The Role of Scalarity in Discourse Context: the Case of Noteworthy Comparison with Indeterminateness

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Abstract
In Japanese sentences with *nani-yori-mo* ‘lit. what-than-MO’ can express two kinds of comparison with indeterminateness. In the individual comparison, *nani-yori-mo* compares a target individual with every alternative individual. On the other hand, in the noteworthy comparison, *nani-yori-mo* compares an at-issue utterance with every alternative utterance based on the scale of noteworthiness.

The purpose of this paper is to investigate the similarities and differences between the individual comparison and the noteworthy comparison in the Japanese expression *nani-yori-mo* (and similar expressions in other languages) and to consider the roles of scalarity in discourse structure. As for the differences and similarities, I will show that although the individual comparison and the noteworthy comparison are logically and dimensionally different, there is a striking parallelism between the two kinds of comparison in terms of scale structure. I argue that the multidimensional approach (Potts 2005) can best capture the similarities and differences between the two kinds of comparison.

As for the roles of scalarity in discourse context, I argue that comparison plays an important role in structuring and relativizing multiple utterances, and the pragmatic notion of noteworthiness provides a speaker-oriented perspective, measuring to what extent an at-issue utterance contributes to the goal of the conversation.

The theoretical implications of this paper are that scalarity in natural language is ubiquitous and that the scale structures at the level of semantics are extended to the discourse-pragmatic dimension in a parallel way.

Key words: comparison, noteworthiness, multidimensionality, goal, discourse context
1. **Introduction**

In Japanese the meaning of comparison with indeterminateness is expressed by an ‘indeterminate pronoun’ plus *yori-mo* ‘than-MO’. Interestingly, if the indeterminate *nani* ‘what’ is used in this environment, the sentence can be ambiguous between two readings, as follows:¹

(1) Nani-*yori-mo* tenisu-wa tanoshii.

What-than-MO tennis-TOP fun

a. at-issue: Tennis is more fun than anything. *(Individual reading)*
b. at-issue: Tennis is fun. *(Implicature: The proposition that tennis is fun is more noteworthy than any other proposition related to tennis.) *(Noteworthy reading)*

Descriptively, we can observe that in the first reading of (1a), the speaker compares ‘tennis’ with contextually determined alternatives (e.g. soccer, basketball, baseball, etc.) and says that tennis is the most interesting. On the other hand, in the case of (1b), we can descriptively observe that the speaker compares the proposition ‘tennis is interesting’ with alternative propositions in terms of noteworthiness/importance and says that the at-issue proposition is the most noteworthy (important).² I will call the former reading the individual reading and the latter reading the noteworthy reading.

In terms of the semantics/pragmatics distinction, the individual reading is semantic in that the comparison is made at the propositional level. On the other hand, the noteworthy reading is discourse pragmatic in that the comparison is made in the realm of discourse. In other words, in the noteworthy reading, the speaker compares his/her own utterance with alternative utterances. This raises a serious question on the interface between semantics and pragmatics. This is because, although the current theories of semantics and pragmatics assume that there is a division between truth conditional and non-truth conditional meanings (i.e. non-at-issue meaning) and that they

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¹ Note that although the meaning of comparison with indeterminateness has a free choice flavor, the free choice item *demo* cannot appear in the comparative environment (i.e. *nani-*yori-*demo*) (Kuroda 1979). Similar phenomena can be observed in other languages, such as Korean (Haspelmath 1997). For a discussion of the distribution of *demo*, see, e.g., Kuroda (1979), Teramura (1991), and Yoshimura (2007) and references therein.

² I will assume that the terms ‘noteworthy’ and ‘important’ are interchangeable. As we will discuss in detail, the noteworthy *nani-*yori-*mo* measures the value of an at-issue utterance.
are fundamentally different in terms of the nature of meaning, the phenomenon of comparison with indeterminateness clearly suggests that there is a similarity between them as well.

The purpose of this paper is to investigate the semantics/pragmatics of the Japanese expression *nani-yori-mo* and similar expressions in other languages and consider the parallelism/non-parallelism between individual comparison and noteworthy comparison and the roles of scalarity in discourse structure. More specifically, we will address the following questions:

(2) a. What are the similarities and differences between the individual reading and the noteworthy reading?

b. How does the ‘noteworthy comparison’ play out in the dynamic flow of discourse?

c. What are the roles of comparison and the pragmatic gradable property of noteworthiness in the discourse context?

As for the first question, I will argue that the meaning of the individual *nani-yori-mo* and the noteworthy *nani-yori-mo* are interpreted along different dimensions. While the meaning of individual comparison with indeterminateness contributes to the truth conditional aspect of meaning, the meaning of noteworthy comparison with indeterminateness is a conventional implicature. In terms of the level of modification, I argue that unlike the case of the individual *nani-yori-mo*, the noteworthy *nani-yori-mo* operates on the speech act level.

However, I will also argue that there is a striking parallelism between the individual comparison and the noteworthy comparison. That is, they both share the same scale structure and denote that ‘the degree of a target is greater than any alternatives.’ I will argue that the above similarities and differences can best be captured in a unified way if we use Potts’s multidimensional compositional system (Potts 2005), where at-issue content and CIs are both compositional but are interpreted along different dimensions.

As to the second question, I argue that the noteworthy *nani-yori-mo* relativizes the dynamic sequence of discourse (Roberts 1996, 2004) based on the pragmatic scale of noteworthiness and signals that the at-issue utterance is the most noteworthy. I will demonstrate that there are two ways (timings) of using the noteworthy *nani-yori-mo*, i.e. to signal it at either the beginning or the end of the discourse sequence. It will be argued that the differences in the ways of using the noteworthy *nani-yori-mo* are reflected in the directionality of scale and information structure. In the beginning-of-sentence
strategy, the at-issue utterance is compared to ‘potential’ alternative utterances and the conversation moves from top to bottom on the scale of noteworthiness, while in the end-of-sentence strategy, the at-issue utterance is compared to ‘discourse-given’ utterances and the conversation moves from the bottom zone to the highest level on the scale of noteworthiness.

As for the final question, I will argue that the concept of scalarity plays an important role in moving toward the goal of the conversation in an economical/effective way. Specifically, I argue that the notion of comparison provides a way of relativizing the at-issue utterance with respect to other utterances, and the notion of noteworthiness provides a speaker-oriented perspective signaling to what extent the at-issue utterance contributes to the goal of the conversation. I will define the pragmatic notion of noteworthiness in relation to the primitive concept of goal in conversation, arguing that a given utterance $U$ is noteworthy if and only if uttering $U$ contributes significantly to moving toward the goal of the conversation, and utterance $U_1$ is more noteworthy than $U_2$ if and only if the first utterance contributes more to moving toward the goal of the conversation than the second one. The underlying idea behind this analysis is that utterance is goal-oriented. For example, in the case of assertion, a speaker asserts $U$ in order to answer a question under discussion (QUD) (Roberts 1998; 2004). In the case of a question, the speaker asks something in order to receive information that will help him/her achieve a specific goal. Importantly, in a conversation it is often the case that the speaker has multiple utterances in mind. The role of the gradable properties of comparison and noteworthiness is to enable the speaker to relativize them in terms of their degree of contribution to a goal and to signal the listener as to what extent a given utterance contributes to this goal.

The theoretical implications of this paper are that scalarity in natural language is ubiquitous and that the scale structures at the level of semantics are extended to the discourse-pragmatic dimension in a parallel way.

The rest of the paper is structured as follows: In section 2, we will consider the differences between the individual nani-yori-mo and the noteworthy nani-yori-mo based on the modification structure. In section 3 we will analyze the meaning of the individual nani-yori-mo. In section 4 we will turn our attention to the meaning of the noteworthy nani-yori-mo and consider the similarities and differences between the individual nani-yori-mo and the noteworthy nani-yori-mo in terms of compositionality and dimensionality. In section 5 we will learn that the noteworthy nani-yori-mo operates on speech acts, rather than at the propositional level, based on a consideration of various sentence types. In section 6 we will address the question of how the noteworthy nani-yori-mo (and the English more than anything) are used in actual discourse, based on
Robert’s theory of discourse context. We will consider the timing of signaling the noteworthy comparison and examine the pragmatic motivation behind its use. In section 7 we will discuss the pragmatic notion of noteworthiness theoretically and define the concept based on the concept of conversational goal. In section 8, we will discuss the phenomenon of noteworthy comparison cross-linguistically (i.e. Korean and English) and argue that although the morphological make-up of noteworthy comparison can differ among languages, the concept is cross-linguistically pervasive. We will also consider other related phenomenon of comparison and consider the role of scalarity in discourse structure from a wider perspective. Section 9 is the conclusion.

2. The Individual Nani-yori-mo vs. The Noteworthy Nani-yori-mo
Let us first consider the empirical difference between the individual nani-yori-mo and the noteworthy nani-yori-mo. As we observed in the introduction, the following sentence can be ambiguous between an individual reading and a noteworthy reading:

(3) Nani-yori-mo tenisu-wa tanoshii.
What-than-MO tennis-TOP fun
a. at-issue: Tennis is more fun than anything. (Individual reading)
b. at-issue: Tennis is fun. (Implicature: The proposition that tennis is fun is more noteworthy than any other proposition related to tennis.) (Noteworthy reading)

Structurally speaking, we can say that the basic structure of the individual reading is comparative, while that of the noteworthy reading is adjectival. This is corroborated by the fact that while the intensifier totemo ‘very/really’ can appear in the ‘noteworthy’ reading, it cannot appear in the ‘individual’ reading, as shown in (4):

(4) Nani-yori-mo tennis-wa totemo tanoshii.
What-than-MO tennis-TOP really fun
‘*Tennis is really more fun than anything.’ (Individual reading)
‘The proposition that tennis is really fun is more noteworthy than any other proposition.’ (Noteworthy reading)

As is argued in the literature on Japanese linguistics, the intensifier totemo ‘very/really’ is more or less ‘restricted’ to adjectival predication (e.g. Watanabe 1990, Tsujimura 2001), and it cannot appear in a comparative environment:
(5) a. *Kono hon-wa ano hon-yori-mo totemo omoshiroi. (comparative)
   This book-TOP that book-than-MO very interesting
   ‘*This book is very more interesting than that book.’

   b. Kono hon-wa totemo omoshiroi. (adjectival)
   This book-TOP very interesting
   ‘This book is very interesting.’

The above data clearly show that the individual reading of (3) is structurally different
from the noteworthy reading.

In this paper I will posit the following structures for each reading of (3):

(6)

a. The individual reading (=3a)

   S
   └── DP
          │
          │
          │
          │
          PP
   nani-yori-mo
      Scrambling

b. The noteworthy reading (=3b)

   S
   └── AdvP
          │
          │
          │
          │
          DP
          nani-yori-mo
       ‘tennis’
   nani-yori-mo
      ‘fun’

In the individual reading (= 3a), the sentence’s basic structure is comparative with a null
comparative morpheme MORE.\(^3\) Note that in (3a) nani-yori-mo combines with the
constituent MORE(ADJ) at LF, but in surface form, it is moved to the sentence initial
position via scrambling. (We will discuss the meaning of MORE in the next section.)
On the other hand, in the noteworthy reading, nani-yori-mo is base generated at the
sentence initial position and the sentence’s basic structure is construed as adjectival,
with a null degree morpheme pos (e.g. Cresswell 1976; Kennedy 1999). The role of pos
is to relate the degree argument of an adjective to a contextual standard and denote that
it is greater than a standard. (We will discuss the denotation of pos in detail in section
4.4.) This structural difference between (6a) and (6b) can naturally explain why the
adverb totemo can appear in the noteworthy reading but not in the comparative reading.
The intensifier totemo can appear in the noteworthy reading because it is a special kind

\(^3\) In (3) there is no comparative morpheme like the English er/mor, but I will assume,
following the majority view, that there is a null comparative morpheme MORE in
Japanese comparatives (e.g. Beck et al. 2004).
of pos morpheme. Intuitively speaking, totemo denotes that an at-issue degree (degree argument) is located at a much higher position than a standard. On the other hand, totemo cannot appear in the individual comparative reading because the position of totemo ‘very’ is already filled by the comparative morpheme MORE, so in our example, it cannot directly combine with the adjective tanoshii ‘fun’.

Note that a sentence with the noteworthy nani-yori-mo does not need to contain an adjective, as in the following example:

(7) (Context: Please tell me where Japan is located?)

Nani-yori-mo nihon-wa ajia-ni aru.

What-than-MO Japan-TOP Asia-LOC exist
‘More than anything, Japan is in Asia.’

This strongly suggests that the noteworthy comparison is not an adjectival comparison. The noteworthy nani-yori-mo is operating at a higher level.

Then how can we analyze the meaning of the two kinds of nani-yori-mo? In sections 3 and 4 we will discuss the meanings of the two kinds of nani-yori-mo and the parallelism and non-parallelism between the two kinds of comparison with indeterminateness.

3. The Semantics of the Individual Nani-yori-mo

Let us first consider the meaning of the individual reading. I would like to point out first that we can express the meaning of individual comparison with indeterminateness by using various kinds of indeterminate pronouns:

(8) Indeterminate pronoun plus yori-mo

<table>
<thead>
<tr>
<th>dare ‘who’</th>
<th>(dare-yori-mo)</th>
<th>ikura ‘how much’ (*ikura-yori-mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>nani ‘what’</td>
<td>(nani-yori-mo)</td>
<td>itu ‘when’ (*itu-yori-mo)</td>
</tr>
<tr>
<td>dore ‘which’</td>
<td>(dore-yori-mo)</td>
<td>naze ‘why’ (*naze-yori-mo)</td>
</tr>
<tr>
<td>dono ‘which (Det)’</td>
<td>(dono N-yori-mo)</td>
<td>doo ‘how’ (*doo-yori-mo)</td>
</tr>
<tr>
<td>doko ‘where’</td>
<td>(doko-yori-mo)</td>
<td></td>
</tr>
</tbody>
</table>

4 See Kennedy and McNally (2005) for a detailed discussion of the meaning of the English intensifier very.

5 Itu-yori-mo ‘when-than-mo’ sounds odd for some native speakers. Note that there is also an expression itu-mo–yori, but it means ‘than usual’ not ‘than anytime.’
As the above table shows, individual comparison with indeterminateness is not fully productive. It can only be used when the indefinite pronoun is *dare* ‘who’, *nani* ‘what’, *dore* ‘which’, *dono NP* or *doko* ‘where’.

In order to highlight the difference between the individual reading and the noteworthy reading, this paper only focuses on the semantics of individual comparison in which the indeterminate pronoun *nani* is used:

(9) **Nani-vori-mo** tennis-wa tanoshii.

What-than-MO tennis-TOP fun

‘a: Tennis is more fun than anything.’  

(Individual reading)

‘b: The proposition that tennis is fun is more noteworthy than any other proposition.’  

(Noteworthy reading)

As for the semantics of comparison, I assume that Japanese posits a null comparative morpheme MORE\textsubscript{IND} as in (10), and the marker of standard is semantically null (IND stands for individual):

(10) $[[\text{MORE}_{\text{IND}}]] = \lambda g \lambda y \lambda x. \max\{d' | g(d')(x) \} > \max\{d'' | g(d'')(y)\}$

As for the meaning of the gradable predicate, I follow the assumption that gradable predicates represent relations between individuals and degrees (Seuren 1973; Cresswell 1977; von Stechow 1984; Klein 1991; Kennedy and McNally 2005). The following shows the denotation of *tanoshii*:

(11) $[[\text{tanoshii}]] = \lambda d \lambda x. \text{fun}(x) = d$

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6 As we will discuss in detail in section 4, the noteworthy comparison with indeterminateness is more restrictive than the individual comparison in terms of productivity. Usually, the noteworthy comparison is expressed by using the indeterminate pronoun *nani*. However, note that some native speakers think that *donna koto* ‘lit. which fact’ can also be used to express the meaning of noteworthy comparison. The following is an example of the noteworthy comparison with *donna koto*:

(i) **Donna koto-vori-mo** mazu siken-ni gookaku-site!

Which fact-than-MO first exam-DAT price-NOM

‘Please first pass the exam.’

Implicature: To pass the exam is more important than any other alternative things the addressee should do.

In this paper we will (almost) solely focus on comparisons with *nani*. 
The question is how to generate the meaning of \textit{nani-yori-mo}. There are various approaches for the meaning of indeterminate pronouns and \textit{mo} but in this paper I use Hamblin’s (1973) semantics for Japanese indeterminate pronouns (Kratzer & Shimoyama 2002; Shimoyama 2006). In this system, \textit{nani} ‘what’ in (9a) introduces a set of \textbf{individual} alternatives, as in (12), where possible worlds and variable assignments are omitted for the sake of simplicity:

\begin{equation}
[[\textit{nani}]] = \{ x \in D_e : \text{thing (x)} \}
\end{equation}

Since \textit{yori} is semantically vacuous, the meaning of \textit{nani-yori} is interpreted same as \textit{nani} as shown in (13) and (14):

\begin{equation}
[[\textit{nani-yori}]] = \{ x \in D_e : \text{thing (x)} \}
\end{equation}

\begin{equation}
\begin{array}{c}
\text{nani-yori} \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\begin{array}{c}
nani \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\begin{array}{c}
yori \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\end{equation}

Notice that the alternatives expand until they meet the universal operator \textit{mo}, which selects them as in (15):

\begin{equation}
\begin{array}{c}
\text{nani-yori} \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\begin{array}{c}
\text{nani} \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\begin{array}{c}
yori \\
\{ \text{soccer, baseball, basketball, …} \}
\end{array}
\begin{array}{c}
\text{mo}
\end{array}
\end{equation}

The denotations of \textit{mo} and \textit{nani-yori-mo} can be represented as follows:

\begin{equation}
\begin{align*}
\text{(16) a. } &[[\text{mo}]] = \lambda S \lambda P_{<e,>}. \forall x [x \in S \rightarrow P(x)] \\
\text{b. } &[[\text{mo}]]( [[\text{nani-yori}]] ) = \\
&\lambda P_{<e,>}. \forall x [x \in \{ D_e : \text{thing (x)} \} \rightarrow P(x)]
\end{align*}
\end{equation}

\footnote{Another way to derive a universal meaning is to use the meaning of \textit{even} (Nakanishi 2006) or \textit{also}. \textit{Mo} literally means ‘also/even.’}
(16b) shows that *mo* is a kind of generalized quantifier (Shimoyama 2006). The LF structure of (9) can be represented as in (17): 8

\[
\forall x \in \{D_e: \text{thing}(x)\} \rightarrow \max \{d'| \text{fun(tennis)} = d'\} > \max \{d''| \text{fun(x)} = d''\}
\]

\[
\lambda v. \max \{d'| \text{fun(tennis)} = d'\} > \max \{d''| \text{fun(v)} = d''\}
\]

\[
\lambda P_{v,e,o} \forall x \in \{D_e: \text{thing}(x)\} \rightarrow P(x)
\]

\[
\lambda z. \max \{d'| \text{fun(z)} = d'\} > \max \{d''| \text{fun(y)} = d''\}
\]

\[
\lambda g,d,e,t>\lambda y\lambda z. \max \{d'| g(d')(z)\} > \max \{d''| g(d'')(y)\}
\]

\[
\lambda d\in \text{fun(x)} = d
\]

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8 Note that in this paper we will not fully adopt the theory of alternative semantics (Hamblin 1973; Kratzer and Shimoyama 2002; Shimoyama 2006). According to alternative semantics, the denotations of lexical items that are not indeterminate phrases are considered to be singleton sets whose sole members are their normal denotations. In this approach, the denotations of an indeterminate phrase (the individual set) and the non-determinate phrases are combined by applying function applications in a pointwise manner (Kratzer and Shimoyama 2002; Shimoyama 2006). For example, in (i) the denotation of *dare* ‘who’ is considered to denote the set of all humans, and the denotation of *odorimasu* ‘to dance (polite)’ is considered to be a singleton set whose sole member is its normal denotation (i.e. \(\lambda x\text{[dance(x)]}\)):

(i) [Dare-ga odorimasu]-ka?

Who-NOM dance-PRED.POL-Q

‘Who dances?’

The denotations of *dare* and *odoru* (*odori*) are then combined in a pointwise manner to form a set of propositions such as \{Taro dances, Bill dances, Hanako dances, etc.\}.

However, we will not use the pointwise function application. As far as sentences with *nani-yori-mo* are concerned, we don’t need to posit a pointwise function application. This is because the indeterminate phrase *nani* directly combines with the particle *mo* before combining with non-determinate phrases. Thus, in order to simplify my argument, this paper will assume an ordinary compositional semantics for the meaning of sentences with *nani-yori-mo*. 

10
In this approach, *nani-yori-mo* scopes over an entire sentence by QR (Heim 2006). At the end of the day, we get the following truth condition for the individual reading in (9):

\[(18) \forall x[x \in \{D_e: \text{thing (x)}\} \to \max\{d' | \text{fun(tennis)} = d'\} > \max\{d'' | \text{fun(x)} = d''\}]\]

This sentence is true only in the case where the degree to which tennis is fun on a given scale is greater than any of the alternatives. The crucial point here is that the comparison in (18) is made at the ‘at-issue’ level.

4. **The Meaning of the Noteworthy *Nani-yori-mo***

The notion of comparison with indeterminateness can also be used at the pragmatic level. In this section, we will analyze the compositionality and dimensionality of the noteworthy *nani-yori-mo* and consider the similarities and differences between the individual *nani-yori-mo* and the noteworthy *nani-yori-mo*.

4.1 **Alternatives and a Discourse Topic**

To consider the compositionality and dimensionality of the noteworthy comparison, it is important to think about what the noteworthy *nani-yori-mo* is comparing. Let’s consider this question based on the following example:

\[(19) \text{Nani-yori-mo tennis-wa tanoshii.} \]

What-than-MO tennis-TOP fun

‘a: Tennis is more fun than anything.’ (Individual reading)

‘b: The proposition that tennis is fun is more noteworthy than any other proposition.’ (Noteworthy reading)

The above sentence is ambiguous between the individual reading and the noteworthy reading. As for the individual reading, we showed that *nani* introduces a set of individual alternatives. Thus, it is comparing individuals. But what about the case of *nani* in the noteworthy reading?

Note that, the above ambiguity does not arise if there is a mismatch in meaning between *nani* and the target of comparison as in (20):

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9 We can also explain the same meaning without positing a movement. That is, we can type-shift the meaning *nani-yori-mo* in (16b) into (i):

(i) \(\lambda P_{<, <, >} \lambda y. \forall x[x \in \{D_e: \text{thing (x)}\} \to P(x)(y)]\)
(20) Nani-yori-mo Taro-wa yasashii. \(^{(Noteworthy\ reading)}\)
What-than-MO Taro-TOP kind
At-issue: Taro is kind.
(Implicature: The proposition that Taro is kind is more noteworthy than any other proposition related to Taro.)

The reason why nani-yori-mo ‘what-then-MO’ but not dare-yori-mo ‘who-then-MO’ has the ‘noteworthy’ reading is that nani can refer to a proposition. Observe the following sentence:

(21) Taro-wa nan-to i-tta?
Taro-TOP what-that say-PAST
‘What did Taro say?’

It is natural to consider that nan in (21) is introducing a set of propositions.\(^{10}\) This suggests that there is another lexical item for nani:

(22) \([nani] = \{ p \in D : \text{proposition}(p) \}\)

The above idea can naturally apply to the case of the noteworthy nani-yori-mo. For example, in the following example, we can posit the set of alternative propositions like (24) that are related to the topic of Tokyo:

(23) (Question: What are the good points of Tokyo?)
Nani-yori-mo (Tokyo-wa) benri-ga ii.
What-than-MO Tokyo-TOP convenience-NOM good
‘More than anything, Tokyo is convenient.’

(24) p-R-Topic = \{Tokyo is modern, It is warm, There are many universities,…\}

In (24) ‘p-R-Topic’ is read as ‘p is related to Topic’. That is, in this set every proposition is related to the topic Tokyo. The important point is that the concept here involves a ‘discourse topic’ rather than a ‘sentence topic.’ In order to understand this, let us compare (23) with (25):

\(^{10}\) In this example, there is a phonological change from nani to non but there is no semantic difference between them.
Similarly to (23), (25) is also talking about Tokyo, but unlike in (23), this time the speaker is talking about Tokyo in terms of a negative perspective. Thus, we can posit the following set for (25):

(26)  \[ p-R\text{-}Topic = \{ \text{Tokyo is expensive, Tokyo is crowded, it is noisy, ...} \} \]

The difference between (23) and (25) suggests that it is not the ‘sentence topic’ but the ‘discourse topic’ that plays an important role in introducing a set of alternatives. The discourse topic is taken to be the ‘relevant question’ that is being answered, in other words the question under discussion (QUD) (e.g. von Fintel 1994; Roberts 1996; McNally 1998; Büring 1999; Glanzberg 2001). We can summarize the above discussion as follows:

(27)  Generalization on the alternatives allowed by the noteworthy nani-yori-mo (not final): The noteworthy nani-yori-mo introduces a set of alternative propositions that are related to the discourse topic (QUD).

We will, however, modify this generalization in section 6 where we discuss the role of the noteworthy nani-yori-mo in discourse context. We will revise the generalization based on the general notion of ‘goal’ so that it can capture all possible environments in which the noteworthy nani-yori-mo can be used. However, as far as the case of assertion is concerned, this generalization is plausible both intuitively and theoretically.

4.2  The Noteworthy Nani-yori-mo: A Multidimensional Approach

The most important difference between the individual comparison and the noteworthy comparison is concerned with dimensionality of meaning. Unlike the individual nani-yori-mo, the meaning of comparison with indeterminateness is calculated in the domain of conventional implicature (CI) (Grice 1989; Potts 2005). For example, we can divide the meaning of (28) into two levels, the ‘at issue’ level and the CI level:
Potts (2005) defines CI as follows: (a) CIs are part of the conventional meaning of the words; (b) CIs are commitments, and thus give rise to entailments; (c) These commitments are commitments of the speaker\(^{11}\); (d) CIs are logically and compositionally independent of ‘what is said.’

Let us consider whether the meaning of the noteworthy *nani-yori-mo* satisfies these conditions based on example (28). Condition (a) is satisfied because the meaning of the comparison with indeterminateness is associated with the lexical items. Condition (b) is satisfied because the meaning of the noteworthy *nani-yori-mo* gives rise to an entailment, since it would be odd to cancel the CI by saying, ‘But that is not noteworthy information at all.’

Before considering Condition (c), let us first consider Condition (d), because it is less controversial/complicated. We can say that Condition (d) is also met. This is corroborated by the fact that the meaning of the noteworthy *nani-yori-mo* in (28) cannot be challenged by saying ‘No, that’s false’:

(29) (Utterance after (28))
    Iie. Sore-wa chigau-yo.
    No that-TOP false-YO
    ‘No, that’s false.’

The speaker in (29) is only challenging the at-issue part of (28). Thus, the meaning of the noteworthy *nani-yori-mo* is not part of ‘what is said.’\(^{12}\)

Finally, let us consider Condition (c). As far as example (28) is concerned, this condition is also met for the meaning of the noteworthy *nani-yori-mo* because in (28) the person who thinks that the proposition (utterance) expressed is the most noteworthy one is the speaker. However, recent studies have shown that the property of speaker-

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\(^{11}\) Potts (2007) amends this condition, saying that the perspective encoded in the expressive aspects of an utterance is often but not always that of the speaker. He then adopts Lasersohn’s (2005) notion of a ‘contextual judge.’

\(^{12}\) However, challenging/denial is not necessarily a perfect diagnostic for distinguishing ‘what is said’ and CI (Potts in press).
orientedness is not a defining characteristic of CI (Amaral, Roberts & Smith 2007; Harris and Potts 2009). For example, it has been argued that appositives are conventional implicature bearing expressions and as such are invariably speaker-oriented. As we can see from the following example, it is uncontroversial that appositives can be speaker-oriented even if they are embedded in the complements of attitude predicates and verbs of saying (Potts 2005):

(30) Sheila believes that Chuck, a psychopath, is fit to watch the kids.

However, Amaral et al. (2007) claim that if we assume that it is in the interlocutors’ common ground that Chuck is a psychopath, the appositive can be subject-oriented. They further claim that in the following example, one is likely to get the subject-anchored interpretation, where Sheila (and not the speaker) is committed to Chuck’s being a sweetheart:

(31) Sheila believes that Chuck, a sweetheart if she ever met one, is fit to watch the kids. (Amaral et al. 2007: 737)

Harris and Potts (2009) present corpus and experimental evidence to indicate that appositives (and expressives) are generally speaker-oriented, but certain discourse conditions can counteract this preference. Non-speaker-orientation becomes the dominant interpretation if certain discourse conditions are met.

A similar phenomenon can be observed with regard to the noteworthy nani-yori-mo. In the following sentence, where nani-yori-mo is embedded under the verbs of saying, it can be either speaker-oriented or subject-oriented:

(32) Taro-wa [nani-yori-mo Shizuoka-wa sumiyasui]-to kangae-teiru. Taro-TOP what-than-MO Shizuoka-TOP easy to live-that think-TEIRU
‘Taro thinks that nani-yori-mo Shizuoka is easy to live.’
(a) Subject-oriented reading: (CI: Taro thinks that the proposition that Shizuoka is easy to live is more noteworthy than any other proposition related to Shizuoka.)
(b) Speaker-oriented reading: (CI: The speaker thinks that the proposition that Shizuoka is easy to live is more noteworthy than any other proposition related to Shizuoka.)

The foregoing discussion suggests that the property of speaker-orientedness may not necessarily be the defining characteristic of CIs. However, this does not mean that we
cannot define the property of CI, nor that we cannot say that the noteworthy *nani-yori-mo* has a CI meaning. Although Condition (c) may need to be revised (or abandoned), we still can define the property of CI based on the other conditions. The CIs are derived from words and their meanings do not contribute to ‘what is said.’ And clearly, the noteworthy *nani-yori-mo* has these properties.

One might think that the meaning of the noteworthy *nani-yori-mo* is a presupposition. A presupposition is a proposition whose truth is taken for granted as background information in the utterance of a sentence (i.e. it is common ground among the participants in the conversation), but the meaning of the noteworthy *nani-yori-mo* is not a part of this common ground. It is the speaker’s personal construal of the proposition expressed. Furthermore, the fact that unlike presuppositions, the noteworthy *nani-yori-mo* can project beyond presupposition plugs such as the non-factive verbs (verbs of saying) supports the idea that the meaning of *nani-yori-mo* is not a presupposition (See the example (32)). If the meaning of the noteworthy *nani-yori-mo* is a presupposition, it cannot project beyond the presupposition plugs. In the pragmatics literature, it is often claimed that the presupposition plugs block off all presuppositions among the lower clauses (Karttunen 1973).

Although there is a major ongoing debate on the status of CI (with some researchers claiming that there is no such thing as a CI (Bach 1999; for the procedural approach in Relevance Theory, see e.g. Blackmore 1987, 2002), and others claiming that what is analyzed as a CI must be analyzed as presupposition (e.g. Schlenker 2007)) in this paper I will take the position that CIs and presuppositions differ and that the meaning of the noteworthy *nani-yori-mo* belongs to a CI.

### 4.3 Compositionality of the Noteworthy *Nani-yori-mo*

Let us now consider how the meaning of the noteworthy comparison is computed. Let’s first consider the issue based on the following example:

(33)  *Nani-yori-(mo)* tenisu-wa tanoshii.
     What-than-MO tennis-TOP fun
     At-issue: Tennis is fun.
     CI: ‘The proposition that tennis is fun is more noteworthy than any other proposition.’

(33) is in some sense both ‘adjectival’ and ‘comparative’. In the at-issue dimension, the sentence is interpreted as an adjectival sentence, while in the CI domain, it is interpreted as a comparative. How can we compute the two kinds of scalar meaning in a unified
way? We will show that Potts’s (2005) multidimensional composition system can best capture the two kinds of scalar meanings in a unified way.

There are multiple views regarding the meaning of the noteworthy *nani-yori-mo* (according to the multidimensional approach). One view is to argue that the noteworthy *nani-yori-mo* is a lexicalized single utterance modifier, which has the following denotation:

\[(34) \quad [\text{nani-yori(-mo)}_{\text{NW}}]: \langle t', t' \rangle = \lambda p \forall q [q \in \{D_t; \text{proposition}(q)\} \rightarrow \max \{d' | \text{noteworthy}(p) = d' \} > \max \{d'' | \text{noteworthy}(q) = d' \}]\]

Here *nani-yori-mo* takes a proposition of type \(t\) and returns a CI of type \(t '\). The crucial assumption behind this analysis is that the noteworthy *nani-yori-mo* contains an at-issue type (superscript \(a\)) and a CI type (superscript \(c\)) and *nani-yori-mo* is combined with a proposition \(t\) via the CI Application (Potts 2005):

\[(35) \quad \text{CI function application}\]

\[
\begin{array}{c}
\beta : \sigma^a \\
\bullet \\
\alpha(\beta) : \gamma^c
\end{array}
\]

\[\alpha : \langle \sigma^a, \gamma^c \rangle \quad \beta : \sigma^a\]

CI function application says that an \(\alpha\) that is of type \(\langle \sigma^a, \gamma^c \rangle\) takes a \(\beta\) of type \(\sigma^a\) and returns \(\gamma^c\). (The superscript \(c\) stands for CI and the superscript \(a\) stands for ‘at issue.’) Notice that \(\beta\) is consumed twice. The bullet \(\bullet\) is a metalogical device for separating independent lambda expressions. This rule ensures that the at-issue dimension is always insensitive to the presence of adjoined CI operators (Potts 2005: 65).

If we apply the above rule to (33), we get the following logical structure:
In (36) the noteworthy nani-yori-mo takes the proposition ‘tennis is fun’ as its argument and returns a conventional implicature that ‘the maximum degree of noteworthiness of the proposition ‘tennis is fun’ is greater than any alternative proposition.’ At the same time, the proposition ‘tennis is fun’ itself is passed up to the position above the bullet so that its meaning is independently interpreted in the at-issue domain.

Regarding the semantics of gradable predicates, I am following the prevailing view that they combine with null comparatives pos(itive). This turns the adjective into a property of individuals. The semantic function of pos is to relate the degree argument of the adjectives to an appropriate standard of comparison (Cresswell 1977; von Stechow 1984; Kennedy and McNaUly 2005, among others):

(37) \[[\text{pos}]\] = \(\lambda G_{<d,<e,>}\lambda x.\exists d[d \geq \text{Stand} \land G(d)(x)]\)

When pos is combined with the adjective tanoshii, we get an individual property, as in:

(38) \[[\text{pos}]](\text{[tanoshii]}) = \lambda x.\exists d[d \geq \text{Stand} \land \text{interesting}(x) = d]

The above analysis correctly captures the fact that sentence (33) is both adjectival and comparative. In the CI domain, the sentence is interpreted as a comparative, while in the at-issue domain, it is interpreted as an adjectival sentence.

However, the above idiomatic view raises the question of the internal compositionality of nani-yori-mo. Although the above analysis correctly captures the dimensional difference between the at-issue scalar meaning and a CI scalar meaning, it does not explain the internal structure of nani-yori-mo. It just stipulates that nani-yori-
mo is like an idiom. But intuitively speaking, there is a clear intuition that the meaning of nani and yori are combined compositionally. I propose that there is actually an implicit (invisible) gradable predicate NOTEWORTHY in the logical structure of the noteworthy comparison. This view leads us to posit the following logical structure for (33):

(39)

\[
\exists d \in \text{Stand-interesting(tennis)} = d': \forall r \in \{D_r: \text{proposition}(r)\} \rightarrow \max(d'\text{NOTEWORTHY(tennis is fun)} = d') > \max(d''\text{NOTEWORTHY}(r) = d'')
\]

Let us consider the above logical structure in detail. First, for the meaning of noteworthiness, we will posit the following denotation:

(40) The lexical entry of noteworthiness (not final)

\[ [[\text{NOTEWORTHY}] = \lambda d. \lambda p. \text{noteworthy}(p) = d \]

Second, the above LF leads us to posit the following denotations for nani (NW stands for ‘noteworthy’):

(41) The lexical entry of nani for comparison of noteworthiness (not final)

\[ [[\text{nani}_{NW}] = \{ r \in D_r: \text{proposition}(r) \} \]
Similarly to the case of an individual comparison, the alternatives introduced by \( nani_{NW} \) expand until they meet the universal operator \( mo \). When \( mo \) is combined with \( nani\text{-}yori_{NW} \), we get the following meaning (see also the boxed part of figure (39)):

\[
\begin{align*}
(42) \ a. \ & [[\text{mo}]] = \lambda S<\tau>\lambda P<\tau,\tau> \ \exists r \in S \rightarrow P(r) \\
& b. \ [[\text{mo}_{NW}]](\ [[\text{nani\text{-}yori}_{NW}]])) = \\
& \quad \lambda P<\tau,\tau,\tau> . \ \forall r \in \{D_i: \text{proposition}(r)\} \rightarrow P(r)
\end{align*}
\]

Note that we will also posit another lexical entry for \( \text{MORE} \):

\[
(43) \ \text{The lexical entry of \( \text{MORE} \) for the noteworthy comparison (not final)}
\]

\[
[[\text{MORE}_{NW}]] = \lambda g \lambda p \lambda q. \max\{d'|g(d')(q)\} > \max\{d''|g(d'')(p)\}
\]

If we put everything together in a compositional fashion, at the end of the day we can get the following CI scalar meaning for sentence (33):

\[
(44) \ \text{The CI meaning of (33) (not final)}
\]

\[
\forall r \in \{D_i: \text{proposition}(r)\} \rightarrow \max\{d'|\text{NOTEWORTHY}(\text{tennis is fun}) = d'\} > \\
\max\{d''|\text{NOTEWORTHY}(r) = d''\}
\]

This decompositional approach is more advantageous than the idiomatic approach, in that the former can explicitly capture the semantic relationship between the individual comparison and the comparison of noteworthiness. Another advantage of the decompositional approach is that it can explain a similar phenomenon in another indeterminate phrase (i.e. \( \text{donna koto} \ ‘\text{which fact}’ \)):

\[
(45) \ \text{donna koto\text{-}yori\text{-}mo mazu siken\text{-}ni gookaku\text{-}site!}
\]

\[
\text{Which fact\text{-}than\text{-}MO first exam\text{-}DAT price\text{-}NOM}
\]

‘Please first pass the exam.’

Implicature: To pass the exam is more important than any other alternative things the addressee should do.
In (45) the speaker is conveying that to pass the exam is the most important thing for the addressee. This fact seems to support the ideas that ‘pragmatic comparison’ is productive and that the meaning *nani-yori-mo* is computed in a compositional way.

Based on the above argument, I conclude that there is an implicit gradable predicate in the noteworthy *nani-yori-mo* and that its meaning is computed compositionally in the same way as in the case of the individual *nani-yori-mo*.

5. The Noteworthy *Nani-yori-mo* Operates on Speech Acts

However, the above proposition-based decompositional approach to the noteworthy *nani-yori-mo* only works for the affirmative sentence and it does not explain the cases where *nani-yori-mo* is used in non-affirmative sentences.

In actual use of the noteworthy *nani-yori-mo*, it can co-occur with other kinds of sentence types (Sadock and Zwicky 1985) such as interrogative and imperative:

(46) a. *Nani-yori-mo*  Tokyo-wa  anzen-da.  \( (\text{Declarative}) \)
  What-than-MO  Tokyo-TOP  safe-PRED
  At issue: Tokyo is safe.
  CI: The assertion that ‘Tokyo is safe’ is more noteworthy than any other assertion.

b. *Nani-yori-mo*  naze anata-wa  Chicago-ni  iku-no?  \( (\text{Interrogative}) \)
  What-than-MO  why  you-TOP  Chicago-TO  go-Q
  At issue: Why do you go to Chicago?
  CI: The question ‘why do you go to Chicago?’ is more noteworthy than any other question.

---

13 It seems that *donna koto-yori-mo* is typically used in the context of directives. Some native speakers think that it is difficult to use *donna koto-yori-mo* in a simple declarative sentence:

(i) ? *Donna koto-yori-mo*  Tokyo-wa  bukka-ga  takai.
   Which fact-than-MO  Tokyo-TOP  price-NOM  expensive
   At-issue: Tokyo is expensive.
   Implicature: The proposition (fact) that Tokyo is expensive is more noteworthy than any other proposition (fact) related to Tokyo.
c. Nani-yori-mo jugyoo-ni ki-nasai!  
(Imperative)

What-than-MO class-to come-IMPERATIVE

At issue: Come to the class!

CI: The command ‘come to the class!’ is more noteworthy (significant) than any other command.

(46a) is comparing the assertion that ‘Tokyo is safe’ with alternative assertions. In (46b) it is comparing the question ‘Why did you come to Chicago?’ with contextually determined alternative questions, and is saying that the at-issue question is the most noteworthy. As for (46c), it is comparing the command ‘come to the class!’ with contextually determined alternative commands (e.g. study hard!) and is saying that it is the most noteworthy command. The decompositional proposition-based approach we proposed in section 4.4 cannot explain these speech act comparisons because questions and imperatives do not denote a proposition.

Thus, the proposition-based approach is not sufficient. The above data strongly suggests that the noteworthy nani-yori-mo is an utterance modifier which operates on the speech act level. How can we analyze the meaning of ‘speech act comparison’ in a formal way? Although there are various approaches to the representation of clause-type systems, here I follow Stenius (1967), Krifka (2001) and Tomioka (2010), according to whom an illocutionary operator combines with a sentence radical meaning (typically, a proposition) to form a speech act.14 This approach assumes the following general type-formation:15

14 This idea is similar (and compatible) to the Searle (1969, 1979)’s theory of speech acts. In Searle’s view, elementary illocutionary acts are of the form F(p) where the variable F takes illocutionary force indicating devices as values and p takes expressions for propositions (Searle 1969: 31). Building on the theory in Searle (1969, 1979), Searle and Vanderveken (1985) have used the resources of logic in order to analyze the logical form of illocutionary acts. They have decomposed illocutionary forces into their various components: (i) illocutionary point, (ii) degree of strength of the illocutionary point, (iii) mode of achievement, (iv) propositional content conditions, (v) preparatory conditions, (vi) sincerity condition, (vii) degree of strength of the sincerity conditions.

15 Note that there are various approaches to the representation of illocutionary force (See Portner 2004). For example, Portner (2005) argues that the sentential force per se is not formally represented in the syntax.
(47)  a. Basic types: e entities, t truth values, p (=st) propositions, a speech acts.
   b. A Speech Act operator is a function from the type of the sentence radical it
      selects to type a.
   c. The variables for the type a = {U, U’, U”, …}

   For example, in this view, the logical structure of (46a) can be represented as follows:

   (48)

   Here the noteworthy nani-yori-mo compares a given speech act to alternative speech
   acts. This means that we need to revise the lexical entries for nani\textsubscript{NW}, MORE\textsubscript{NW} and the
   gradable predicate NOTEWORTHY into (49), (50), and (51) respectively:

   (49)  The lexical entry of nani for the comparison of noteworthiness (final version)
   
   \[
   [[\text{nani}\text{NW}]] = \{ u \in D_a : \text{speech act}(u) \}
   \]

   (50)  The lexical entry of MORE for the noteworthy comparison (final version)
   
   \[
   [[\text{MORE}\text{NW}]] = \lambda g \lambda U_1 U' \max \{ d' \mid g(d')(U') \} > \max \{ d'' \mid g(d'')(U) \}
   \]
(51) The lexical entry of the adjectival *noteworthy* (final version)

\[ [[\text{noteworthy}]] = \lambda d. \text{noteworthy}(U) = d \]

The speech act alternatives expand until they meet *mo*. If the meaning of *mo* in (52a) is combined with *nani-yori*, we get the meaning like (52b):

(52) a. \[ [[\text{mo}_{NW}]] = \lambda S. \lambda P. \langle d', f' \rangle. \forall U[U \in S \rightarrow P(U)] \]
   
   b. \[ [[\text{mo}_{NW}]]( [[\text{nani-yori}_{NW}]] ) = \]
   
   \[ \lambda P. \langle d', f' \rangle. \forall U[U \in \{D_a; \text{speech act}(U)\} \rightarrow P(U)] \]

Thus, if we combine everything, we get the following CI scalar meaning:

(53) The CI meaning of (46a)

\[ \forall U[U \in \{D_a; \text{speech act}(U)\}] \rightarrow \max \{d'[\text{NOTEWORTHY}(\text{ASSERT}(\exists d[d \geq \text{Stand} \wedge \text{safe}(\text{Tokyo}) = d])] = d' \} > \max \{d''[\text{NOTEWORTHY}(U) = d''] \} \]

The speech act-based account is better than the propositional-based account in that it can naturally capture cases where the noteworthy *nani-yori-mo* occurs in non-declarative sentence types. Note that in (50) the illocutionary force is unspecified. One might think that the denotation in (50) predicts that it is possible to compare different kinds of speech acts in terms of noteworthiness (e.g. questions vs. assertions). Although this kind of mixed comparison is not theoretically prohibited in our system, it seems that such a situation is rare in actual conversation, because the illocutionary force of the main clause and the set of alternatives must be relevant to each other.

Based on the foregoing discussion, it is safe to conclude that the noteworthy *nani-yori-mo* operates on the speech act level. However, there are some potentially problematic cases for this speech act-based approach to the noteworthy *nani-yori-mo*. First, as we observed in the introduction, this expression can also be used as a parenthetical:

(54) Tenisu-wa *nani-yori-mo* tanoshii. *(Noteworthy reading)*

Tennis-TOP what-than-MO fun

‘Tennis is, more than anything, fun.’

One way to analyze this case using the speech act-based approach is to assume that the parenthetical noteworthy *nani-yori-mo* operates on the speech act level at LF, despite the fact that at a superficial level it is placed inside the sentence. Another way to
analyze (54) is to assume that the parenthetical *nani-yori-mo* operates on a property and posit different semantics for it. For example, it may be possible to consider that the parenthetical *nani-yori-mo* in (54) conveys the following CI meaning:

(55) The property *tanoshii* ‘fun’ is more noteworthy than any other property for characterizing tennis.

I think that the former option is preferable because if we accept it, we don’t have to posit another lexical entry for the noteworthy *nani-yori-mo*. However, in order to determine which approach is better more empirical investigations need to be done (especially on whether the parenthetical *nani-yori-mo* can appear in non-declarative environments). I would like to leave this question for future research.

6. Comparison of Noteworthiness and Discourse Context
In this section we will think more deeply about how the noteworthy *nani-yori-mo* functions in the discourse context. In the previous section we looked at the pragmatic aspects of the noteworthy *nani-yori-mo* in terms of multidimensionality and implicature, but so far we have considered these only from a single utterance level. In this section we will consider the use of the noteworthy *nani-yori-mo* from a discourse-pragmatic perspective and think about the fundamental question of how the notion of scalarity contributes to the conversation between the speaker and the listener.

6.1 Information Structure in Discourse (Roberts 1998; 2004)
In order to consider the role of scalarity in the discourse context, we need to first understand the nature of the discourse context in general. In this paper we will adopt Roberts’s (1998, 2004) view of discourse interaction. According to this model, the primary goal of discourse is to answer to the following big question: “What is the way things are?” That is, the goal of discourse is to share information about our world. However, questions in discourse are generally specific, in that we usually have goals in the real world, things we want to achieve quite apart from general inquiry. These are *domain goals*. Roberts (1998, 2004) argues that domain goals generally direct the type of conversational inquiry that we conduct. We are most likely to inquire first about those matters that directly concern the achievement of our domain goals.

To understand how goals and intentions fit into the context of discourse, it is useful to treat discourse context like a game. The principal elements of a game are its goal(s), the rules that players follow, the moves they may make toward the goal(s), and
the strategies they may pursue in making their moves. In this view, the rules of the language game constrain how different types of linguistic structures update the discourse context (Roberts 1998, 2004: 125). For example, Assertion and Question have the following constrains on updating:

(56) Pragmatics of Assertion (following Stalnaker 1978)
If an assertion is accepted by the interlocutors in a discourse, it is added to Common Ground (CG) thereby reducing the context set.\(^{16}\)

(57) Pragmatics of Questions
a. If a question is accepted by the interlocutors in a discourse, it is added to the set of Question under Discussion (QUDs).
   b. A member of the set of QUDs in a discourse is removed from that set iff its answer is entailed by CG or it is determined to be answerable.\(^{17}\)

Discourse typically progresses by raising and answering questions. Thus, Assertions and Questions are the basic acts. However, Questions and Assertions (answers) are not the only possible moves. We can also use Requests/Commands in conversation. Roberts consider the pragmatics of Requests as follows:

(58) Pragmatics of Requests (and Commands)
If a request is accepted by an addressee \(i\) in a discourse, the set of \(i\)’s goals is updated with the information expressed by the corresponding indicative, with \(i\) taken as the denotation of the subject.

Based on the above setup, let us consider the role of noteworthy \textit{nani-yori-mo} in discourse context. I argue that the noteworthy \textit{nani-yori-mo} signals that the at-issue utterance is the most noteworthy/important, and when the listener accepts the utterance ‘\textit{nani-yori-mo}(Utterance)’, the information it provides is added to the Common Ground (CG) independently of the information of the Utterance. For example, in the case of

\(^{16}\) Roberts uses Stalnaker’s notions of COMMON GROUND (CG) and CONTEXT SET. (Stalnaker 1978). The common ground is the set of propositions taken for granted by the speaker and listener(s) at a given point in a discourse. The context set is the set of possible worlds compatible with what is taken for granted by the interlocutors. Discourse involves the successive refinement of the context set.

\(^{17}\) Roberts’s model assumes that the semantics of a question introduces a set of possible answers (Hamblin 1973).
‘nani-yori-mo(ASSERT(p))’, if the utterance is accepted, both the content of the assertion (i.e. p) and the information regarding noteworthy comparison are updated to CG:

(59)  <QUD: What are good points of Taro?>
Nani-yori-mo Taro-wa yasashii.
What-then-MO Taro-TOP kind
‘More than anything, Taro is kind’
CG: {Taro is kind. The assertion that Taro is kind is more noteworthy than any alternative assertions related to QUD.}

In the case of ‘nani-yori-mo(COMMAND(p))’, the two kinds of information will be updated in different places. If the whole utterance is accepted, the proposition corresponding to the command form (i.e. p) is added to the set of domain goals, and the information on the noteworthiness of the at-issue command is updated to CG:

(60)  Nani-yori-mo jugyo-to ki-nasai.
What-than-MO class-ni come-IMP
‘More than anything, come to the class!’
Domain goals: {the addressee comes to the class.}
CG: {the command that ‘the addressee come to the class’ is more noteworthy for the speaker than any other command.}

Finally, in the case of ‘nani-yori-mo(Question(p))’, if the addressee accepts the whole utterance, the question is added to the set of QUDs and the information regarding noteworthy comparison is updated to CG:

(61)  Nani-yori-mo naze ryugaku si-ta-no?
What-than-MO why study abroad do-PAST-Q
‘More than anything, why did you study abroad?’
QUD {why did you study abroad?}
CG {The question of why you studied abroad is more noteworthy for the speaker than alternative Questions.}

The crucial point here is that the information regarding noteworthy comparison is always added to CG, regardless of whether the at-issue utterance is accepted by the addressee or not. For example, in (59) even if the addressee does not accept the
assertion ‘Taro is kind’, he/she will add the information that the speaker thinks that this assertion is more noteworthy than any alternative assertion to CG. It may be the case that the listener himself/herself does not think that this scalar meaning is right, but he/she will accept that the speaker thinks that it is.

This idea naturally fits into the multidimensional analysis of the noteworthy nani-yori-mo that we discussed in section 4. As we said, the meaning of the noteworthy nani-yori-mo is a conventional implicature that is independent of the at-issue content. Amaral et al. (2007) claim that CIs may be relevant to the question under discussion, but need not be. They propose the following felicity condition for an utterance:

\[(62)\quad \text{The felicity of an utterance necessitates that its at-issue content be relevant to the question under discussion. (Amaral, Roberts, and Smith 2007: 732)}\]

In the case of the noteworthy nani-yori-mo, its CI meaning is totally independent of the question under discussion.

### 6.2 Goal-orientedness of the noteworthy nani-yori-mo

In section 4.1, we proposed the following generalization on the alternatives created by the noteworthy nani-yori-mo:

\[(63)\quad \text{Generalization on the alternatives created by the noteworthy nani-yori-mo (not final): The noteworthy nani-yori-mo introduces a set of alternative propositions that is related to the ‘discourse topic’ (i.e. QUD).}\]

However, this generalization can only capture the declarative case, not cases where nani-yori-mo appears in other environments such as interrogatives and imperatives. I will thus propose the following revised generalization, which is based on the general concept of goals:

\[(64)\quad \text{Generalization on alternatives created by the comparison of noteworthiness (final version): The noteworthy nani-yori-mo introduces a set of alternative speech acts that contribute to achieving the same goal.}\]

The important part of the above definition is that alternatives are sensitive to the ‘goal’ of the conversation. Earlier, we argued that while there may be a big, general goal in discourse of sharing information about the world, we usually pursue more specific goals. I assume that each sentence type has different goals:
<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declarative</td>
<td>To answer the Question Under Discussion (QUD)</td>
</tr>
<tr>
<td>Interrogative</td>
<td>To achieve a specific goal (domain goal)</td>
</tr>
<tr>
<td>Imperative</td>
<td>To achieve a specific goal (domain goal)</td>
</tr>
</tbody>
</table>

A declarative sentence may be used to answer the QUD. On the other hand, interrogative and imperative sentences are used to achieve specific goals. For example, in (61) it is possible to argue that the speaker (an interviewer) asks the question ‘why did you study abroad’ in order to receive information that will help him/her to achieve a specific goal (e.g. to receive information on an applicant and determine whether he/she is suitable for the job). Likewise, in (60) the speaker commands the listener to come to class in order to achieve a specific goal (e.g. furthering the addressee’s studies).

By positing that each sentence type has a goal and assuming that the alternatives to *nani-yori-mo* are sensitive to that goal, we can explain the various kinds of alternatives in a uniform way.

### 6.3 Timing of Signaling a ‘Comparison of Noteworthiness’
Under what temporal circumstances is the noteworthy *nani-yori-mo* used? So far we have only looked at how the meaning of the noteworthy *nani-yori-mo* is updated and how alternative utterances are introduced in the discourse context, but we have not discussed their specific timing. In this section, we will consider the timing of the use of the noteworthy *nani-yori-mo* and clarify its pragmatic function in the dynamic sequence of discourse. I will show that there are two ways of timing for the use of the noteworthy *nani-yori-mo*: (i) to use it at the beginning of sequences of utterances; or (ii) to signal it at the end of sequences of utterances. We will show that each strategy has different pragmatic effects and information structure.

#### 6.3.1 Strategy 1: The First Utterance, The Most Noteworthy
Let us first look at the following dialogue:

(66) A: Tokyo-no ii tokoro-tte nan-desu-ka
     Tokyo-GEN good point-TE what-PRED.POL-Q
     ‘What is a good point of Tokyo?’/’What are the good points of Tokyo?’

   Let’s see what-than-MO Tokyo-TOP safe-PRED.POL
   ‘Let’s see. More than anything, Tokyo is safe.’
In this context, the speaker is listing his/her ideas about the most noteworthy utterances. As a reply to A’s question, speaker B starts by saying that Tokyo is safe and continues by saying that Tokyo is also convenient.

The following figure shows the moves and a scale structure of the above dialogue graphically:

(67)

Noteworthiness

\[
\text{possible alternatives} \begin{cases} \text{assert(Tokyo is safe)} & \text{potential move}_1 \\ \text{assert(p}_2) & \text{potential move}_2 \\ \text{assert(p}_3) & \text{potential move}_3 \\ \text{assert(p}_4) & \text{potential move}_3 \\ \text{... ...} & \text{potential move}_n \end{cases}
\]

This kind of strategy is conventionalized in the grammar of discourse. In natural language, there are many expressions that posit the assumption that “the earlier expressed, the more important.” The English expression *last but not least* is another good example:

(68) **Last but not least**, I’d like to thank all the catering staff.

The expression *last but not least* is used when speaker’s final utterance is ‘not less important than discourse-given utterances.’ This expression clearly suggests that ‘the first utterance is normally the most important.’ Japanese also has an expression that can support this norm.

(69) Saigo-ni nari-masi-ta-ga, kono purojekuto-o sapooto-si te
Last-to become-PRED.POL-PAST-but this project-ACC support-do TE
itadai-ta subete-no kata-ni fukaku kansya-itasimasu.
give.HON-PAST all-GEN people-to deeply thank-do.POL
‘lit. The following utterance is made at the end, but I would like to deeply thank all of the people who supported this project.’
Notice that the speaker is using the concessive expression *ga* ‘but.’ The utterance “p-ga q” implies that ‘generally, if q, then not p.’ The speaker uses the concessive marker *ga* because he/she thinks that thanking his/her supporters is very important, and normally this should have been done earlier.

The strategy of stating the most important information first is very effective because there is never any guarantee that the conversation will continue until the speaker has uttered everything he/she wants. Also, the listener may not be able to listen to every utterance due to lack of attention or concentration, etc. Thus, it is very useful to utter the most noteworthy utterance at the beginning of a series of utterances. Once the speaker utters the most noteworthy utterance, he or she has in a way satisfies his/her purpose, because he/she has conveyed the most important information to the addressee. The given utterance unilaterally entails the other utterances in terms of the degree of noteworthiness. In fact, it seems that it is often the case that the speaker only conveys the most noteworthy information and doesn’t move on to the next alternative utterance.

### 6.3.2 Strategy 2: The Last Utterance as the Most Noteworthy

However, there is another strategy for signaling the noteworthy comparison. As the following conversation shows, a speaker can signal the highest relative noteworthiness at the end of a series of utterances:

(70) A: Tokyo-no iitokoro-tte nan-desu-ka?
    Tokyo-GEN good point-TE what-PRED.POL-Q
    ‘What are the good points of Tokyo?’/What is a good point of Tokyo?’

B: (Utterance 1):
    Soo-desu-nee. Tokyo-wa benri-ga ii-si tabemono-mo
    Let’s see Tokyo-TOP convenience-NOM good-and food-also
    oisii-desu.
    good-PRED.POL.
    ‘Let’s see. Tokyo is convenient, and the food is also good.

---

18 The status of the meaning of *ga* ‘but’ can be controversial but we will not get into a discussion of that here. See Bach (1999) for a discussion of the status of the meaning of the English *but*.

19 The expression *saigo-ni nari masi ta-ga* is almost a fixed expression that is used for finishing a speech in a polite manner.
B: (Utterance 2):

Sosite nani-yori-mo, Tokyo-wa anzen-desu.
And what-than-MO Tokyo-TOP safe-PRED.POL
‘And more than anything, Tokyo is safe.’

Here, the speaker signals the most important information at the end of his/her series of utterances (i.e. Utterance 2). Graphically, we can represent the relative noteworthiness of each utterance as follows.\(^{20}\)

![Diagram of relative noteworthiness](https://via.placeholder.com/150)

Interestingly, exactly the same strategy can be observed in the English expression *more than anything*, which has the same meaning as the noteworthy *nani-yori-mo*:

\(\text{(71)}\)

You know I want you to be happy. And more than anything, I wanted to be the cause of happiness in you.
(\url{http://www.imdb.com/title/tt0421994/quotes})

I want to show the U.S. Ski Team how I can ski, I want to show the country how I can ski, and more than anything, I want to show the diabetes community what’s possible. I really did not want to have a blood-sugar episode on the biggest stage. I wanted this to be 'You can do anything with this disease' -- and I still totally believe that -- but there are setbacks along the way. I got one more chance.”

---

\(^{20}\) Note that the relative ranking of the alternative utterances is implicit (i.e. not clear). In the figure I have placed the utterance ‘Tokyo is convenient’ at the bottom of the scale, but it is also likely that that it is placed at the same level as the second utterance ‘Tokyo is warm’.
Strategy 2 is different from Strategy 1 in the following ways. First, Strategy 2 is different from the Strategy 1 in terms of the directionality of move. Strategy 2 is used when the speaker wants to convey the noteworthiness of his/her information in a cumulative way, i.e. from the bottom up. The fact the noteworthy nani-yori-mo (and also the English more than anything) always co-occur with the conjunction sorsite ‘and’ supports this fact. See the direction of move in Figure (71). On the other hand, in the case of Strategy 1, the directionality of movement is from top to bottom on the scale of noteworthiness.

Strategy 2 is also different from Strategy 1 in terms of information structure. In Strategy 2, the noteworthy nani-yori-mo (and the English more than anything) compares the at-issue utterance with ‘discourse-given’ alternative utterances. On the other hand, in the case of Strategy 1, the noteworthy nani-yori-mo (and the English more than anything) compares the at-issue utterance with potential alternative utterances. Strategy 2 is effective in providing information in a cumulative way.

In terms of the speech act, it seems that these two different strategies induce different higher-order speech acts (Grice 1989):

(74) Listing

Nani-yori-mo  Tokyo-wa  anzen-desu.
what-than-MO  Tokyo-TOP  safe-PRED.POL
At-issue: Tokyo is safe.’
CI: The utterance that Tokyo is safe is more noteworthy than any other utterance.
Higher-order speech act: listing

(75) Additive reinforcing

(i) Tokyo-wa  benri-ga  ii-si  tabemono-mo
    Tokyo-TOP  convenience-NOM  good-and  food-also
    oisii-desu.
good-PRED.POL.
    ‘Tokyo is convenient, and the food is also good.’
(ii): (Utterance 2):
    Sosite  nani-yori-mo,  Tokyo-wa  anzen-desu.
    And  what-than-MO  Tokyo-TOP  safe-PRED.POL
    At-issue: And, Tokyo is safe.
    CI: The utterance that Tokyo is safe is more noteworthy than any alternative utterance.
    Higher-order speech act: additive reinforcing
(74) has a higher-order speech act of ‘listing’, while (75ii) does not induce such a speech act. Instead, (75ii) seems to include a higher-order speech act of ‘adding reinforcing.’ A higher-order speech act is a non-central speech act in which the speaker is commenting on the performance of the central speech act (Grice 1989: 359-368). Notice, however, that I may be using the term higher-order speech act in a more general way. Under the Gricean pragmatic approach, conventional implicature inducing elements such as *on the other hand* and *frankly speaking* are often analyzed as indicating the presence of a higher-order speech act (Grice 1989: 362; Bach 1999). However, the speech acts of *listing* and *additive reinforcing* in (74) and (75ii) are not part of the meaning of the expression *nani-yori-mo.* Their emergence is purely pragmatic in that these higher level speech acts are sensitive to the timing of each expression. Thus, the higher-order speech acts in (74) and (75ii) are context dependent.

7. **Defining the notion of noteworthiness**

We have now understood how the meaning of comparison of noteworthiness is computed and updated during the discourse flow. However, we still have not understood the exact nature of the notion of noteworthiness. We merely stipulated that there is a gradable predicate ‘noteworthy’ as in (76):

(76) The lexical entry of the adjective *noteworthy* (final version)

\[=[[\text{noteworthy}]] = \lambda d \cdot \text{U. noteworthy(U)} = d\]

In the adjectival environment this adjective combines with the *pos*, which relates the degree argument to a contextually determined standard. In the comparative environment, the adjective ‘noteworthy’ directly combines with the null comparative morpheme *MORE* to create a meaning of comparison based on the scale of noteworthiness.

The questions are: Where does the notion of noteworthiness come from and what is its nature? It seems that since the notion of noteworthiness is not expressed by a lexical item, it has emerged evolutionally. I would like to consider that the notion of noteworthiness arised due to the necessity of signalling to what extent a given utterence contribute to achieving the goal of the conversation (see section 6.2 on the discussion on

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21 Bach (1999) uses the term second order speech act, instead of higher-order speech act.

22 The emergence of the higher-order speech act of additive reinforcing may be related to the use of the conjunction *sosite* ‘and.’
the notion of goal-orientedness of conversation). I propose that the notion of noteworthiness can be defined in relation to the primitive concept of goal:

(77) The at-issue utterance $U$ is noteworthy iff uttering $U$ contributes significantly to the goal of the conversation.

For instance, if $U$ is a declarative sentence, $U_{\text{decl}}$ is noteworthy if and only if it contributes significantly to the goal of the utterance (i.e. to answer the QUD). Whether the given utterance contributes significantly to the goal of the conversation is context-dependent. Building on the concept of the context-dependency of relative gradable predicates, I assume that utterance $U$ contributes significantly to the goal of the conversation if and only if the position created by uttering $U$ is beyond the contextual standard (threshold). We can visualize this idea as follows:

(78)

\[
\begin{array}{ccc}
\text{Standard} & \text{U (at-issue)} & \text{to the goal} \\
\end{array}
\]

\begin{center}
\begin{tikzpicture}
\path[draw,thick,->] (0,0) -- (2,0) node[midway,above] {\text{the degree of contribution}};
\end{tikzpicture}
\end{center}

Similarly, the comparison of noteworthiness can be defined based on its relationship with the goal of the conversation:

(79) The at-issue utterance $U_1$ is more noteworthy than the alternative utterance $U_2$ iff $U_1$ contributes more to the goal of the conversation than $U_2$.

The following figure visualizes the above definition:

(80)

\[
\begin{array}{ccc}
\text{U}_2 & \text{U}_1 (\text{at-issue}) & \text{to the goal} \\
\end{array}
\]

\begin{center}
\begin{tikzpicture}
\path[draw,thick,->] (0,0) -- (2,0) node[midway,above] {\text{the degree of contribution}};
\end{tikzpicture}
\end{center}

The only difference between (78) and (80) is whether the at-issue utterance is compared with a contextual standard or another utterance.

Based on the foregoing discussion, I assume that the notion of noteworthiness is a discourse-pragmatic scalar concept that measures the contribution of an utterance to the goal of the conversation.
8. Cross-linguistic comparison

In this paper we have (almost) solely focused on the dual-use phenomenon of the Japanese expression *nani-yori-mo* and considered the parallelism/non-parallelism between individual comparison and noteworthy comparison. However, this dual-use characteristic of comparative expression is not peculiar to Japanese, but is cross-linguistically pervasive. For example, in Korean a sentence with *mwues-pota-to* ‘what-than-TO’ can be ambiguous between the noteworthy and individual readings:

(81) Mwues-pota-to teynisu-nun caymi-itta. (Korean)
    what-than-TO tennis-TOP fun-decl
    ‘Tennis is more interesting than anything.’
    ‘More than anything, tennis is interesting.’

There is a morphological parallelism between the Japanese *nani-yori-mo* and the Korean *mwues-pota-to*. Furthermore, similarly to the case of the noteworthy *nani-yori-mo*, the noteworthy *mwues-pota-to* can occur in command and question environments:

(82) a. Mwues-pota-to, swuep-ey (com) o-ala! (Imperative)
    what-than-TO, class-loc (COM) come-Imp
    ‘More than anything, come to the class!’

    b. Mwues-pota-to, Tokyo-ey way ka-ss-e? (Interrogative)
    What-than-TO, Tokyo-loc why go-Past-Decl
    ‘More than anything, why did you go to Tokyo?’

Thus, it is highly likely that we can apply our semantic/pragmatic analysis of *nani-yori-mo* to *mwues-pota-to*.

Similar phenomena can be observed in English as well. We can express the two readings using exactly the same degree morphemes (i.e. *more, than*). However, in English individual comparison and noteworthy comparison are distinguished by their surface form:

(83) Tennis is more interesting than anything. (Individual reading)
(84) a. More than anything, tennis is interesting. (Noteworthy reading)
    b. Tennis is, more than anything, interesting. (Noteworthy reading)

(83) only has an individual reading, while (84) only has a noteworthy reading.

Similarly to the noteworthy *nani-yori-mo* (and the Korean *mwues-pota-to*), *more
than anything can appear in various kinds of sentences:

(85)  a. More than anything, do not start training again until you are fully recovered.
     (http://www.faant.com/library/race-recovery-secrets-revealed.cfm)
     (Imperative)

     b. More than anything, why do you care so much?
     (www.circleofmoms.com/.../what-s-the-appeal-in-naming-your-girl-a-boy-s-
     name-563913 -) (Interrogative)

Thus, we can say that the English more than anything also operates on the speech act level. The above cross-linguistic data strongly suggest that the noteworthy comparison is not a matter of language-specific (or lexicon-specific) phenomena, and that it is not a coincidence that individual comparison and noteworthy comparison are expressed based on the same degree morphology.

The question is how we should analyze the meaning of the English more than anything. Note that in English there is also an expression more important than anything (else). This expression is semantically analogous to the expression more than anything:

(86)  More important than anything (else), tennis is interesting.

This seems to support the idea that there is an implicit gradable predicate of noteworthy (or important) in the semantics of more than anything. The decompositional approach we proposed seems to naturally apply to the English more than anything. However, notice that unlike the case of the Japanese nani-yori-mo and the Korean mwues-pota-to, in more than anything, there is no particle corresponding to mo or the Korean to. In our analysis, the particle mo (or to in Korean) selects all possible alternatives created by indeterminate pronouns. Notice also that there is no wh-word in the English more than anything.

I think that it is possible to argue that here, any performs a similar role to ‘an indefinite pronoun plus mo.’ In Kadmon and Landman’s (1993) seminal paper on the meaning/distribution of any, this word is characterized by the concepts of domain widening and strengthening. These researchers argue that in the form of ‘any CN’ (common noun) in the domain-widening component, any widens the interpretation of the common noun phrase along some contextual dimension (Kadmon and Landman 1993: 361). In our case, it is possible to consider that in the case of the individual comparison, any widens the domain of the individual (thing), whereas in the case of the noteworthy comparison, any widens the speech act (utterance) domain.
Note that the domain widening is associated with the pragmatic function of strengthening. That is, *any* is licensed only if the widening that it induces creates a stronger statement, i.e., only if the statement involving the wide interpretation entails the statement involving the narrow interpretation (Kadmon and Landman 1993: 369). The intuition behind this analysis is that *any* has an emphatic function that ‘even the broadest choice of domain makes the statement true’ (See also Chierchia 2006, Krifka 1995; Lee and Horn 1994; Lahiri 1998). I think that this looks very similar to what [wh plus *mo*] and [wh plus *to*] are doing. *Any* and *mo (to)* are both taking all the possible alternatives into consideration and creating a strong statement.

9. Other Related Phenomena

9.1 *Sore-yori-(mo) ‘lit. than that’*

Finally, let us consider some phenomena related to noteworthy comparison. In natural language there are various kinds of ‘pragmatic’ comparative expressions other than the noteworthy *nani-yori-mo*. For example, in (87) the Japanese expression *sore-yori(-mo)* ‘lit. that-than-MO’ compares the at-issue question (QUD) to the discourse-given question (QUD) and says that the at-issue question is more important/preferable than the discourse-given question:

(87) Sore-yori(-mo) kinoo-no siken-wa doo-da-ta?
    That-than-MO yesterday-GEN exam-TOP how-PRED.PAST
    At-issue: How was yesterday’s exam?
    CI: To ask ‘how was yesterday’s exam’ is a more important topic than the current topic.
    (∼ By the way, how was yesterday’s exam?)

Kawabata (2002) observes that the phrase *sore-yori-mo* is used when the speaker wants to ‘change a topic’ because he/she thinks that there is a more preferable/suitable topic than a discourse-given topic. She then classifies the expression as a kind of topic-changing conjunction. I think that this expression is similar to the noteworthy *nani-yori-mo* in that it also measures the value of information. However, it seems that *sore-yori-mo* is different from *nani-yori-mo* in that the former only arises in non-assertive environments such as question, suggestion, command and request (See Kawabata (2002) for the discussion on the use of *sore-yori-mo*).
9.2 Metalinguistic comparison with indeterminateness

Metalinguistic comparison also involves a pragmatic scale:

(88) It is quite big itself, though, more tall than anything.
(cf. It is taller than anything.)

(89) You're not that big, more tall than anything.
(www.learngospelmusic.com/forums/index.php?action=profile;u=68224;sa=showPosts) (cf. ??You are taller than anything.)

The above examples are considered to be metalingusitic in that they posit pragmatic scales like appropriateness, truthfulness, or preference. For example, in (89) the sentence asserts that to say ‘you are tall’ is more appropriate or preferable than any other possible description of the addressee. It seems that unlike the noteworthy comparison, the metalingusitic comparison operates on a propositional level, but similarly to the case of noteworthy comparison, it measures the value of information.23

10. Conclusions

This paper has investigated the semantics/pragmatics of two types of comparison with indeterminateness and has considered their dimensionality and compositionality in meaning, as well as the role of scalarity in discourse structure. In terms of compositionality and dimensionality, I argue that although the meanings of the individual comparison and the comparison of noteworthiness are interpreted at different dimensions (the former is interpreted at the at-issue level, while the latter is interpreted at the CI level), there is a striking parallelism between them in terms of scale structure. I explained the similarities and differences between the two kinds of comparison based on Potts’s multidimensional compositional system (Potts 2005).

We then discussed the pragmatic properties of the noteworthy comparison from the perspective of the discourse context. I argued that the noteworthy nani-yori-mo relativizes the dynamic sequence of discourse (Roberts 1996; 2002) and signals that the at-issue utterance is the most noteworthy. I then showed that there are two strategies for signaling the noteworthy comparison—at the beginning or the end of a discourse sequence. I showed that each strategy has a different information structure and

23 For a detailed discussion on the semantics of metalinguistic comparison, see Giannakidou and Stavrou (2009), Giannakidou and Yoon (2011) and Morzycki (2011) and references therein.
directionality of scale. We further discussed the notion of noteworthiness in detail and argued that it measures to what extent an at-issue utterance contributes to achieving the goal of the conversation.

Finally, let us consider the importance of scalarity in discourse context. The concept of scalarity is important at the discourse-pragmatic level. The pragmatic notion of noteworthiness is important for the speaker/listener because the concept helps him/her to understand to what extent the at-issue information is significant for achieving his/her goals. If there was no such notion, we would have to pay attention to every utterance equally and take more time to achieve the goal (purpose) of the conversation. The notion of comparison is also important at the discourse-pragmatic level because it helps the speaker to manage his/her series of utterances and relativizes plural utterances based on the same property. In a way, pragmatic comparison is similar to the logical connective in that it helps us to connect other (potential) utterances, but in addition to this, pragmatic comparison relativizes the relationships between/among utterances.

The theoretical implications of this paper are that scalarity in natural language is ubiquitous and that the scale structures at the level of semantics are extended to the discourse-pragmatic dimension in a parallel way. This consequence is significant for the theory of semantics/pragmatics interface, because it strongly suggests that there is a shared conceptual basis for the at-issue meaning (semantics) and a CI meaning (pragmatics). For the multidimensional theory, this is a natural consequence because the system assumes that both at-issue meaning and CI are compositional, although they are interpreted at different levels. I hope this paper will shed new light on the issue of the semantics-pragmatics interface.

This paper has left a number of significant questions for future research. First, more typological surveys should be conducted with respect to the pragmatic comparison of noteworthiness. We have looked at data that contain the standard markers like yori ‘than’, than, or pota ‘than. Korean’ but we have not considered what happens in languages which do not use a marker of standard (e.g. the exceed-type comparison languages.)

The second question is concerned with the implicitness of pragmatic gradable predicates. In this paper, we have proposed that there is an implicit gradable predicate in the logical structure of the noteworthy nani-yori-mo, and in section 9, we observed that the expression sore-yori-mo ‘that-than-MO’ and metalinguistic comparison also seem to have implicit gradable predicates like ‘important’ and ‘truthful/preferable’, respectively. The question is why pragmatic gradable predicates are implicit. There must be a reason that they are not linguistically encoded in an expressed way. Finally, it is worthwhile to consider to what extent ‘pragmatic’ gradable predicates have fine-grained scale
structures. Do pragmatic gradable predicates have fine-grained scale structures similar to those of semantic gradable predicates (e.g. open vs. closed scales; Kennedy and McNally 2005)? I think that this question is crucial for understanding the regularity and systematic nature of scale structure in the discourse context. I would like to leave these questions for future research.

Acknowledgement

References


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