The theory of territory of information: The case of Japanese

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This paper proposes a pragmatic theory of the territory of information. Just as many animals, including humans, have territories of which they claim their ownership, this paper asserts that the use of human language is controlled by a notion of territory. The target of analysis in terms of this notion here is Japanese. Arguments are presented which demonstrate that the notion of territory does indeed play a major role in the language. A formalization of the theory of territory of information is attempted, and, using examples from Japanese, the details of the theory are explained and justified. Finally, applications of the theory to other languages and to a variety of pragmatic phenomena are suggested.

1. Introduction

The purpose of the present paper is to propose a theory in pragmatics called the theory of territory of information. The basic idea on which it stands is derived from the study of territory in animal behavior (e.g. Eibl-Eibesfeldt, 1989). Eibl-Eibesfeldt writes:

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* This paper presents a much-revised version of the theory of territory of information which was proposed in Kamio (1990), published in Japanese.

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"Most higher vertebrates (birds, mammals, reptiles) are territorial. They maintain specific areas known as territories as individuals or in pairs or closed groups, and these territories are defended against intruders. ... Man is also disposed to take possession of land and to delineate between himself or his group and other individuals and groups. Group members respect the territorial claim of another group member, ..." (Eibl-Eibesfeldt, 1989: 321)

The theory of territory of information assumes that human territory is also reflected in the use of language and systematically controls it.

The theory to be developed below falls into the realm of modality in general and that of evidentiality in particular. Recent surveys of the study of evidentiality (Chafe and Nichols, 1986; Willett, 1988) show that it still lacks an appropriate theoretical framework. This paper is an attempt to provide one such framework using Japanese as a target language.

Our theory is based on the notion of psychological distance between a given piece of information and the speaker/hearer. The concept of the speaker’s/hearer’s territory of information will be defined in terms of this notion. Some linguists have attempted to explicate the notion of evidentiality in terms of the involvement of the speaker/hearer, or in terms of psychological distance between information and the speaker/hearer (Hansarling, 1984, as cited in Palmer, 1986; Willett, 1988).

It has also been claimed in experimental as well as theoretical research in psycholinguistics that various cognitive or emotional states reflect kinds of psychological distance, and make linguistic forms more or less direct (Wiener and Mehrabian, 1968; Rommetveit, 1974; Ertel, 1977; Bradac et al., 1980; Arndt and Janney, 1987). For example, Wiener and Mehrabian (1968:94) claim that their notion of verbal immediacy, i.e. the degree to which the speaker associates him/herself with the topic of an utterance, controls the difference between direct and indirect forms, for example, between John is sick and I think John is sick. Our theory seeks to establish the relationship between information, the speaker’s/hearer’s cognitive state of knowledge of information, and the forms of utterances.

The organization of this paper is as follows: section 2 provides introductory remarks on Japanese; section 3 provides basic observations and an interpretation of them in terms of the notion of territory of information; section 4 shows that no other accounts exist for the observations presented in section 3; section 5 formalizes the theory and justifies its details. Finally, section 6 concludes with further applications of the theory proposed in this paper.

2. Japanese sentence-final forms

A given piece of information\(^1\) may be expressed in a variety of sentence

\(^1\) In this paper, we will use the term 'information' without a precise definition. In fact, it is so basic that it is extremely difficult to define. Roughly, it corresponds to what is generally
forms, each of which is appropriate to a particular type of situation. For example, the information expressed in utterance (1):

(1) Boston has an unexpectedly small population.

can, in Japanese, be communicated by expressions such as those in (2) and (3), among many others:\(^2\)

(2) Boston wa angai zinkoo ga sukunai.

‘Boston has an unexpectedly small population.’

(3a) Boston wa angai zinkoo ga sukunai\(^3\) -tte.

‘I hear Boston has an unexpectedly small population.’

(3b) Boston wa angai zinkoo ga sukunai-yoo da.

‘Boston appears to have an unexpectedly small population.’

Utterance (2) is one of the most direct and definite expressions for conveying the information (1). The examples in (3), on the other hand, are used for more indirect and indefinite expressions.

These examples illustrate that Japanese has a well developed system of sentence-final forms. This fact has long been noted, but as far as we know, traditional research in Japanese has not gone beyond classifications of sentence-final forms in terms of evidentiality (e.g. Aoki, 1986). Thus, the sentence-final form, in fact a zero form, in utterance (2) has been characterized as appropriate when the speaker has adequate evidence for conveying information (1), while the sentence-final forms in (3) have been characterized as indicating that the evidential basis is hearsay (in (3a)) or inference (in (3b)).

understood by the term ‘proposition’ minus whatever so-called modal elements contribute to it. Thus, (i) and (ii) share the same information in our terms:

(i) John likes music.

(ii) John may like music.

(iib) I hear John likes music.

(iic) John apparently likes music.

In other words, the underlined elements do not contribute to the information these utterances express.

\(^2\) In this paper, we will use the following abbreviatory symbols: TM = Topic Marker; NM = Nominative Marker; HM = Hearsay Marker; QM = Question Marker or Quotative Marker; CP = Complementizer; AM = Accusative Marker; SF = Sentence-final Particle; -F = formal form; -P = honorific form.

\(^3\) We indicate sentence-final elements in Japanese, which play an extremely important role in this paper, by adding a hyphen as a prefix, as in ‘-rasii’, in (the uppermost line of) example utterances. We will also use hyphens in their ordinary usage, but the distinction should be clear.
Kamio (1979) analyzes the pragmatic function of sentence-final forms, proposing the notion of territory of information. This paper extends the analysis proposed in Kamio (1979), although it also contains a partial recapitulation of that paper.4

3. Japanese sentence-final forms and the notion of territory

Detailed observations of Japanese sentence-final forms will show that the traditional characterization cannot provide a unified explanation; some cases can be treated by the traditional approach but others cannot. We will consider various cases in turn, classifying them into three groups.

3.1. Information about direct experience

Consider, first, utterance (4):

(4) Watasi, atama ga itai.
    I head NM ache
    'I have a headache.'

(4) ends with the main predicate, taking the zero sentence-final form in our terms. Thus, like utterance (2) above, (4) expresses the information in a direct and definite form. Let us call forms like this the direct form. In contrast, sentence-final forms like those in utterances (3a) and (3b), which are appended to main predicates and serve to make the assertions weaker and more indefinite, will be called the indirect form.5 Turned into the indirect form, then, utterance (4) would look like (5):

(5a) ??Watasi, atama ga itai-tte.
    I head NM ache HM
    Lit. 'I hear I have a headache.'

4 Since this paper is closely related to Kamio (1979) and Kamio (1990), we will for the most part cite material from these two works without attribution, since noting each citation would be awkward.

5 We will use each of the terms 'direct form' and 'indirect form' in an ambiguous way. That is, they may refer to specific sentence-final forms (including the zero form in the case of the direct form), or to whole utterances which contain one of these elements. For example, in (i) below:

(i) Ano e wa nusumareta-rasii.
    that picture TM was-stolen seem
    'The picture seems to have been stolen.'

either rasii itself or (i) as a whole may be referred to as an indirect form.
All these utterances are quite odd. Thus, utterance (4) cannot be turned into the indirect form. The traditional analysis provides the obvious explanation that since (4) expresses information obtained by the speaker's direct experience, this cannot be expressed as information based on hearsay or inference. This is consistent with the naturalness of utterance (6), in which the subject is someone other than the speaker:

(6) Ano hito, atama ga itai-tte/-yoo da/-rasii.
    that person head NM ache HM appear is seem
    'I hear/It appears/It seems that that person has a headache.'

In (6), the information being conveyed is obtained by the speaker's observation of a third party and not by his/her own direct experience. Thus, this explanation seems basically correct. What is important to us here, however, is not the correctness of this traditional explanation but the correlation between information obtained through the speaker's direct experience and the direct form, as suggested by utterances (4) through (6).

These observations point to a clear generalization: utterances which express information obtained by the speaker's direct experience must be expressed in the direct form. In such utterances, various sentence-final forms which function as markers of hearsay and inference cannot be used.

A first approximation of our explanation for these observations is as follows: the speaker has a conceptual category that is called his/her 'territory of information'. Information that is obtained through the speaker's direct experience is a central component of information that falls within his/her territory of information, precisely because such information is directly acquired by the speaker through his/her own experience. The generalization reached in this subsection suggests that information falling into the speaker's territory is expressed in the direct form. As this section proceeds, it will be made clearer what other kinds of information the speaker's territory of information may contain.

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6 Here yo is a sentence-final particle which roughly conveys the sense of 'I tell you'. Since it does not have an important theoretical status in our analysis, we will not discuss its character.
3.2. Information about personal data

3.2.1. Personal information

Consider the next example, which falls into another class:

(7) Taroo wa byooki desu.
    TM ill is-F
‘Taroo is ill.’

(7) is clearly in the direct form. Thus, as predicted from the correlation explained in section 3.1, (7) would be quite appropriate when, for example, the speaker directly observes Taroo lying in bed and then reports to one of Taroo’s friends about Taroo’s condition. On the other hand, (7) cannot be used in situations such as the following. If one of Taroo’s friends visits his home and is told by his mother that Taroo is ill, the friend cannot use (7) to give the information to other individuals. This is because the friend has not seen Taroo lying in bed but has merely been told that Taroo is ill.

Utterance (7), however, is appropriate in situations like the following. Suppose that Taroo’s father lives separately from his family and that one day Taroo’s mother makes a long-distance telephone call to tell him that Taroo is ill. Suppose further that on the next day, one of Taroo’s father’s colleagues or superiors happens to ask him how his son is doing. Then, (7) sounds perfectly fine. Notice that in this case, Taroo’s father lacks direct observation of his own son. In fact, he got the information represented in (7) through his wife, that is, by a kind of hearsay.7

Utterance (7) is quite natural in the situation just described. Moreover, if Taroo’s father added a sentence-final form indicating hearsay to (7), then the utterance would be rather strange:

It is very important to note that Taroo’s father may use an indirect version of (7) in other situations, such as the following. Suppose that he and his close friend are talking in his apartment far away from his family home. Suppose further that then the telephone rings, and he receives the news from his wife that his son is ill. Then, in response to his friend’s immediate question, “What happened?” Taroo’s father may reply with (i):

(i) Taroo ga byooki da-tte.
    NM ill is HM
Lit. ‘I hear Taroo is ill.’

(ii) Taroo ga byooki-rasii.
    NM ill seem
‘Taroo seems to be ill.’

Notice, however, that Taroo’s father’s utterances, like those in (i) (especially (ia)), are natural immediately after the telephone call. That is, if he is asked the next day by his colleague about how his son is doing, he cannot use (i) naturally, as pointed out in the text. Another situation where Taroo’s father may use (ib) is when his wife’s report is so vague or insufficient that he cannot establish a definite basis for the information about his son’s illness. Cases like these will be treated in section 5.2.
Both utterances in (8) sound as if Taroo's father were very indifferent to his son, or as if he considered his son's illness totally irrelevant to himself.

This observation shows that in cases like (8), the direct form may express information which is not obtained by direct experience but by hearsay, and that in such cases, the indirect form for indicating hearsay produces marginally acceptable utterances.

Utterances like (7) also convey information about persons and things which are close to the speaker: that is, personal information about the speaker. Observe utterance (9):

(9) Kanai wa 46 desu.
    my-wife TM is-F
    'My wife is 46 years old.'

(9) expresses information that is impossible to know by direct observation; nevertheless, the husband would obviously use the direct form in communicating this information to another person.

Just as in the case of (7), if this form were a form which indicates that the information is hearsay-based, then the utterances would sound strange:

(10) ??Kanai wa 46 desu-tte/ da-soo desu.
    wife TM isHM is hear is-F
    Lit. 'I hear my wife is 46.'

In this example, the speaker sounds as if he were totally indifferent to his wife.

3.2.2. Geographical information

A subclass of cases involving personal information includes those concerned with geographical information. Observe utterances (11) and (12):

(11) Kyoto no zinkoo wa 150-man gurai desu yo.
    of population TM ten-thousand about is-F SF
    'The population of Kyoto is about 1,500,000.'

(12) Kusiro wa samui yo.
    TM cold SF
    'It's cold in Kusiro.'
Both (11) and (12) clearly have the direct form. These utterances can be used naturally by speakers who have, or have had, a geographical relation to the places mentioned in them, when they talk to persons who have no such geographical relation. That is, (11) would be natural from a speaker who actually lives in Kyoto or its vicinity, or who has once lived there, to a hearer who has had no such experience; similarly, (12) would be natural when the speaker is or was a resident of Kusiro or its vicinity, or when he/she has been a visitor to the city in winter, but the hearer is not such a person.

If, however, the speaker has no geographical relation to the place mentioned in examples like (11) and (12), but the hearer has, the utterances must be turned into indirect forms such as those in (13) and (14):

(13) Kyoto no zinkoo wa 150-man gurai-rasii ne/-no yoo desu ne.8
   of population TM ten-thousand about seem SF of look is-F SF
   'It seems/It looks like the population of Kyoto is about 1,500,000, isn't it?'
(14) Kusiro wa samui-rasii ne/soo da ne.
    TM cold seem SF hear is SF
    'It seems/I hear it's cold in Kusiro, isn't it?'

3.2.3. Information about plans, actions, and behavior

Observe next the following examples:

(15) Kore kara Osaka e ikimasu.
    this from to go-F
    'I am going to Osaka now.'
(16) Kyoo wa mou kaeru yo.
    today TM now go-home SF
    'I will go home now.'

Examples like these express the speaker's own plan, action, behavior, etc. In this sense, they constitute still another subclass of personal information. This class must also be expressed in the direct form. Thus, both (15) and (16), which are in the direct form, are perfectly natural, whereas utterances (17) and (18), which are in the indirect form, are very strange in the sense given in the gloss:

8 One might here think of the distinction between informational and non-informational utterances that has been discussed in the literature (e.g. Jakobson, 1960). That is, utterances whose primary function is to convey information to the hearer are quite different in many respects from utterances whose primary function is to express something other than substantive information.

According to this idea, utterances like (13) and (14) would be considered to have a non-informational character, since they are used to express information that is already known to the hearer. Thus, the utterance-final ne would be interpreted as an indicator of this non-informational character. Later in section 5.10, however, we will show that the characterization of ne can be captured in terms of our theory, which is independent of the informational or non-informational character of an utterance. Thus, these notions may be relevant to our theory but not essential to it.
If acceptable, (17) and (18) can only mean that the speaker has heard that, or it seems to the speaker that, someone other than the speaker is going somewhere.

Thus, utterances conveying information about the speaker’s plan, action, behavior, etc. must also be in the direct form. Summarizing the previous subsections of 3.2, these three sub-classes of information must be uniformly expressed in the direct form. From our point of view, this generalization can be explained straightforwardly: it obtains because the three subclasses of information express personal information.

3.2.4. Implications

Information that is essentially personal to the speaker must be expressed in the direct form, even when it is not obtained by direct observation. Section 3.1 showed that information obtained by the speaker’s direct observation must be expressed in the direct form. We can now say that information which embodies the speaker’s direct experience or the speaker’s personal information must also be expressed in the direct form. An obvious question is why these two classes of information are linguistically treated in the same way.

Our tentative answer to this is that both classes of information fall within the speaker’s territory of information: just as information acquired by his/her own direct experience constitutes a major class of information in the speaker’s territory, information about persons, facts, and things close to him/her also constitutes one of the central components of information falling within the speaker’s territory of information. This is why both classes of information are expressed in the direct form.

3.3. Information about expertise

In section 3.2.2, we observed how geographical information is expressed. There is, however, a class of speakers who are exceptions to the observations and the generalization obtained there. They are professional demographers and meteorologists. They can quite naturally say (19) or (20), even if they themselves do not have any particular geographical relation to Kyoto or Kusiro:

(19) Kyoto no zinkoo wa 150-man gurai desu yo. (= (11))
‘The population of Kyoto is about 1,500,000.’
Thus a demographer can use (19), a direct form, except when the hearer has a geographical relation to Kyoto or is a colleague in the same field; likewise, a meteorologist can say (20), also a direct form, except when talking to a resident of Kusiro or to a fellow meteorologist.

This observation therefore suggests that information that falls within the knowledge of the speaker's professional or other expertise can be expressed in the direct form. A further example below attests to the correctness of this generalization:

(21) Pari e wa tyokkoubin ga benri desu.
Paris to TM direct-flight NM convenient is-F
'To go to Paris, a direct flight is convenient.'

A travel agent, or a very experienced traveler, may naturally use an utterance in the direct form like (21) when talking to a novice traveler who is planning a trip to Paris.

In our interpretation, this means that information pertinent to spheres of knowledge in various fields is considered to fall within the territory of an expert in such fields, professional or otherwise. This easily explains why experts can use the direct form in conveying information within their fields of expertise to hearers with no special training in those fields.

3.4. Implications of the preceding observations

Three broad classes of information are expressed in Japanese in the direct form when they are considered to fall within the speaker's territory of information. We have also seen that there are cases in which an interaction is observed between the speaker's territory of information and the hearer's. In such cases, information can only be expressed in the direct form if the information falls within the speaker's territory but not the hearer's.

We have so far based the notion of territory of information on an intuitive analogy to the general idea of territory often noticed in animal behavior, and referred to in everyday speech. In the next section, we will make the character of the speaker's/hearer's territory more explicit, and provide arguments that are indeed necessary to explain the kinds of phenomena we have observed in this section.
4. Arguments for the concept of territory of information

4.1. The speaker's/hearer's territory

Our discussions in 3.1 to 3.4 enumerated three different classes of information, summarized in I:

I. Classes of information
(a) information obtained through the speaker's direct experience
(b) information about persons, facts, and things close to the speaker, including information about the speaker's plans, actions, and behavior and information about places to which the speaker has a geographical relation
(c) information embodying detailed knowledge which falls within the speaker's professional or other expertise

As far as we are aware, all and only these three classes of information are relevant to the notion of the speaker's territory of information; although this list will be elaborated later, it sufficiently captures the classes of information which involve the notion of territory, and it reflects the general character of the speaker's territory of information. Notice that the three clauses in list I collectively define what is intuitively 'close' to the speaker: the speaker's territory of information is a conceptual category which contains information close to the speaker him/herself. Therefore, only information which can be classified as belonging to one of the three clauses in list I is considered to fall within the speaker's territory of information; other information is not inside the speaker's territory.

We alluded to the hearer's territory of information in the discussion of geographical relation. The hearer's territory of information can be defined quite simply by replacing each occurrence of 'the speaker' in list I by 'the hearer'. It is thus no different in character except that the speaker, rather than the hearer, assumes its existence and its functioning in a speech situation. Consider utterance (22):

(22a) Ano hito, kimi no tomodati-desyoo?
that person you of friend is-will-F
'Isn't that person your friend?'
(22b) *Ano hito, kimi no tomodati desu.
that person you of friend is-F
Lit. 'That person is your friend.'

Suppose that Taroo and Hanako are talking in the lobby of a hotel. Then a second man, who Taroo believes to be Hanako's friend, appears behind
Hanako, but she does not notice him. In this situation, when Taroo has recognized him, he will use (22a), a non-direct form, to let her know her friend happens to be close by. If he used (22b), a direct form, then the utterance would be very odd. The explanation for this is clear: because by condition Ib, the information about the relationship between Hanako and the second man falls into her territory of information but not Taroo's. From Taroo's point of view, Hanako's territory of information is functioning, and thus a non-direct form is required. Taroo, the speaker of (22), must assume all this. Therefore, the existence and functioning of the hearer's territory (as well as the speaker's own) must be assumed by the speaker.

4.2. *An argument for territory of information*

We have so far used the terms 'the speaker's and the hearer's territories of information' when giving a number of tentative explanations for the examples we have cited. Now it seems necessary to argue that what is really at work is a principle of the territory of information, and not anything else. For this purpose, consider again utterance (7), which is reproduced here as (23):

(23)  
\[
\begin{align*}
\text{Taroo wa byooki desu.} \\
\quad \text{TM ill is-F} \\
\quad \text{‘Taroo is ill.’}
\end{align*}
\]

The point of this example was that it can and must be used even when the speaker, Taroo's father, has not seen his son lying in bed: the only source of information that Taroo's father had was a telephone call from his wife.

One might here point out that since the source of information is his wife, who is a very reliable source, Taroo's father received information which is as reliable as any he could have directly perceived. Therefore, according to this counterargument, he must use the direct form, as in (23), when conveying the information to others. This claim can be refuted as follows.

Suppose that measles is prevalent in the neighborhood of Taroo's home, and that Taroo's mother has actually seen a child lying in bed who has contracted the disease. Suppose further that she tells her husband about this over the telephone. Then, if an appropriate occasion for this topic arose on the next day, he would say (24) to his friend:

(24)  
\[
\begin{align*}
\text{Kinzyo no ko ga hasika ni kakatta-soo da.} \\
\quad \text{neighborhood of child NM measles by caught hear is} \\
\quad \text{‘I hear a child in the neighborhood of my home caught the measles.’}
\end{align*}
\]

(24) is clearly in the indirect form, in contrast to (23). The original source of this information is no doubt what the speaker's wife directly perceived.
Therefore, what makes a difference in (23) and (24) is that information about someone else's child is not personal to Taroo's father. That is, it is not as close to him as the information about his own son. Therefore, in terms of condition Ib, the information expressed in (23) falls into Taroo's father's territory of information, but the information expressed in (24) does not. It is exactly for this reason that the former is conveyed in the direct form, while the latter is conveyed in the indirect form.

There are various other, vaguer counterarguments. For example, since Taroo is the speaker's son, information about Taroo must be familiar to the speaker, or the speaker must have detailed knowledge about Taroo. Because of this, the argument runs, Taroo's father must have unusually strong confidence in information about Taroo, so that when Taroo's father talks about his son, he can or must use the direct form, which is the most definite means of expressing information about his son.

Arguments like this can be refuted quite easily. Recall that utterance (23) conveys the information that Taroo is ill. It is quite possible that Taroo has never been ill before. In this case also, Taroo's father can naturally use (23), although information about his son's illness is not at all familiar to him and, in the situation assumed for (23), he may not have detailed knowledge about Taroo's current condition. If, on the other hand, the above counterargument claims that Taroo's father must be confident in any and all information about Taroo, presupposing that information a speaker is strongly confident about is expressed in the direct form, then it would follow that Taroo's father cannot use any indirect form when talking about his son. This is, however, contrary to fact. For example, if Taroo goes to an Australian college and writes to his family for the first time saying that he is doing well, then, on reading the letter, Taroo's father would say (25), an indirect form, to his wife:

(25) Taroo wa genki de yatte iru-yoo da na.⁹

NM well in doing is appear is SF

'Taroo seems to be doing well.'

Thus, arguments like those above collapse.

Our arguments for the notion of the speaker's/hearer's territory of information can be applied to cases of information expressing the speaker's direct experience, and to those of information falling into the speaker's expertise, in essentially the same way. This can be seen from our observation that these two kinds of cases are also concerned with information close to the speaker/hearer, though not with personal information.

⁹ Utterance (25) might seem to be an exception to list Ib. Recall, however, fn. 7, in which it was pointed out that if a person receives information about another person close to him/her, he/she may use an indirect form immediately after the reception of information, or when the basis for the information is insufficient. Utterance (25) is also such a case when Taroo's father says it.
4.3. Another argument for territory of information

The foregoing discussions have made it clear that the distinction between the direct and the indirect or non-direct forms is controlled by the speaker’s/hearer’s territory of information. As an example in which the two territories of information interact, let us consider the following situation. Suppose that the president of a company is talking with a business associate in the former’s office. The president’s secretary comes in and tells the president that he/she has a meeting at three o’clock. Note here that the two business people hear the secretary’s utterance at the same time. Later, when it is close to three o’clock, and the president wants to remind his/her guest that he/she must attend the meeting, he/she can say (26):

(26) President: Watasi wa 3-zi kara kaigi ga arimasu (kara)\textsuperscript{10}\textsuperscript{11} I TM o’clock from meeting NM have since ‘(Since) I have a meeting at three’

On the other hand, if the associate notices that it is now close to three, and wants to bring the meeting to a close so that the president may attend to the next appointment, he/she would have to say (27), and cannot say (28):

(27) Associate: Syatyoo wa 3-zi kara kaigi ga aru-yoo President TM o’clock from meeting NM have appear desu kara/aru-soo desu kara is-F since/hear is-F since ‘Since it appears/I hear the president has a meeting from three’

(28) Associate: ??Syatyoo wa 3-zi kara kaigi ga arimasu kara. president TM o’clock from meeting NM have-F since Lit. ‘Since the president has a meeting from three’

\textsuperscript{10} This use of \textit{kara} (since) and other conjunctive particles is commonly observed in colloquial speech. Although they have a specific lexical meaning, in this use they are almost meaningless and always lack the other clause. Their major function in this use seems to be to allow the utterances in which they appear to avoid a definite assertion.

\textsuperscript{11} Kuno (personal communication) points out that in this situation, the president may say (i), an indirect form:

(i) Watasi wa 3-zi kara kaigi ga aru-yoo desu (kara).
I TM o’clock from meeting NM have appear is since ‘(Since) I appear to have a meeting at three’

In fact, (i) sounds softer than utterance (26). There are two reasons why (i) is appropriate here. First, since the president knew about the meeting from his/her secretary’s utterance, the information that he/she has a meeting at three may not fall into his territory. (See fns. 7 and 9, and meta-condition Vb in section 5.2). Secondly, even if the information falls into his territory by condition Ic, the president can choose to use an indirect form to achieve the rhetorical effect pointed out above.
Thus, an indirect form is appropriate for the associate's utterance in this situation.

The president, however, can use a direct form, since the meeting constitutes his/her own business. Following condition Ib about the speaker's plans, actions, and behavior, the information expressed in (26) falls into the president's territory of information. Hence, the direct form is appropriate in his/her utterance. In contrast, the associate cannot use a direct form, since the meeting is an event internal to the president's company, and the associate is not as close to the information about its occurrence as the president is. On the other hand, as we have just seen, the information is closer to the hearer, the president. Thus, the information falls within the hearer's territory but not within the associate's. Therefore, the latter cannot use utterance (28), a direct form, but must use (29), an indirect form. Our theory of territory of information thus provides a natural explanation of how the forms of their utterances are determined, although the theory has not yet been completely developed.

Notice here that in these examples, the president and the associate received the same information from the same source at the same time. Therefore, there can be no difference in the content or amount of information they obtained. This shows that the difference in the forms of their utterances is entirely due to the difference in the relations of the information to the president and to the associate. It is exactly the notion of the speaker's and the hearer's territories of information that captures this difference.

4.4. Characterizing the territory of information

It is very important to notice that in cases like the one we have just observed, where interaction between the speaker's and the hearer's territories occurs, it becomes clear that closeness to a given piece of information is relative: it is not usually the case that a given piece of information is close to one of the parties, and not close at all to the other. Rather, information is close to some degree to one, and distant to some degree from the other. Of course, in extreme cases, information is absolutely close to the speaker, for example, and totally distant from the hearer. In general, however, the closeness of information is relative and gradable. This means that although, for the sake of clarity, we have been talking about the speaker's/hearer's territory as if it were an absolute, all-or-nothing category, in fact, it must be considered a relative, gradable category. Thus, it can often happen that a given piece of information belongs to the speaker's territory to some degree, and to the hearer's territory to some other degree. This concept of the notion of territory of information will be made explicit in the next section.
5. The system of the theory of territory of information

This section provides a formalization of the theory of territory of information, introducing some new concepts and elaborating on already-introduced ones. Several components of the body of our theory, thus formalized, are explained and justified.

5.1. The basis of the theory

Let us first introduce the basic postulate of the theory:

II. Assumption

There are two linear psychological scales, one for the speaker, and the other for the hearer:

Speaker \( | - - - - - | - - - - - - - - - - - - - - - - - | \)

1 information 0

Hearer \( | - - - - - - - - - - - - - - - - - | - - - - - - - - - - - - | \)

1 information 0

A given piece of information is located on these scales and can take any value between (and including) 1 and 0.

In the case illustrated in II, the information is closer to the speaker than to the hearer.

On the basis of assumption II, we define the speaker’s/hearer’s territory of information as in III:

III. Definition

There are two conceptual categories, called the speaker’s and the hearer’s territories of information. These categories each contain information close to the speaker/hearer, i.e. having the value \( \geq n \), where \( n \) is a specific value between 1 and 0.

Thus, if a given piece of information takes the value \( m = 1 \) on the speaker’s scale and the value \( m' = 0 \) on the hearer’s scale, then the information falls completely within the speaker’s territory, and not within the hearer’s at all. If the reverse case obtains, then the information falls completely within the hearer’s territory, and not within the speaker’s. In general, however, information has a relative and gradable character, so that cases like the following often occur. If a given piece of information takes the value \( m (\geq n) \) on the speaker’s scale, while it takes the value \( (n >) m' \) on the hearer’s scale (as in the above diagram), then that information falls within the speaker’s territory...
to some degree (though not completely), and not within the hearer's, since \( n \) is the threshold value for information to fall into the speaker's/hearer's territory. On the other hand, if \( m' > m \geq n \) holds in this situation, then that information falls within both territories, but more in the hearer's than in the speaker's.

5.2. Conditions and meta-conditions for information

We next consider what determines the value of information on the two scales. There are general conditions which determine these values, given in IV (an elaboration of list I in section 4.1):

IV. Conditions
(a) information obtained through the speaker's/hearer's internal direct experience
(b) information embodying detailed knowledge which falls into the speaker's/hearer's professional or other expertise
(c) information obtained through the speaker's/hearer's external direct experience
(d) information about persons, objects, events and facts close to the speaker/hearer including information about the speaker/hearer himself

Information which satisfies one of these conditions becomes closer to the speaker or the hearer. In IVa, 'internal direct experience' means so-called internal feelings such as pain, emotions, feelings, and beliefs within the experiencer's mind. In contrast, 'external direct experience' means experience which is obtained from outside the experiencer through the five senses. Condition IVd refers to what may be called personal data in a broad sense. This includes the speaker's/hearer's plans, actions, behavior, and relation to a certain geographical location mentioned in Ib.

Conditions IVa and IVd have the following characteristic: in general, utterances expressing information which meets these conditions cannot be made in forms other than the direct form. This was already shown in (5) in section 3.1, and in (10) in section 3.2.1. There are, however, two kinds of exceptions to this: when the speaker expresses his/her belief; and when the conditions in V, to be discussed shortly, apply. In such cases, the speaker may use an indirect form. Observe, for example, the contrast between (29a) and (29b) below:

(29a) Asita wa ame desu.
    tomorrow TM rain is-F
    'It rains tomorrow.'
(29b) Asita wa ame desyoo.
   tomorrow TM rain is-will-F
   ‘It may rain tomorrow.’

(29a) expresses an ordinary speaker’s belief, but sounds dogmatic. To avoid this unfavorable effect, the speaker may use the perfectly normal (29b), a non-direct form.

On the other hand, information which meets IVb or IVc can be made in a non-direct form. An example is utterance (30a) (contributed by Takahiro Iwahata), which expresses information meeting IVc:

(30a) Kono tubo wa sukos kizu ga arimasu ne.
   this pot TM a-little flaw NM exist-F SF
   ‘This pot has a few flaws, doesn’t it?’

(30b) Kono tubo wa sukos kizu ga aru-yoo desu ne.
   this pot TM a-little flaw NM exist look is-F SF
   ‘This pot looks as if it has a few flaws.’

(30a) can be expressed in a non-direct form like (30b). When a customer in an antique shop takes a pot in his/her hand and notices that there are some flaws in it, he/she can say (30a), based on his/her external direct experience. The indirect form in (30b), however, is preferred if he/she wants to be polite.

Condition IVa has another characteristic: unlike the other three conditions, it does not have cases where the basis for this condition is so insufficient that its effect is weakened. For example, if the speaker feels nauseous, then that will automatically be a sufficient basis for IVa to apply, so that the speaker may say that he/she feels nauseous. Thus, if this condition is met, an utterance takes the direct form.

In contrast, let us take condition IVc (external direct experience) again for an example. In utterances (30) above, if the flaws on the pot are so small that the speaker is not sure if they really exist, then his/her external direct experience has an insufficient basis. In this case, the speaker would say (30b), a non-direct form, rather than (30a), a direct form.

Likewise, information which satisfies condition IVd (personal data) may be expressed in a non-direct form if the speaker does not have a sufficient basis:

(31) Taroo wa genki de yatte iru-yoo da. (cf. (25); fns. 7, 9)
   TM well in doing is appear is
   ‘Taroo seems to be doing well.’

If the speaker is Taroo’s father, then the information conveyed in (31) satisfies condition IVd. Hence, it is close to him and should be expressed in the direct form. If, however, he does not have detailed information about how Taroo is
doing, but only an indication of this, then an indirect form like the one in (31) is perfectly natural. Thus, condition IVd can be affected by the speaker's basis of knowledge for a given piece of information. Moreover, information subject to condition IVd may take a non-direct form immediately after its reception (cf. fn. 7).

To capture the observations that have just been discussed, we introduce here the meta-conditions in V:

V. Meta-conditions
(a) information subject to conditions IVb to IVd is considered less close if the speaker does not have an adequate basis for asserting it
(b) information subject to condition IVd may be considered less close when it has just been conveyed to the speaker

Thus, the conditions in IV, now supplemented by meta-conditions in V, decide whether a given piece of information is close to the speaker/hearer. Recall here, however, that it is the speaker's assumption that ultimately decides the relation between his/her territory, the hearer's territory, and a given piece of information. Thus, how far the meta-conditions in V can push a given piece of information further away from the speaker/hearer depends on what the speaker assumes about the degree of insufficiency or about other features of the context.

It should be noted here that since there are two psychological scales, one for the speaker and one for the hearer, it is usually the case that one condition applies with respect to the speaker's scale, while another applies with respect to the hearer's. For example, consider (32) below:

(32) Kimi no imooto-san, uta ga umai ne.
    you of sister song NM good SF
    'Your sister sings very well, doesn't she?'

Suppose that, in the hearer's presence, the speaker has heard the hearer's sister sing, and has been impressed by her singing, and that the hearer knows that his/her sister is good at singing. Then condition IVc (external direct experience) locates the information which (32) expresses on the speaker's scale, whereas conditions IVa (internal belief), IVc (external observation), and IVd (personal data) locate the information on the hearer's scale. Thus, different conditions apply with respect to the two different scales. Furthermore, this example shows that with respect to one scale, more than one condition may apply, which causes no problems. Finally, each condition is considered to have an approximately equal effect. The effect of one condition, however, can be combined with the effect of another. If a double or triple application occurs to the same scale, as in example (32), this doubles or triples the cumulative effects.
5.3. Territory of information and forms of utterance

The central part of the theory of territory of information can be shown in the form of the following table, because, as we saw in several examples above, there is an interaction between the speaker's territory of information and the hearer's. Given the speaker and the hearer, and given the assumption that information takes values between (and including) 1 and 0 on the speaker's and the hearer's scales, it follows that a table like VI can be produced:

<table>
<thead>
<tr>
<th>VI. Case</th>
<th>Definition of case</th>
<th>Utterance form</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$1 = \text{Speaker} &gt; \text{Hearer} = 0$</td>
<td>direct form</td>
</tr>
<tr>
<td>B</td>
<td>$n &lt; \text{Speaker} \leq \text{Hearer} = 1$</td>
<td>direct-ne form</td>
</tr>
<tr>
<td>BC</td>
<td>$1 = \text{Speaker} &gt; \text{Hearer} &gt; n$</td>
<td>daroo form</td>
</tr>
<tr>
<td>CB</td>
<td>$n \leq \text{Speaker} &lt; \text{Hearer}$</td>
<td>daroo form</td>
</tr>
<tr>
<td>C</td>
<td>$n &gt; \text{Speaker} &lt; \text{Hearer} = 1$</td>
<td>indirect-ne form</td>
</tr>
<tr>
<td>D</td>
<td>$n &gt; \text{Speaker} = \text{Hearer}$</td>
<td>indirect form</td>
</tr>
</tbody>
</table>

In this table, $n$ is the threshold value for the speaker's/hearer's territory. The notation $x > y$ means that a given piece of information belongs more to $x$'s territory of information than to $y$'s, while the notation $x < y$ means the reverse situation. $x = y$ means that information falls into both territories to the same degree. There are six different cases in all, which we will call A, B, BC, CB, C and D, as indicated in VI.

The name of the form of utterances given in each case indicates the form appropriate to that case. The direct form in case A is a form we have already seen often in section 3. It ends with a main predicate, or with a minimum stylistic auxiliary such as -masu or -masita, which immediately follows the main predicate, rendering the style more formal. Its most important feature, however, is that it does not contain any sentence-final hedging element which indicates that given information is hearsay- or inference-based. It also excludes hedging adverbs such as tabun (probably) and maa (likely), but may be optionally followed by a sentence-final particle like yo. In contrast, the indirect form in case D, of which we have also seen examples, ends with or contains just such a hedging element, optionally followed by a sentence-final particle such as yo. Another class of indirect forms comprises rhetorical questions which mitigate assertive force, thus functioning like declarative utterances containing hedges. The other four forms in the table, accompanied by ne or daroo, have not yet been explained, although we have illustrated some of them (e.g. utterances (13); (29b)). Thus far, we have called the forms with ne the direct or indirect form with ne, but they are henceforth called the direct-ne and the indirect-ne forms. The direct-ne form is made up of a direct
form immediately followed by the sentence-final particle *ne*, or by one of its variants, *nee*, *na*, or *naa*. Correspondingly, the indirect-*ne* form consists of an indirect form and the immediately following *ne*, or one of its variants. Examples of these two forms will be given below.\(^\text{12}\)

The remaining two forms, both called the *daroo* form, are nearly identical, each containing *daroo*, or its more formal variant *desyoo*, or their shortened variants *daro* or *desyo*, at the end. It should be noted here that there are two intonational patterns that can be imposed on them: one is relatively flat, while the other rises like a question intonation. The *daroo* form appropriate to cases BC and CB may have either intonation pattern, but the rising one more clearly indicates that the intended case is BC or CB. Moreover, there is one sentence-final form that can be used in case CB but not in case BC. The form is *zyanai* (... isn't it), which is a colloquial shortened variant of *de wa nai*. When it represents case CB, it is used with a rising intonation. This form is included in the *daroo* form when it is used in case CB.

Let us now return to the table in VI and look at the role of territory of information in each case.

5.4. Case A

In case A the value for the speaker's territory is 1 while that for the hearer's is 0. That is, a given piece of information falls completely within the speaker's territory of information and not within the hearer's territory in the least. A typical example of this case is an utterance expressing the speaker's mental state. Thus, we can consider example (4) in section 3.1 again here:

(33) Watasi, atama ga itai. (= (4))
   I head NM ache
   'I have a headache.'

The speaker assumes that the information expressed in (33) is very close to him/her, in keeping with condition IVa (internal direct experience), and no further conditions in IV lead him/her to assume that it is close to the hearer. Therefore, (33) falls into case A. As we saw in other examples above also, case A is expressed in the direct form.\(^\text{13}\) Moreover, as we pointed out earlier in

\(^\text{12}\) Note that the forms appended with *ne* are used in cases B and C in VI. *Ne*, however, can be used with the direct form in case A and with the indirect form in case D. But this latter *ne* is optional, whereas *ne* is obligatory in cases B and C. It is for this reason that VI shows the forms without *ne* in cases A and D. Section 5.10 discusses how the distribution of *ne* is determined, and how the obligatory and the optional *nes* are different.

\(^\text{13}\) Ken-ichi Takami (personal communication) points out that utterances like (i):

(i) Doumo saikin i ga warui-mitai da.
   apparently recently stomach NM bad look is
   'Recently I apparently seem to have stomach trouble.'
section 5.3, information subject to condition IVa does not generally allow the sentence to take any indirect form.

Some other examples of case A are as follows:

(34) Taroo wa byooki desu. (= (7), (23))
    TM ill is-F
    'Taroo is ill.'

In (34), the relevant condition is IVd (personal data): the speaker assumes that it applies to him/her but that no condition applies to the hearer (unless the hearer is Taroo’s mother, for example). As predicted from the table in VI, (34) takes the direct form. Similarly, (35), cited in section 3.2.3 as (15), is acceptable in the direct form:

(35) Kore kara Osaka e ikimasu. (= (15))
    this from to go
    'I will go to Osaka now.'

The relevant condition in this example is IVd (personal data). Thus, all these examples show that case A is expressed in the direct form.

5.5. Case B

Consider next case B. This is a case which subsumes two different subcases: in one subcase, the value for both the speaker’s and the hearer’s territories is 1; that is, the speaker assumes that information falls completely into both territories; in the other subcase, he/she assumes that information falls completely into the hearer’s territory, and only partially into his/her own territory. In either case, the table in VI specifies that information must be expressed in the direct-ne form. A typical example of the first subcase of this form is observed in (36):

(36) Ii tenki da nee.
    nice weather is SF
    'It's a beautiful day!'

is quite natural in the indirect form although the information (i) expresses seems an instance of case A.

This observation is correct, and points to a case on a borderline of case A: although the speaker must have had internal direct experience suggesting that he has stomach trouble, he could not have identified what is wrong with him through his internal direct experience itself. That is, the information (i) expresses involves the speaker’s judgment, which is based on, but beyond, his own direct experience. This is presumably the reason why utterance (i) is acceptable in the indirect form. Note that meta-condition Va is relevant here.
When both the speaker and the hearer are under a clear blue sky and are feeling that the weather is quite pleasant, (36) is an instance of case B; since both partners directly perceive the weather, the speaker assumes that the information represented in (36) falls into the territories of both by condition IVc about external direct experience. Notice that in case B, the final particle, ne (or its variants such as nee and naa), is indispensable. If it is dropped, then the character of the utterance changes drastically, and the utterance becomes an instance of case A. It would then be appropriate to a situation in which the speaker is talking long-distance to a hearer in some other location, and is discussing by telephone the weather conditions in the speaker's own vicinity, for example.

Other examples of the first subcase of case B are (37):

(37a) Kimi wa doitu-go ga dekimasu nee.
     you TM German AM competent-F SF
     'You are competent in German!'
(37b) Kimi, sukosi yaseta ne.
     you a little lost-weight SF
     'You have lost a little weight, haven’t you?'

In (37a), the speaker must somehow have had a direct experience in which he was impressed with the hearer’s competence in German. Thus, by condition IVc, the speaker assumes that the information falls into his/her own territory. On the other hand, since the information is about a personal trait of the hearer, by IVd (personal data), he/she assumes that it also falls into the hearer’s territory. Therefore, case B obtains and the direct-ne form is appropriate. Again in example (37b), since the speaker directly perceives that the hearer has lost weight, and this is a personal trait of the hearer, the speaker assumes that it falls into both territories of information. This creates a case B, and hence the direct-ne form is natural. As in (36), if the sentence-final ne were dropped, the character of these utterances would drastically change, since the form would be the direct form appropriate to case A.

The second subcase of Case B is illustrated in (38):14

(38a) Kimi no imooto-san, uta ga umai ne. (= (32))
     you of sister song NM good SF
     'Your sister sings very well, doesn’t she?'
(38b) Kore, oisii desu ne.
     this delicious is-F SF
     'This is delicious, isn’t it?'

14 The second subcase of case B was first brought to my attention by Takami (personal communication). Example (38b) discussed here is also his. I am very grateful to him for this valuable observation.
As explained earlier, the speaker assumes that the information (38a) expressed falls deep into the hearer's territory by conditions IVa, IVc, and IVd, whereas it falls into his/her own territory only by condition IVc. Thus, (38a) satisfies the definition of case B. In (38b), suppose that the hearer of (38b) has taken the speaker to a restaurant. Suppose further that the hearer has been there many times, and knows well that good food is served there, while the speaker is there for the first time. Then, if the hearer has said to the speaker *Oisii desyo?* (Isn't this delicious?), in response to this utterance, the speaker would say (38b). In this situation, the information that the meal is delicious is assumed by the speaker to fall deep within the hearer's territory by conditions IVb and IVc, but it is assumed to fall within the speaker's territory only by condition IVc. Hence case B obtains.

5.6. Case BC

We consider next case BC. This is a case in which the speaker assumes that information falls within his/her own territory to the fullest degree, while it falls within the hearer's territory to a lesser degree. This case requires the form of utterances with *daroo* or *desyoo*, or their shortened variants *daro* or *desyo*.

Observe first an example of this case:

(39) Kono kyoku, ii kyoku daroo.
     this melody nice melody is-will
     ‘This melody is really nice, isn't it?’

Suppose that both the speaker and the hearer are listening to a melody being played on a CD player. If no further condition holds, then this is an instance of case B by condition IVc (external direct experience). Suppose, however, that the speaker of (39) himself composed the melody, while the hearer is just a music lover. In this case, conditions IVa and IVc about direct experience in composing, IVd (personal data), or even IVb (expertise) produce the additional effect, making the speaker assume that the information (39) expresses is closer to him/her than to the hearer. Note that the information falls into the hearer's territory also, although to a lesser degree, by condition IVc, since he/she is now directly experiencing the music. Thus, example (39) in this situation is an instance of case BC. Note also that in the situation assumed here, the speaker cannot say (40), a direct-*ne* form, as in case B:

(40) ??Kono kyoku, ii kyoku da nee.
     this melody nice melody is SF
     Lit. ‘This melody is really nice, isn’t it?’
This observation shows that case BC is distinct from case B. It should further be noted that this clearly shows that the effects of the conditions in IV are approximately equal, but they can be combined with the effects of other conditions to produce a cumulative effect which is greater than that of any one condition alone. As a result, the information is considered much closer to the speaker than to the hearer.

Some more examples are as follows:

(41a) Kuuki ga kirei desyo.

air NM clean is-will-F

The air is very clean, isn't it?

(41b) Uti no imooto, kawaii daro.

our of sister pretty is-will

My sister is pretty, isn't she?

A situation that is appropriate to (41a) is one where a man has come to a village far distant from large cities, at the invitation of a friend. He enjoys the atmosphere there and the refreshing smell of the air. Then his friend, who has lived long in that village, says (41a) to the man. Because both feel the nice air, they are having the same external direct experience. However, since the friend has a long-term geographical relation to the area, the combined effect of conditions IVc and IVd leads the speaker to assume that the information conveyed in (41a) falls deeply within his/her territory, while the visitor holds the information in his territory only by condition IVc (external direct experience). Therefore, the information falls within his territory to a lesser degree than it does within the territory of the person living there. This situation thus meets the definition of case BC, requiring the duroo form. Similarly, in (41b) the hearer has met the speaker's sister for the first time. The speaker therefore assumes that, although both he/she and the hearer hold the information in their territories, it falls completely within the former's territory, but only to a lesser degree within the latter's territory. Although condition IVc (direct experience) applies to utterance (41b), and thus makes the information fall within both territories, the speaker assumes that he/she is closer to the information than the hearer in terms of conditions IVd (personal data) and, possibly, IVa (internal belief). Thus, (41b) is also a case of BC and takes the daroo form as required.

5.7. Case CB

Consider next case CB. This case holds when a given piece of information falls within the speaker's territory but falls more deeply within the hearer's. Notice, however, that the speaker does not necessarily assume that it falls into the hearer's territory to the fullest degree, as in the second subcase of case B.
In other words, this is the case where the speaker has a certain piece of information in his/her territory, to some degree, and only assumes that it falls more into the hearer’s. Observe the following example, which was contributed by Susumu Kuno (personal communication):

(42) Anata, Yamada-san desyoo.
     you mr/ms are-will-F
     ‘You are Mr./Ms. Yamada, aren’t you?’

In (42), the speaker assumes that he/she holds the information that the hearer is Mr./Ms. Yamada in his/her territory by condition IVc (external observation) and condition IVb (detailed knowledge). The effects of these conditions, however, are weakened by meta-condition Va (insufficient basis). Thus the information falls within the speaker’s territory only to some degree. The speaker, therefore, wants to make certain of the information by uttering (42), assuming that the hearer certainly has the information more deeply within his/her territory by condition IVd, not weakened by any meta-condition. This then is an instance of case CB.

Observe a few more examples of this case:

(43a) Omae ga garasu o wattan daroo.
      you NM glass AM broke are-will
      ‘It’s you who broke the window, isn’t it?’

(43b) Kimi, netu ga arun zya nai.
      you fever NM have be not
      ‘Isn’t it the case that you have fever?’

In the two examples in (43), the information falls within the speaker’s territory to some degree, while it falls within the hearer’s more deeply. Thus in (43a), the speaker has evidence for strongly suspecting that it was the hearer who broke the window; this information falls within the speaker’s territory to some degree by condition IVc (external direct experience): seeing the broken window and the flight of the hearer, for example. But the effect of condition IVc is weakened by meta-condition Va if the speaker’s observation is not sufficient. On the other hand, the information that the hearer broke the window falls into the hearer’s territory more deeply by virtue of condition IVa (internal direct experience in memory) and IVd about the hearer’s action. Thus, (43a) is an instance of case CB. (43b) takes the ‘zyanai form, which can be used in case CB. In this case, relevant conditions are IVc, e.g., the speaker’s external direct observation of the hearer’s forehead and appearance, and IVa (the hearer’s internal direct experience). Condition IVc, however, is insufficient for information about an internal state, and thus is weakened by meta-condition Va. By virtue of these conditions, the speaker assumes that case CB holds in (43b).
5.8. Case C

We next consider case C. The definition of this case in the table in VI is that information does not fall within the speaker's territory, while it falls completely within the hearer's. As in case B, this case requires the form of utterance with ne, but here the indirect form immediately followed by the particle is used. Observe the following examples, one of which was cited as (13) in section 3.2.2:

(44) Kyoto no zinkoo wa 150-man gurai-rasii ne/-no yoo da
   of population TM ten-thousand about seem SF of appear ne. (= (13))
   is SF
   'It seems/It appears that the population of Kyoto is about 1,500,000, isn’t it?'

(45) Hitati-tte kekkou ookina mati-rasii ne.
   QM fairly big city seem SF
   'Hitati seems to be a fairly big city, doesn’t it?'

When example (44) is used by an average citizen of Tokyo in talking to a hearer who is an ordinary resident of Kyoto, for example, then by condition IVd, the speaker assumes that the information falls within the hearer's territory, and no conditions lead the speaker to assume that it falls within his/her own territory. Consequently, he/she assumes that case C holds, and the indirect-ne form is appropriate. Likewise, if a resident of Tokyo uses (45) to another person who lives in the vicinity of Hitati (which is about 100 miles from Tokyo and belongs to a different prefecture), then the speaker assumes that case C holds, which makes the indirect-ne form acceptable. The relevant condition in this case is again IVd (geographical relations) applied to the hearer, but not to the speaker.

Another good example of case C is an utterance about the physical or psychological state of other persons. Observe (46):

(46) Anata wa kibun ga warui-mitai desu ne.
   you-F TM feeling NM bad look is-F SF
   'It looks like you are feeling sick, aren’t you?'

In this example, feeling sick is what the hearer is internally experiencing, and can only be inferred by the speaker from his/her appearance and attitude. Therefore, the speaker assumes that condition IVa applies to the hearer, but that only condition IVc (external direct experiences) weakened by meta-condition Va is applicable with respect to the speaker; hence, the speaker assumes that the information does not fall within his/her own territory. The example is thus a typical instance of case C.
It should be noted here that *daroo* and *desyoo*, which are appropriate in cases BC and CB, may also appear as elements constituting indirect-*ne* forms when immediately followed by *ne*, as in the following examples. (47b) is an adaptation of an example suggested to me by Kuno (personal communication):

(47a) *Kimi wa honki daroo ne.*  
you TM serious are-will SF  
‘You are serious, aren’t you?’

(47b) *Yamada-sensei wa ogenki desyoo ne.*  
teacher TM well is-will SF  
‘Professor Yamada is well, isn’t he/she?’

(47a) concerns the hearer’s mental state. Therefore, the speaker assumes that condition IVa applies to the hearer, while no condition in IV is sufficient to make the information fall within his/her own territory. Hence Case C obtains. In (47b), suppose that both the speaker and the hearer know Prof. Yamada, but only the latter is in a position to have information about his/her recent state. In this situation, the speaker assumes that condition IVb makes the information (47b) conveyed closer to the hearer, while no condition applies with respect to the speaker him/herself. Therefore, he/she assumes that case C situation holds and the indirect-*ne* form is appropriate.

5.9. Case D

Finally, we consider case D. This is the case where information falls within neither the speaker’s nor the hearer’s territory of information. Examples are typically found in situations where a given utterance conveys only hearsay-based information. For example, observe (48) and (49):

(48) *Alaska no huyu wa monosugoi-rasii yo/-tte.*  
of winter TM terrible seem SF HM  
‘It seems/I hear winter in Alaska is terrible.’

(49) *Ano eiga wa omosiroi-soo da/-mitai da yo.*  
that movie TM enjoyable hear is/look is SF  
‘I hear/It looks like that movie is enjoyable.’

Utterance (48) is quite natural in situations where both the speaker and the hearer have only hearsay information about winter in Alaska, having no geographical relation to that state. In such cases, the speaker assumes that no conditions in IV are applicable, and thus the information falls outside both territories. This is case D, in which the indirect form must be used. Likewise, utterance (49) is appropriate when neither the speaker nor the hearer has seen the movie, but both have heard or read about it. In such cases, the speaker
assumes that no conditions in IV are applicable here either, and thus the indirect form is required.

As in case C, daroo and desyoo may constitute indirect forms. For example:

(50) Asita wa hareru daroo.
   tomorrow TM get-fair is-will
   'It will be fair tomorrow.'

(50) concerns tomorrow's weather. Obviously, the speaker can assume that no conditions in IV apply with respect to either the speaker or the hearer. This makes the information fall outside both territories. Thus, utterance (50) is an instance of case D.

5.10. On the character of ne

We have presented the main body of the theory of territory of information. We would now like to discuss some major consequences of the theory. Since, however, a full account of them is developed elsewhere (Kamio in preparation a), we will limit ourselves to one particularly important and direct consequence.

Recall first that in cases B and C, the forms that obligatorily take ne are required (i.e. the direct- and the indirect-ne forms, respectively). On the other hand, there is another kind of ne, which may optionally appear with the direct and the indirect forms, i.e., the forms required in cases A and D, respectively (cf. fn. 12). Ne is one of the particles that have traditionally been called sentence-final particles. Their distribution is largely determined on the basis of the pragmatic properties of utterances in which they appear; notions such as the speaker's intention and knowledge, various types of speech acts, and contexts heavily affect their distribution. Thus, a general theory of sentence-final particles is called for. In the following subsections, we attempt to capture the character of both kinds of ne from the point of view of the theory of territory of information. That is, we attempt to examine the properties of ne manifested at the intersection of the general theory of sentence-final particles and our theory.

5.10.1. Obligatory ne

Consider first the characterization of obligatory ne. An inspection of its distribution in VI reveals the following definition in terms of our theory. (Henceforth, S and H designate the speaker and the hearer, respectively.)

VII. Principle

The distribution of obligatory ne: S≤H−1

For interesting work toward such a theory, see Cheng (1987).
The principle in VII specifies that obligatory *ne* appears when (i) a given piece of information falls completely within the hearer's territory, and when (ii) this same information also falls within the speaker's territory completely, or falls within it to a lesser degree (even a zero degree, as in case C).

Consider case B, which is defined as $n < S = H = 1$ or $n < S < H = 1$ in VI. Since this definition satisfies the principle in VII, the appearance of obligatory *ne* is accounted for. Likewise, case C, which is defined as $n > S < H = 1$, obviously satisfies VII, and thus the occurrence of obligatory *ne* is accounted for. Also, since no other cases in VI satisfy VII, the non-occurrence of obligatory *ne* in these cases is consistent with the principle.

Moreover, the principle in VII not only is fully in accord with our intuition about the function of obligatory *ne*, but seems essentially compatible with a recent work on sentence-final particles in general (Cheng, 1987). VII stipulates that the speaker must use *ne* when he/she assumes that a given piece of information falls equally, or more deeply (even exclusively), within the hearer's territory, and to the fullest degree. This explains why obligatory *ne* is used to seek assent, confirmation, or reconfirmation about a given piece of information from the hearer. Thus, the principle in VII seems an adequate characterization of obligatory *ne* in terms of the theory of territory of information.

### 5.10.2. Optional *ne*

We next turn to the characterization of optional *ne*. This can also be obtained by examining cases A and D, where optional *ne* may appear in the table in VI:

**VIII. Principle**

The distribution of optional *ne*: $S \geq H < n$

The principle in VIII specifies that optional *ne* may appear when (i) a given piece of information does not fall into the hearer's territory, but (ii) it is closer to the speaker, or equally far from both. When the information is closer to the speaker than to the hearer in (ii), the information may or may not fall into the speaker's territory.

From this characterization, it is clear that optional *ne* has a character different from obligatory *ne*. Thus, optional *ne* cannot be used to seek assent or confirmation from the hearer, since the hearer does not have the information in his/her territory, and since the speaker may 'know the information more'. The character of optional *ne* has not been made clear in traditional or modern studies; even Cheng (1987), for example, treats optional *ne* only tangentially.

The principle in VIII, however, accounts for not only the optional use of *ne* in cases A and D, but also other hitherto unexplained examples. Consider first
case A, whose definition is $1 - S > H - 0$. Since this definition satisfies VIII, ne may optionally appear in case A. For example:

(51) S: Kore, ikura desu ka?
   this how-much is-F QM
   'How much is this?'
H: Gohyaku-en desu ne.
   500 yen is-F SF
   Lit. '(It) is 500 yen.'

In (51H), H expresses information which definitely falls into his/her territory, but not into that of S in the least. Thus, H's utterance represents case A, in which principle VIII specifies that the ne is optional. As predicted, H's utterance is acceptable, and even if the ne is dropped, the utterance is still acceptable. Similarly, case D, which is defined as $n > S = H$, also meets the principle in VIII. Thus, the optional occurrence of ne in utterance (52) below, for instance, is accounted for:

(52) Asita wa hareru desyo nee. (cf. (50))
   tomorrow TM get-fair is-will SF
   'It will be fair tomorrow.'

As in (51), the addition of ne is completely optional here. Moreover, utterance (53) below illustrates the use of optional ne which has not been explained well:

(53) Tyotto yuubinkyoku e itte kimasu (ne).
   a-little post-office to going come SF
   'I am going to the post office for a short time.'

As indicated by the parentheses, ne in this example is completely optional. Since (53) says that the speaker is going to the post office, the information it expresses falls fully into the speaker's territory, while it does not fall into the hearer's at all. Thus, this is an instance of case A. Since case A satisfies the principle in VIII, the optionality of ne here is accounted for.\(^{16}\)

\(^{16}\) As we emphasized at the beginning of this subsection, a comprehensive characterization of ne is a task for the theory of sentence-final particles as a whole. What we have done in this subsection leaves many aspects of ne unanalyzed. For example, although we have characterized the optional ne as following the principle in VIII within the framework of our theory, utterance (i) below is odd despite the fact that it meets the principle:

(i) ??Kinoo boku wa doubutuen e itte kimasita ne.
   yesterday I TM zoo to going came-F SF
   Lit. 'Yesterday, I went to the zoo, didn't I?'

Assuming that the hearer did not know the information expressed in (i), it obviously satisfies
Finally, in this subsection, it should be noted that our analysis of *ne*, embodied in the principles in VII and VIII, accounts for why *ne* does not appear in cases BC and CB. Since these cases are defined as $1 = S > H > n$ and $n < S < H$, respectively, they do not satisfy either VII or VIII. Thus, neither obligatory *ne* nor optional *ne* may appear in these two cases.\(^{17}\)

Thus, the basic conditions that govern occurrences of obligatory and optional *ne* can be characterized within the framework of our theory. Note that this fact provides considerable empirical support for the analysis embodied in the table in VI in particular, and for our theory of territory of information in general. When an adequate general theory of sentence-final particles is developed, the results obtained in this subsection will be incorporated into it in an appropriate form.

6. Conclusion

What has been presented above is the theory of territory of information in Japanese. As the title of this paper suggests, however, we assume that the core of the theory of territory of information can be applied to any language. Our initial attempts to apply the theory to English and Chinese will be made in Kamio (in preparation b) and Kamio and Yang (in preparation), respectively. The former paper compares Japanese and English, and discusses the application of the notion of territory of information to a specific pragmatic phenomenon in both languages.

The notions of territory of information and psychological distance which constitute the basis for our theory, are involved in a very wide range of pragmatic phenomena in lexical semantics, syntax, and discourse. In particular, the reader may already have noticed the relevance of our theory to the domain of politeness. Since it has been proposed as a theory dealing with evidentiality, this relevance is quite significant; it may mean that evidentiality

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\(^{17}\) In fact, the *daroo* form for cases BC and CB can take optional *ne*, as in (i) below:

(ia) Uti no imooto, kawaii daro, *ne*?
  our of sister pretty is-will SF
  'My sister is pretty, isn't she?'

(ib) Anata, Yamada-san desyo, *ne*?
  you mr/ms are-will-F SF
  'You are Mr./Ms. Yamada, aren't you?'

This kind of *ne*, however, seems rather different from the *ne* we have been discussing in the following respects. First, it requires a clear pause preceding it; second, it must be very strongly stressed; third, it must bear a clearly rising intonation.
and politeness are closely related at a deep level. This matter and others suggesting the theory's wide range of application will be discussed extensively in Kamio (in preparation a). Part of the relevance of the notion of territory of information to syntax was discussed in Kamio (1991), although the framework adopted there is an earlier one, which differs significantly from the one presented in this paper.  

References


