

The demonstratives in modern Japanese*

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1. Introduction

Japanese has three demonstrative prefixes *ko-*, *so-*, *a-*, as exemplified in (1).¹

- (1) a. *ko-no hito* 'this person'
b. *so-no hito* 'that person'
c. *a-no hito* 'that person'

In this paper, we refer to NPs such as (1) (and those NPs in note 1) as *ko/so/a-NPs*. *Ko/so/a-NPs* can be used either in the context of (2a) or (2b), much as in the case of *this NP* and *that NP* in English.

- (2) a. where the object being referred to is visible in the speech location²
b. where the object being referred to is not visible in the speech location

Let us call their uses in the contexts of (2a) and (2b) their *deictic use* and *non-deictic use*, respectively.³

Ko/so/a-NPs are most often characterized in regard to their deictic uses. (3) shows one of the standard descriptions, which is based on Matsushita 1978: 233-235, originally published in 1930.⁴

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¹ A more exhaustive paradigm of Japanese demonstratives is given in (i).

(i)

<i>Ko-</i>	<i>So-</i>	<i>A-</i>
<i>ko-re</i> 'this thing'	<i>so-re</i>	<i>a-re</i>
<i>ko-tira</i> 'this way'	<i>so-tira</i>	<i>a-tira</i>
<i>ko-tti</i> 'this way'	<i>so-tti</i>	<i>a-tti</i>
<i>ko-ko</i> 'this place'	<i>so-ko</i>	<i>a-soko</i>
<i>ko-itu</i> 'this guy'	<i>so-itu</i>	<i>a-itu</i>

² Replacing "visible" with "perceptible" would broaden the empirical coverage of (2a) to cases involving noise, smell, and so on, discussed in Kinsui 2000 among others, making the distinction between the two uses of demonstratives descriptively more adequate. A more satisfactory characterization of the relevant distinction, however, would also have to involve some articulation of the notion "perceptible." In this paper, we will concentrate on what seems to us to be the most elementary distinction in regard to the uses of the demonstratives and plan to discuss in separate works how the line of thinking pursued here can be extended to more complex cases.

³ The discussion of the non-deictic uses of a *ko/so/a-NP* has often focused on examples in which the NP in question is understood to be related to another NP, and for this reason, the term *anaphoric use* has sometimes been employed in the literature, instead of *non-deictic use*; cf. Kuno 1973: ch. 24, for example. Throughout the paper, we will use *non-deictic* rather than *anaphoric*.

⁴ The earliest works we know of that make the relevant observations are Aston 1872: 24, 1873: 13, which are discussed in Furuta 1980.

- (i) *Sore* is properly speaking a pronoun of the second person, and mostly refers to something situated near to, or in some way connected with the person addressed, while *kore* is of the first person, and relates to objects close to, or connected with the speaker. (Aston 1872: 24)
- (ii) *Sore, sono* is the demonstrative pronoun of the second person; *are, ano* of the third person. *Kore, kono* refer to something present before the speaker's eyes; *are, ano* to something a little way off, or not in sight. *Sore, sono* refer to the immediate subject of conversation: *are, ano* to something else. (Aston 1873: 13)

- (3) The standard characterization of the *deictic uses* of *ko/so/a*-NPs:
- a. A *ko*-NP is used for referring to something near the speaker.
 - b. A *so*-NP is used for referring to something closer to the hearer.
 - c. An *a*-NP is used for referring to something at a distance from both the speaker and the hearer.

One influential characterization of the *non-deictic uses* of *so/a*-NPs is (4).

- (4) Kuno's (1973: 290) characterization of the *non-deictic uses* of *so/a*-NPs (slightly adapted):
- a. A *so*-NP is used for referring to something that is not known personally to either the speaker or the hearer or has not been a shared experience between them.
 - b. An *a*-NP is used for referring to something (at a distance either in time or space) that the speaker knows both s/he and the hearer know personally or have experience in.⁵

Kuno 1973 thus characterizes the non-deictic uses of *so/a*-NPs in terms of the speaker/hearer's knowledge of the object referred to by demonstratives. Notice that his characterization of the non-deictic *so/a*-NPs cannot be related to the standard characterization of their deictic uses given in (3), as pointed out by Kuroda (1979: 92-93) and further discussed in Takubo & Kinsui 1996: 68.⁶

Independently of (3) and (4), the generalization in (5) has been pointed out in works such as Hoji 1991 among others.

- (5) A *so*-NP can be 'bound' by a quantificational NP, while an *a*-NP cannot.

Although (3) and (5) might appear not to be related with each other, it seems worth considering what fundamental properties underlie the demonstratives, and how (3) and (5) can possibly be derived from them. This paper discusses the demonstrative system in modern Japanese in some depth, and argues that while (5) reflects the formal properties of the demonstratives more or less directly, (3) results in part from complex interactions between their formal properties and some pragmatic considerations, such as how the speaker 'views' the world. The paper also examines the non-deictic uses of the demonstratives in general, and concludes, based on Kuroda 1979 and Takubo & Kinsui 1996, and contra Kuno 1973, that the same formal properties underlie the demonstratives in their deictic as well as non-deictic uses.

The paper is organized as follows. In section 2, we will briefly review the theory of reference and anaphora proposed in Ueyama 1998. The notion which plays the most crucial role in expressing (5) in theoretical terms is called *D-index*. According to Ueyama 1998, a D-indexed NP is strictly 'referential' and it has to be understood in connection with a specific individual known to the speaker, hence it cannot give rise to a covariant interpretation. Ueyama 1998 thus claims that (5) is derived from (6).

- (6) a. A *so*-NP cannot be D-indexed (at least when the target object is not visible at the scene).
 b. An *a*-NP must be D-indexed.

In section 3, we will argue, on the basis of a variety of empirical data, that (6) should be extended to (7); and in section 4, we will make the claims in (8).

- (7) a. A *ko*-NP must be D-indexed.
 b. A *so*-NP cannot be D-indexed (at least when the target object is not visible at the scene).
 c. An *a*-NP must be D-indexed.
- (8) a. A *ko*-NP is linguistically marked as [Proximal].
 b. An *a*-NP is linguistically marked as [Distal].

NPs marked [Proximal] (i.e., *ko*-NPs) provide a means, so to speak, for the cognitive agent (the speaker) to express objects that s/he construes cognitively as *proximal*, and NPs marked [Distal] (i.e., *a*-NPs) objects that s/he construes cognitively as *distal*. Whether a given object is construed cognitively as *proximal* or *distal*, however, is a matter outside grammar. We will demonstrate that the choice between *ko*-NPs and *a*-NPs, both in their deictic and non-deictic uses, is contingent upon other non-linguistic factors, including how the speaker views the world. We will also make an attempt to account for why *so*-NPs can be used deictically in the presence of a hearer, suggesting that the presence of the hearer can give rise to a situation in which construing an object as *distal* results in a conflict between the speaker's 'point of view' and the hearer's 'point of view'; but see

⁵ The descriptive statements in (4) are not totally unlike Matsushita's (1930/1978: 234) given in (i).

(i) The speaker assumes that the hearer is acquainted with the referent identified by an *a*-NP, otherwise a *so*-NP or a *ko*-NP must be used.

Matsushita's (i) is intended to cover both the non-deictic uses and the deictic uses of the Japanese demonstratives. Kuno (1973) however argues that (i) is applicable only to the 'anaphoric' uses.

⁶ Kuno (1973: 282) endorses the characterization of the deictic uses of *ko/so/a*-NPs in (3).

note 14. The use of a *so*-NP in such cases, we suggest, is possible precisely because *so*-NPs are marked neither as [Distal] nor as [Proximal]. After addressing a few of the remaining issues in section 5, we will conclude the paper in section 6 by providing a summary of its major results and also briefly addressing the general research orientation adopted in the present study. Appendix briefly discusses Kuroda 1979, which can be understood as having laid the foundation for the approach pursued here.

2. Ueyama 1998

Ueyama advances a theory of anaphoric relations and NP types, in which *so*-NPs and *a*-NPs are formally distinguished, providing a means to express the generalization in (5) in theoretical terms. Ueyama's theory assumes the following three types of individual-denoting NPs.

- (9) a. D-indexed NPs (e.g. John_{D,3})
 b. 0-indexed NPs (e.g. he)
 c. I-indexed NPs (e.g. [that student]_{I,5})

The distinction crucial in this article is between (i) D-indexed NPs on the one hand and (ii) I-indexed and 0-indexed NPs on the other. A D-indexed NP is inherently referential and hence does not require a linguistic antecedent, while 0-indexed NPs and I-indexed NPs require a linguistic antecedent. We record the distinction in (10).

- (10) a. D-indexed NPs do not require a linguistic antecedent.
 b. 0-indexed and I-indexed NPs require a linguistic antecedent.

Ueyama 1998 argues extensively that (11a) and (11b) hold in Japanese as long as we exclude the *deictic* cases (i.e., the cases in which the target object is visible at the scene of conversation) and the cases in which the *a/so*-NP is not used to refer to an individual.⁷

- (11) a. A-NPs are D-indexed.
 b. *So*-NPs are either I-indexed or 0-indexed.

Let us summarize the relevant part of her arguments.

D-indexed NPs are the NPs which are to be understood in connection with an individual which is known to the speaker by direct experience, and the relevant connection is established independently of other NPs.⁸ Two NPs are said to stand in the relation of *co-D-indexation* if they carry the same D-index, and *co-D-indexation* is one of the bases for so-called 'coreference'.

As illustrated in (12) and (13), an *a*-NP need not have a linguistic antecedent but its referent should be known to the speaker by direct experience.

- (12) (*Situation*: The detective is looking for a man. He somehow believes that the man should be hiding in a certain room. He breaks into the room and asks the people there.)
 [A-itu/#So-itu]-wa do-ko-da?
 that-guy-TOP which-place-COPULA
 'Where is [he]?' (based on Ueyama 1998: section 4.2 (10)&(20))
- (13) (*Situation*: A wife told her husband on the phone that someone had called him. He has no idea who the person is. He asks her.)
 [So-itu/#A-itu]-wa nante itteta?
 that-guy-TOP what said
 'What did [he] say?' (based on Ueyama 1998: section 4.2 (16)&(23))

⁷ For example, the *a*-NP in (i) is individual-denoting, while that in (ii) is not.

- (i) **A-no** hito-wa ko-nakatta.
 that-GEN person-TOP come-didn't
 'That person did not come.'
 (ii) **A-nna** hito-wa ko-nakatta.
 that-like person-TOP come-didn't
 'Such a person did not come.'

⁸ More concretely, it is assumed in Ueyama 1998 that outside Grammar there is a set of ordered pairs of a natural number (index) and an individual, which is called s^D . (i) is one such example.

- (i) $s^D = \{ \langle 1, \text{John} \rangle, \langle 2, \text{Mary} \rangle, \langle 3, \text{Bill} \rangle, \dots \}$

Using the notation $s^D(n)$ to refer to the individual paired with the number n in s^D , we say that a D-indexed NP is mapped to $s^D(n)$.

A *so*-NP, on the other hand, cannot independently refer to an individual (when the object is not visible at the scene) even if the object is known to the speaker by direct experience; see (12). If there is a linguistic antecedent, however, a *so*-NP can refer to an individual that the speaker does not know at all; see (13). Ueyama 1998 thus expresses the insight in Kuroda 1979, Takubo 1984, Takubo & Kinsui 1996, 1997 concerning the fundamental property of *a*-NPs and *so*-NPs as in (14) (see also Appendix).

- (14) a. *A*-NPs must be D-indexed.
 b. *So*-NPs cannot be D-indexed.

Let us turn to another well-known difference between *a*-NPs and *so*-NPs, which has to do with a covariant interpretation; see (5). Consider the examples in (15).

- (15) a. **Toyota-sae** -ga [{so-ko/*a-soko}-no ko-gaisya]-o suisensita.
 Toyota-even-NOM that-place-GEN child-company-ACC recommended
 'Even Toyota recommended [its subsidiary].'
- b. **Do-no zidoosya-gaisya**-ga [{so-ko/*a-soko}-no ko-gaisya]-o
 which-GEN automobile-company-NOM that-place-GEN child-company-ACC
 suisensita no?
 recommended COMP
 'Which automobile company recommended [its subsidiary]?'
- c. **Do-no zidoosya-gaisya**-ga [{so-no/*a-no} zidoosya-gaisya-no
 which-GEN automobile-company-NOM that-GEN automobile-company-GEN
 ko-gaisya]-o suisensita no?
 child-company-ACC recommended COMP
 'Which automobile company recommended [that automobile company's subsidiary]?'
- d. (based on Ueyama 1998: ch.5 (80))
 [Hon-o hiraita hito]-wa minna {so-re/*a-re}-o kaw-anakerebanaranai.
 book-ACC opened person-TOP all that-thing-ACC buy-must
 'Everyone who has opened a book must buy it.'

The relevant observations are summarized in (16).

- (16) a. *A*-NPs cannot give rise to a covariant interpretation.
 b. *So*-NPs can give rise to a covariant interpretation.

(16a) follows directly from (14), given that D-indexed NPs are to be understood 'as referring to' an individual which is known to the speaker by direct experience. (16b) is also expected if we assume that a necessary condition for an NP to give rise to a covariant interpretation is the absence of a D-index. Under the theory in which (9) exhausts the types of individual-denoting NPs, (14) means (11), leading us to conclude that a covariant interpretation is possible only for an NP that is I-indexed or 0-indexed.

- (11) a. *A*-NPs are D-indexed.
 b. *So*-NPs are either I-indexed or 0-indexed.

Ueyama 1998 argues that although both 0-indexed NPs and I-indexed NPs can be construed as bound variables, the two cases must be distinguished, observing that they are subject to different sets of conditions, as indicated in (17).

- (17) a. A 0-indexed NP is not licensed if it is not c-commanded by its antecedent at LF.
 b. An I-indexed NP is not licensed if it precedes its antecedent at PF.

Given (11) and (17), we expect (18).

- (18) Suppose that X neither c-commands Y at LF nor precedes Y at PF:
 a. If Y is an *a*-NP, X and Y can be anaphorically related.
 b. If Y is a *so*-NP, X and Y cannot be anaphorically related.

The contrast between (19) and (20) indicates that this is indeed a correct prediction.⁹

⁹ Obviously (19) and (20) do not show that the two conditions in (17) are necessary. See Ueyama 1998: ch.3 and Hoji et al. 1999 for further discussion.

- (19) [A-soko-o tekitaisiteiru kaisya]-ga mata Kyojin-no
 that-place-ACC be.hostile company-NOM again Giants-GEN
 ninki-ga sagaru yooni kakusakusiteiru rasii.
 popularity-NOM go.down to be.scheming seem
 'It seems that [the company which is hostile to **it**] is scheming again so that the popularity of **the Giants** may go down.'

- (20) ?*[So-ko-o tekitaisiteiru kaisya]-ga mata Kyojin-no
 that-place-ACC be.hostile company-NOM again Giants-GEN
 ninki-ga sagaru yooni kakusakusiteiru rasii.
 popularity-NOM go.down to be.scheming seem
 'It seems that [the company which is hostile to **it**] is scheming again so that the popularity of **the Giants** may go down.'

The covariant interpretation of the sort indicated in (15) above also fails to obtain in the configuration noted in (18), as illustrated in (21); see Ueyama 1998 for the motivation for the postulation of the two distinct conditions in (17) and Hoji et al. 1999 for further discussion.

- (21) a. ?*[So-ko-no oya-gaisya]-ga A-sya-ni-sae Toyota-o
 that-place-GEN parent-company-NOM A-company-DAT-even Toyota-ACC
 suisensita.
 recommended
 '[Its parent company] recommended Toyota to *even Company A*.'
- b. ?*[So-ko-no oya-gaisya]-ga do-no zidoosya-gaisya-ni
 that-place-GEN parent-company-NOM which-GEN automobile-company-DAT
 Toyota-o suisensita no?
 Toyota-ACC recommended COMP
 'To *which automobile company* did [its parent company] recommend Toyota?'

3. The Grammatical difference between *a/ko-* and *so-*: the D-index

3.1. Extending Ueyama's theory to *ko*-NPs

One would naturally wonder how *ko-* is to be categorized in Ueyama's (1998) theory. We propose that *ko*-NPs are D-indexed and that (11) can be generalized as (22).

- (22) The distinction among *ko*-NPs, *so*-NPs, and *a*-NPs:
 a. *Ko*-NPs and *a*-NPs are D-indexed.
 b. *So*-NPs are either I-indexed or 0-indexed.

We maintain that the distinction in (22), the essential content of which is hinted at in Kuroda 1979 and suggested more explicitly in Tanaka 1981, is the only formal difference among *ko-*, *so-*, and *a-*. In this section, we will present evidence for (22).

3.2. The non-deictic use of *a*-NPs and *ko*-NPs

3.2.1. The linguistic antecedent requirement

In (12), repeated here, *a-itu* is interpretable without a linguistic antecedent, but *so-itu* is not.

- (12) (Situation: The detective is looking for a man. He somehow believes that the man should be hiding in a certain room. He breaks into the room and asks the people in the room.)
 [A-itu/#So-itu]-wa do-ko-da?
 that-guy-TOP which-place-COPULA
 'Where is [**he**]?' (based on Ueyama 1998: section 4.2 (10)&(20))

Likewise, *ko-no purozyekuto* 'this project' in (23) can also be used without a linguistic antecedent, in contrast to a *so*-NP such as *so-no purozyekuto* 'that project', as observed originally in Kinsui & Imani 2000: 129.

- (23) (Situation: The president of a company has called an executive meeting regarding a certain important project. As soon as everyone has arrived, he directly plunged into the issue.)
 Buraun-kun, [{ko-no/#so-no} purozyekuto]-wa itu hazimaru-nokane?
 Brown-Mr. this-GEN/that-GEN project-TOP when start-Q
 'When will **this project** start, Mr. Brown?'

Thus, not only *a*-NPs but *ko*-NPs can be used non-deictically without a linguistic antecedent, in sharp contrast to *so*-NPs.

In addition, an *a*-NP can be related to 'its antecedent' that does not c-command or precede it, as illustrated in (19) above. As indicated in (24) below, a *ko*-NP too can be related to 'its antecedent' that does not c-command or precede it.

- (24) (*Situation*: The remaining members of the anti-government movement have gathered at one of their hideouts just after they had failed in their attempt to bomb the embassy. No one dares to say anything, but at last the leader begins to talk.)
- [[{**Ko-no**/***So-no**} **keikaku-o** *saisyoni kangaedasita mono*]-*ga* **taisikan**
 this-GEN/that-GEN plan-ACC first proposed person-NOM embassy
bakuha keikaku-no zikkoo sekininsya-ni naru bekidatta.
 bombing plan-GEN execution leader-DAT become should.have
 'The person who first proposed *this plan* should have become the execution leader of *the embassy bombing plan*.'

Given the theory of Ueyama 1998, this leads us to conclude that *ko*-NP can be D-indexed. The observations in this subsection, summarized in (25), are precisely what we expect, given (22).

- (25) a. *A*-NPs and *ko*-NPs:
 A linguistic antecedent is not necessary.
 Even if there is an apparent antecedent for an *a*-NP or a *ko*-NP in the same sentence, it is not necessary for the former to c-command the latter at LF, or precede it at PF.
- b. *So*-NPs:
 A linguistic antecedent is necessary.
 The linguistic antecedent must either (i) c-command the *so*-NP at LF or (ii) precede it at PF.

3.2.2. Covariant interpretations

We have seen evidence that *ko*-NPs can be D-indexed. A question remains as to whether they *must* be D-indexed. We wish to argue that they must, on the basis of the following observation. Consider (26).

- (26) a. **Do-no zidoosya-gaisya-mo** [{**so-no**/***ko-no**} **zidoosya-gaisya-no**
 which-GEN automobile-company -MO that-GEN/this-GEN automobile-company -GEN
ko-gaisya]-*o* *suisensita.*
 child-company -ACC recommended
 'Every automobile company recommended {that/this} company's subsidiary.'
- b. **Kanarinokazu-no zidoosya-gaisya-ga** {**so-no**/***ko-no**}
 quite.many -GEN automobile-company -NOM that-GEN/this-GEN
zidoosya-gaisya-no ko-gaisya-o *suisensita.*
 automobile-company -GEN child-company -ACC recommended
 '(Each of) quite many automobile companies recommended {that/this} company's subsidiary.'
- c. **Toyota-sae-ga** [_{CP} **CIA-ga** {**so-ko**/***ko-ko**}-*o* *sirabeteiru to*]
 Toyota-even-NOM CIA-NOM that-place/this-place-ACC is.investigating COMP
happyoosita.
 announced
 'Even Toyota has announced that the CIA is investigating it.'

As indicated, *ko*-NPs, as in the case of *a*-NPs, fail to give rise to a covariant interpretation, in contrast to *so*-NPs; see section 5.1. Under the assumption that a necessary condition for an NP to give rise to a covariant interpretation is that it be either 0-indexed or I-indexed, this observation indicates that *ko*-NPs are necessarily D-indexed, since it is assumed under this theory that an individual-denoting NP must be D-indexed, I-indexed or 0-indexed, and there is no other possibility.

3.3. Further evidence for the distinction between *a/ko*- and *so*-

In this section we will present further evidence in support of the proposed distinction between *ko*- and *a*- on the one hand and *so*- on the other. Consider first the examples in (27)-(29), adapted from Hoji 1995.

- (27) a. **do-no sinzoo-gekai-ga so-no isya-no kanzya-o turetekite mo** ...
 which-GEN heart-surgeon-NOM that-GEN doctor-GEN patient-ACC bring-MO
 'No matter *which heart specialist* should bring *that doctor's* patient (to me), ...'

- b. ***do-no isya-ga so-no sinzoo-gekai-no kanzya-o turetekite mo ...**
 which-GEN doctor-NOM that-GEN heart-surgeon-GEN patient-ACC bring-MO
 'No matter *which doctor* should bring *that heart specialist's* patient (to me), ...'
- (28) a. **do-no sinzoo-gekai-no kanzya-ga so-no isya-no sigoto-o**
 which-GEN heart-surgeon-GEN patient-NOM that-GEN doctor-GEN work-ACC
hometa tositemo ...
 praise even.if
 'No matter *which heart specialist's* patient should praise *that doctor's* job, ...'
- b. ***do-no isya-no kanzya-ga so-no sinzoo-gekai-no sigoto-o**
 which-GEN doctor-GEN patient-NOM that-GEN heart-surgeon-GEN work-ACC
hometa tositemo ...
 praise even.if
 'No matter *which doctor's* patient should praise *that heart specialist's* job, ...'
- (29) a. [[**do-no sinzoo-gekai-to ronsoositeita**] otoko]-mo kyuuni so-no
 which-GEN heart-surgeon-with was.disputing man-MO suddenly that-GEN
isya-no sigoto-o home-hazimeta
 doctor-GEN work-ACC praise-started
 '[Every man [who was disputing with *a heart specialist*]] has suddenly begun praising *that doctor's* job.'
- b. *[[**do-no isya-to ronsoositeita**] otoko]-mo kyuuni so-no
 which-GEN doctor-with was.disputing man-MO suddenly that-GEN
sinzoo-gekai-no sigoto-o home-hazimeta
 heart-surgeon-GEN work-ACC praise-started
 '[Every man [who was disputing with *a doctor*]] has suddenly begun praising *that heart specialist's* job.'

The status of the (b) examples can be attributed to a condition like (30), as suggested in Takubo & Kinsui 1998, based on the formulation of Condition D in Ueyama 1998: 204.¹⁰

(30) Condition D' (to be revised later):

Nominal expressions α and β must be disjoint in reference if $\alpha \supset \beta$ and α precedes β , where $\alpha \supset \beta =_{\text{def}} \{x : x \text{ is } N_\alpha\} \cap \{x : x \text{ is } N_\beta\} = \emptyset$, with N_γ designating that part of γ that represents the 'descriptive content' of a nominal expression γ .

Now consider the examples in (31).

- (31) a. (*Situation: The leader of the anti-government movement has called an underground meeting in order to designate the members who will put into action the plan of bombing the embassy, which they have been working on for a couple of weeks. Every member is waiting for him to speak. The leader begins the meeting by making the following statement.*)
 [[**Ko/#A/*So**]-no keikaku-o saisyoni kangaedasita mono]-o kondono
 this/that/that-GEN plan-ACC first proposed person-ACC upcoming
taisikan bakuha keikaku-no zikkoo sekininsya-ni siyoo.
 embassy bombing plan-GEN execution leader-DAT I.nominate
 'I nominate the person who first proposed *this plan* to be the execution leader of *the upcoming embassy bombing plan*.'
- b. (*Situation: After the failure of the bombing at the embassy ten years ago, the group of anti-government guerillas became too weak, and they have decided to dissolve their organization. No one dares to speak a word at the meeting, except for the leader:*)

¹⁰ Lasnik's (1991) condition in (i), which is called *Condition D* in Huang 1988, is formulated in Ueyama 1998: 204 as in (ii).

(i) A less referential expression may not bind a more referential one. (Lasnik 1991: 19 (51))

(ii) Condition D:

Nominal expressions α and β must be disjoint in reference, if $\alpha < \beta$ and α c-commands β , where $\alpha < \beta$ iff (a) for every x , x an individual which can be referred to by the use of β , x can be referred to by the use of α , and, (b) for some y , y an individual which can be referred to by the use of α , y cannot be referred to by the use of β .

[{[#]**Ko/A/*So**}-no keikaku-o saisyoni kangaedasita mono]-ga 10-nen
 this/that/that-GEN plan-ACC first proposed person-NOM 10-year

mae-no taisikan bakuha keikaku-no zikkoo sekininsya-ni naru
 before-GEN embassy bombing plan-GEN execution leader-DAT become

bekidatta.

should.have

'The person who first proposed *that plan* should have become the execution leader of *the embassy bombing plan ten years ago*.'

Note that {*ko/a/so*}-no keikaku in (31) is neither preceded nor c-commanded by its antecedent; hence the status of (31) with *so*- is as expected. That (31) is much better with *ko/a*- than with *so*- is consistent with our proposal that *ko*-NPs and *a*-NPs are D-indexed. Recall that coreference between two co-D-indexed NPs can obtain without satisfying the PF precedence condition or the LF c-command condition.

Now consider (32).

(32) (Situation: An anti-government guerilla leader begins an underground meeting by making the following statement.)

a. [**Keikaku-o saisyoni kangaedasita mono**]-o {**ko/??a/*so**}-no taisikan
 plan-ACC first proposed person-ACC this/that/that-GEN embassy

bakuha keikaku-no zikkoo sekininsya-ni siyoo.
 bombing plan-GEN execution leader-DAT I.nominate

'I nominate the person who first proposed *the plan* to be the execution leader of *{this/that} embassy bombing plan*.'

b. [**Keikaku-o saisyoni kangaedasita mono**]-ga {**??ko/a/*so**}-no taisikan
 plan-ACC first proposed person-NOM this/that/that-GEN embassy

bakuha keikaku-no zikkoo sekininsya-ni naru bekidatta.
 bombing plan-GEN execution leader-DAT become should.have

'The person who first proposed *the plan* should have become the execution leader of *{this/that} embassy bombing plan*.'

Here, the *so*-NP is preceded by 'its (intended) antecedent'. Hence the PF precedence condition is satisfied in (32). We maintain that what is responsible for the status of (32) with the *so*-NP is Condition D', just as in the case of (27b), (28b), and (29b). What is of particular interest is that (32) seems much better with *ko/a*- than with *so*-. This suggests that *ko*-NPs and *a*-NPs are not subject to Condition D', in contrast to *so*-NPs. This in turn provides further evidence for the proposed distinction between *ko*-NPs and *a*-NPs on the one hand and *so*-NPs on the other. Given that the relevant distinction is expressed in terms of D-indexing, as in (22), we can restate (30) as (33).

(33) Condition D':

Nominal expressions α and β must be disjoint in reference if $\alpha \supset \beta$ and α precedes β , unless α and β are co-D-indexed, where $\alpha \supset \beta =_{\text{def}} \{x : x \text{ is } N_\alpha\} \setminus \{x : x \text{ is } N_\beta\}$, with N_γ designating that part of γ that represents the 'descriptive content' of a nominal expression γ .

4. On the deictic uses of *ko/so/a*-NPs

4.1. Problem

We have proposed the distinction among *ko*-NPs, *so*-NPs, and *a*-NPs, as in (22), repeated here.

(22) The distinction among *ko*-NPs, *so*-NPs, and *a*-NPs:

- a. *Ko*-NPs and *a*-NPs are D-indexed.
- b. *So*-NPs are either I-indexed or 0-indexed.

We would now like to address how (22) should be related with the standard characterization of the deictic uses of these NPs, repeated in (3).

(3) The standard characterization of the *deictic uses* of *ko/so/a*-NPs:

- a. A *ko*-NP is used for referring to something near the speaker.
- b. A *so*-NP is used for referring to something closer to the hearer.
- c. An *a*-NP is used for referring to something at a distance from both the speaker and the hearer.

4.2. A-NPs as [Distal] and ko-NPs as [Proximal]

We propose (34).

- (34) *Ko*-NPs and *a*-NPs are marked, linguistically, as [Proximal] and [Distal], respectively, and must correspond to what the speaker construes as *proximal* and *distal*, respectively.

We would like to entertain the hypothesis that all the differences among *ko*-, *so*-, and *a*-, at least in the core cases, can be attributed to (22) and (34). Given (34), we can restate (3a) and (3c) as in (35).

- (35) a. A *ko*-NP is used for referring to something that is construed by the speaker as being *proximal*.
 b. An *a*-NP is used for referring to something that is construed by the speaker as being *distal*.

The deictic uses of *ko*- and *a*- can thus be directly accounted for by (34), without making reference to the notion the *hearer*.¹¹

Under the proposal that the relevant distinction between *proximal* and *distal* in (34) is a cognitive, rather than grammatical, distinction, we expect (36).¹²

- (36) The felicitousness of a *ko*-NP and an *a*-NP in a given sentence, hence the choice between the two, can be affected by non-grammatical factors.

In this section, we will present evidence in support of (36).

Let us first consider the choice between *ko*- and *a*- in their deictic uses. Consider first the example in (37), intended as utterances directed to the hearer who is standing by the speaker.

- (37) a. [Pointing to someone standing 10 meters away]
 {A/^{??}Ko}-no hito-wa amerikazin desu.
 that/ this-GEN person-TOP American be
 '{That/This} person is an American.'
- b. [Pointing to someone the speaker has his/her arm around]
 {Ko/[#]A}-no hito-wa amerikazin desu.
 this/ that-GEN person-TOP American be
 '{This/That} person is an American.'

Although the contrast in (37) can be due to the physical proximity to the speaker of the person who is being referred to, the physical proximity does not always determine the choice between *ko*- and *a*- in their deictic uses. Suppose that the speaker has ordered someone to stand 10 meters away and explains to the hearer who this person is. In this situation, the utterance in (38) seems acceptable, with either *a*- or *ko*-, despite the fact that the distance between the speaker and the person referred to remains the same.

- (38) {A/Ko}-no otoko-wa [(wasi-ga kondo amerika-kara turetekita)
 that/ this-GEN man-TOP I-NOM this.time America-from brought
 amerikazin] zya.
 American be
 '{That/This} man is an American (that I have brought from America this time).'

The subtle contrast in (39) also suggests that something about the speaker's knowledge affects the choice between *ko*- and *a*- in their deictic uses.

- (39) [Pointing to a dog sitting 10 meters away]
 a. {A/^{??}Ko}-no inu-wa hasukii desu ka?
 that/ this-GEN dog-TOP Husky be Q
 'Is {that/this} dog a Husky?'
- b. {A/[?]Ko}-no inu-wa hasukii desu yo.
 that/ this-GEN dog-TOP Husky be PARTICLE
 '{That/This} dog is a Husky.'

Similarly, (40) seems worse than (38), in the same situation.

- (40) {A/^{??}Ko}-no kata-wa do-ko-no kuni-no kata desu ka?
 that/this-GEN person-TOP which-place-GEN country-GEN person be Q

¹¹ We will return to (3b) in the next section.

¹² We assume that *ko*- and *a*- are linguistically marked as [Proximal] and [Distal], and in this sense the distinction between *ko*- and *a*- is linguistic. What is cognitive is the difference between *proximal* and *distal*.

'Which country is **{that/this} person** from?'

Now consider (41).

(41) [Pointing to a tall tree 20 meters away standing all by itself in a large field]

- a. **{A/Ko}-no ki-wa kasinoki desu.**
 that/this-GEN tree-TOP oak be
 '{That/This} tree is an oak.'
- b. **{A/Ko}-no ki-wa nan-no ki desu ka?**
 that/this-GEN tree-TOP what-GEN tree be Q
 'What tree is **{that/this} tree**?'

The status of (41b) does not seem very different from that of (41a). The choice between *ko-* and *a-* in (41) thus seems independent from the speaker's knowledge, unlike examples such as (37)-(40). Now compare (41) with (42).

(42) [Pointing to a tall tree standing 20 meters away, surrounded by many other trees]
{A/??Ko}-no ki-wa kasinoki desu.
 that/this-GEN tree-TOP oak be
 '{That/This} tree is an oak.'

The relevant factor in determining the choice between *ko-* and *a-* in (41)-(42) seems to be conspicuousness of some sort. In the case of (41), the tree in question is conspicuous while it is not so conspicuous in (42). A more extreme case is given in (43).

(43) [Pointing to a gigantic spaceship covering the entire sky, as in the movie *Independence Day*]
{Ko/#A}-re-wa do-ko-kara kitanda!
 this/that-thing-TOP which-place-from came
 'Where does **{this/that}** come from!'

It thus seems that various factors contribute to the determination of the choice between *ko-* and *a-* in their deictic uses, which we have tried to characterize in terms of the speaker's knowledge and conspicuousness of some sort (which seems to be much affected by the visual information available to the speaker, as we have just observed). Our contention is that these, and most likely other, considerations determine whether the speaker construes a given object as *distal* or *proximal*. Once it is determined how the speaker chooses to construe the object cognitively, the choice between a *ko*-NP and an *a*-NP is a matter of compatibility between a linguistic form and the speaker's cognitive intention. *Ko*-NPs and *a*-NPs are linguistically marked [Proximal] and [Distal], by hypothesis, and hence the relevant compatibility is achieved only when *ko*-NPs and *a*-NPs are chosen to express *proximal* and *distal*, respectively.

The examples below illustrate that the choice between *ko-* and *a-* in their non-deictic uses is also much affected by non-grammatical factors. First consider (44).

- (44) a. (=31a)
 (Situation: The leader of the anti-government movement has called an underground meeting in order to designate the members who will put into action the plan of bombing the embassy, which they have been working on for a couple of weeks. Every member is waiting for his words. The leader begins the meeting by making the following statement.)
[[{Ko/#A/*So}-no keikaku-o saisyoni kangaedasita mono]-o kondono
 this/that/that-GEN plan-ACC first proposed person-ACC upcoming
taisikan bakuha keikaku-no zikkoo sekininsya-ni siyoo.
 embassy bombing plan-GEN execution leader-DAT I.nominate
 'I nominate the person who first proposed **this plan** to be the execution leader of **the upcoming embassy bombing plan**.'
- b. (Situation: A group of guerillas are scheming to attack the government in some way. Many plans have been proposed over several meetings, but most of them do not have an appropriate person who will actually carry them out. Suddenly, one of the guerillas recalls that there is one feasible plan left, which was proposed at the first meeting ; it was almost forgotten since it was suggested at the first meeting two weeks ago.)
[[#Ko/A/*So]-no keikaku-o saisyoni kangaedasita mono]-o kondono
 this/that/that-GEN plan-ACC first proposed person-ACC upcoming

taisikan bakuha keikaku-no zikkoo sekininsya-ni siyoo.
 embassy bombing plan-GEN execution leader-DAT I.nominate

'I nominate the person who first proposed *that plan* to be the execution leader of *the upcoming embassy bombing plan*.'

As expected, the *so*-NPs in (44) are disallowed since there is no linguistic antecedent for them; see (25a). What is of interest is the choice between *ko*- and *a*- in (44). The identical sentence is used in (44a) and (44b), but different pragmatic contexts are given for them. It seems that the situation in (44a) makes it more appropriate for the speaker to construe the relevant plan as *proximal*. The situation in (44b), by contrast, seems to make it more appropriate for the speaker to construe it as something *distal*. Since the relevant difference is not due to grammatical factors, however, we do not expect the contrast between (44a) and (44b) to obtain uniformly among speakers, although the contrast as indicated seems fairly clear to most speakers. We observe a similar contrast in (45) as well.¹³

(45) a. (=31b))

(*Situation*: After the failure of the bombing at the embassy ten years ago, the group of anti-government guerillas became too weak, and they have decided to dissolve their organization. No one dares to speak a word at the meeting, except for the leader.)

[[[#]Ko/A/*So]-no keikaku-o saisyoni kangaedasita mono]-ga 10-nen
 this/that/that-GEN plan-ACC first proposed person-NOM 10-year

mae-no taisikan bakuha keikaku-no zikkoo sekininsya-ni naru
 before-GEN embassy bombing plan-GEN execution leader-DAT become

bekidatta.
 should.have

'The person who first proposed *that plan* should have become the execution leader of *the embassy bombing plan ten years ago*.'

b. (*Situation*: The group of anti-government guerillas failed in the embassy bombing plan ten years ago. They still keep the inside map of the embassy on the wall of their hiding place. One day, the remaining members are staring at the map in silence. Someone murmurs abruptly.)

[[Ko/[#]A/*So]-no keikaku-o saisyoni kangaedasita mono]-ga 10-nen
 this/that/that-GEN plan-ACC first proposed person-NOM 10-year

mae-no taisikan bakuha keikaku-no zikkoo sekininsya-ni naru
 before-GEN embassy bombing plan-GEN execution leader-DAT become

bekidatta.
 should.have

'The person who first proposed *this plan* should have become the execution leader of *the embassy bombing plan ten years ago*.'

We have argued that the choice between *ko*-NPs (which are marked [Proximal]) and *a*-NPs (which are marked [Distal]) is determined whether the speaker perceives the object in question as *proximal* or *distal*, and that the decision is made on the basis of various considerations. The crucial point of contention here is that this holds uniformly for their deictic uses as well as their non-deictic uses.

4.3. Deictic *so*

One of the main theses pursued in this paper is that *so*-NPs are either I-indexed or 0-indexed, and never D-indexed; see (22a). This has the consequence that they always require a linguistic antecedent. The deictic use of *so*-NPs, as in (46), therefore seems to pose a serious challenge to this claim.

¹³ The differences between *ko*- and *a*-, which we have observed in section 4, also show up in a monologue.

- (i) [In a monologue, thinking about one's own pain.]
 {Ko/^{??}A/*So}-no itami-wa doko-kara kiteru nokanaa
 this/ that/that-GEN pain-TOP where-from originate I.wonder
 'I wonder where {this/that} pain originates.'
- (ii) [In a monologue, thinking about one's own pain.]
 a. {^{??}Ko/A/*So}-no itami-wa doko-kara kiteita no ka naa
 this/that/that-GEN pain-TOP where-from originated I.wonder
 'I wonder where {this/that} pain originated.'

- (46) a. *Sumimasen-ga, so-no hon-o totte kudasai.*
 excuse.me-but that-GEN book-ACC take please
 'Excuse me, but could you get me **that book** (next to you)?'
- b. *So-no otoko-wa dare da?*
 that-GEN man-TOP who be
 'Who is **that man** (next to you)?'

One might suggest that the deictic *so*-NPs are D-indexed. Such an approach however would lead to distinct treatments of the deictic and the non-deictic uses of the demonstratives. In this section, we would like to maintain that *so*-NPs are never D-indexed, and suggest a uniform treatment of the deictic and the non-deictic uses of the demonstratives.

As observed earlier, the well-known generalization concerning the deictic *so*- is as in (3b), repeated below, along with (3a) and (3c).

- (3) The standard characterization of the *deictic uses* of *ko/so/a*-NPs:
- A *ko*-NP is used for referring to something near the speaker.
 - A *so*-NP is used for referring to something closer to the hearer.
 - An *a*-NP is used for referring to something at a distance from both the speaker and the hearer.

As an illustration of (3b), consider the situation in (47).

- (47) John is sitting in a white chair at one end of a room, looking at a red chair placed at the other end of the room. He is all by himself.

John can refer to the red chair as *ko-no isu* 'this chair' or *a-no isu* 'that chair', depending upon whether he perceives it as *proximal* or *distal*; see the discussion in section 4.2. When there is someone sitting in the red chair, however, the same options do not seem to be available to John; he can no longer refer to the red chair as *a-no isu* 'that chair' if his utterance is directed to this person. It is interesting to observe that, contrary to the standard generalization in (3), the use of *ko-no isu* 'this chair' in this situation does not seem to be totally impossible, in sharp contrast to that of *a-no isu*, which is simply impossible.

To observe the relevant contrast between *a-no isu* and *ko-no isu* more clearly, let us consider a few more situations, starting with (48).

- (48) A tyrant is sitting in a white chair at one end of a room in his palace, looking at a red chair placed at the other end of the room. He is all by himself.

As in (47), the tyrant can refer to the red chair as *ko-no isu* 'this chair' or *a-no isu* 'that chair', depending upon whether he perceives it as *proximal* or *distal*. Now, suppose one of his men is sitting in the red chair. The tyrant talks to his man.

- (49) (*Yoku kike.*) {**Ko-no/So-no/*A-no**} *isu-wa naa, wasi-ga Pekin-kara*
 carefully listen this/tha/that chair-TOP PARTICLE I-NOM Beijing-from
mottekaetta nozya.
 bring.back PARTICLE

'(Listen carefully.) **{This/That} chair** is what I have brought back from Beijing.'

As we discussed in section 4.2, whether the speaker construes a given object as *proximal* or *distal* is affected by a number of non-grammatical factors. While this is true even in the absence of the hearer, additional factors seem to be introduced by the presence of the hearer. That is to say, it seems that whether the speaker construes a given object as *proximal* or *distal* is affected by the 'relative proximity' between the speaker and the hearer, as it is understood by the speaker. Since the 'relative proximity' is a matter the speaker determines, the speaker seems to have the option of taking (virtually) everything in the world as *proximal* if s/he so wishes. The use of *ko-no isu* 'this chair' in (49) is thus not unexpected.

Now, why is *a-no isu* 'that chair' not acceptable in (49)? We would like to suggest that the clear unacceptability of *a-no isu* in (49) is due to the conflict between the two 'points of view', so to speak, as described in (50).¹⁴

¹⁴ In works subsequent to the completion of the draft of this paper, we propose (e.g., in Hoji et al. 2000) a somewhat different analysis of the deictic use of *so*-NPs as well as *ko/a*-NPs, dispensing with the crucial use of 'points of views', especially that of the hearer. The presentation of the new analysis, however, would require considerable space and it has to wait for a separate occasion.

- (50) The speaker construes the relevant object (=the red chair) as *distal*, and the speaker thinks that the hearer would construe the relevant object (=the red chair) as *proximal*.¹⁵

We suggest that when the situation as given in (50) arises, the *a*-NP (i.e., *a-no isu* 'that chair'), which by hypothesis is marked linguistically as [Distal], cannot be used to express the object that is cognitively construed as *distal*.

Now, if the use of *a*-NPs is not allowed under (50), how can the speaker refer to the object in question? Although the *ko*-NP is potentially usable, it would be an expression of the speaker's cognitive understanding of the object as *proximal*, and that is NOT the speaker's intention here. The speaker cannot express his/her cognitive understanding of the object as *distal* either, because of the 'conflict', just noted. The only option s/he has is then to express his/her cognitive understanding of the object in question as neither *proximal* nor *distal*, and the speaker can do this with a *so*-NP. *So*-NPs, by hypothesis, are not marked as either [Distal] or [Proximal]. According to Ueyama's theory, however, *so*-NPs are either I-indexed or 0-indexed, and as the result, need a linguistic antecedent. We suggest that a marked operation creates, on the basis of 'visual contact' with an object, what corresponds to a linguistic expression that can serve as an antecedent for an I-indexed *so*-NP and that this is what underlies the deictic use of *so*-NPs.

Deictic *so*-NPs never appear in a monologue. In a monologue, no conflicts of the sort under discussion arise. So the speaker has no reason to invoke, and hence cannot invoke, the marked operation. The description of the deictic *so*-NPs in the literature always makes a crucial reference to the *hearer*, as discussed in section 1. According to the account of the deictic *so*-NPs suggested here, this is because the conflicts of the sort under discussion arise only in the presence of the hearer; but see note 14.

5. Remaining issues

5.1. On the possibility of covariant interpretations with *ko*-NPs

In section 3.2.2, we concluded, on the basis of examples like (51), that *ko*-NPs do not give rise to a covariant interpretation.

- (51) a. (=26a))

Do-no zidoosya-gaisya-mo [**{so-no/*ko-no}** **zidoosya-gaisya-no**
which-GEN automobile-company -MO that-GEN/this-GEN automobile-company -GEN

ko-gaisya]-*o* *suisensita*.
child-company -ACC recommended

'Every automobile company recommended {that/this} company's subsidiary.'

- b. (=26b))

Kanarinokazu-no zidoosya-gaisya-ga **{so-no/*ko-no}**
quite.many -GEN automobile-company -NOM that-GEN/this-GEN

zidoosya-gaisya-no *ko-gaisya-o* *suisensita*.
automobile-company -GEN child-company -ACC recommended

'(Each of) quite many automobile companies recommended {that/*this} company's subsidiary.'

There are, however, examples like (52), noted in Tanaka 1981.

¹⁵ Recall that whether the speaker construes a given object as *proximal* or *distal* is affected by a number of non-grammatical factors. Recall further that we assume that the speaker has the option of taking (virtually) everything in the world as *proximal* if s/he so wishes. We can ask whether the speaker also has the option of taking (virtually) everything in the world as *distal* if s/he so wishes. It seems that the speaker does not have as free an option of taking everything in the world to be *distal* as s/he does of taking everything in the world *proximal*. We have the option of referring to a star in the sky as *ko-no hosi* 'this star' or *a-no hosi* 'that star', but we do not seem to have the option of referring to a pen that we are holding in our hands as *ko-no pen* 'this pen' or *a-no pen* 'that pen'. It seems that we must refer to it as *ko-no pen* 'this pen', no matter how we try to adjust the way we view the world. The notion *proximal* thus seems to have primacy of some sort over the notion *distal*.

As noted, the choice between *distal* and *proximal* can be affected by various factors, including the way the speaker views the world as well as the physical distance between the object and the speaker. The speaker, we might say, has all the relevant information about the way s/he views the world, which affects whether s/he construes an object as *distal* or *proximal*, when the option is available. When it comes to how the speaker thinks the hearer construes a given object, the speaker presumably has much less information as to the way the hearer views the world. Hence it seems reasonable to assume that the relevant choice is determined mostly on the basis of the physical distance between the object and the hearer. These considerations, combined with the primacy of *proximal* over *distal*, thus lead us to conclude that in the situation given for (49) above, the speaker is highly likely to think that the hearer construes the red chair as *proximal*. See Appendix for further discussion.

- (52) *Mukasi-wa konna huuni kangaeteitano. Dareka sutekina okoto-no hito-o*
 before-TOP such.way I.thought some nice male-GEN person-ACC
mitukete, ko-no hito-to sekaizyuu-o ryokoosite mawaritaina tte.
 find this-GEN person-with around.world-ACC travel around.want COMP
Imazya yume-ne.
 now dream-PARTICLE

'I used to dream to myself like this. I would find *a nice man* and travel around the world with *this man*. Now it is just a dream of the past.' (Tanaka 1981: (58))

Given the impossibility of the covariant interpretation in (51), and given the absence of c-command in (52), the relevant interpretation in (52) cannot be that of pure bound variable anaphora.

We seem to have only two clear options. One is to treat *ko*-NPs as either D-indexed or I-indexed. This option, however, would lead us to expect (53a) to be as acceptable as (53b), under the relevant readings; see (51).

- (53) a. *Do-no NP-ga [ko-no-NP-no ...] ... V ...*
 b. *Do-no NP-ga [so-no-NP-no ...] ... V ...*

The other option is to continue to assume *ko*-NPs to be always D-indexed and somehow allow them to have a covariant interpretation of the sort observed in (52). We would like to adopt the latter option and suggest that examples like (54) in English are also to be analyzed in a similar way.

- (54) (J. Uriagereka (p.c. September, 2001))
 Every family who has *a George* thinks *this George* is a genius.

Space limitation however prevents us from elaborating on the relevant analysis here.

Given the preceding discussion, we should be able to determine the nature of the interpretations of the *ko*-NP in examples like (52) and *this NP* in examples like (54) by examining whether the availability of the relevant readings is sensitive to (i) the LF c-command condition, (ii) the PF precedence condition, and (iii) Condition D'. We wish to address these issues in a separate work.¹⁶

5.2. Further issues

The relevant concepts that we have used most crucially are as in (55).

- (55) a. D-index, I-index and 0-index
 b. [Distal] and [Proximal]

One might naturally wonder how these concepts manifest themselves in languages other than Japanese. Hoji et al. 1999 discusses reconstruction effects in English in regard to bound variable anaphora and addresses how the grammar of English exhibits properties associated with I-index and 0-index, and their discussion indicates that the notions in (55a) are in fact part of the grammar of English.

Recall that *ko*-NPs and *a*-NPs are marked as [Proximal] and [Distal], and must correspond to what the speaker construes as *proximal* and *distal*, respectively. Whether the speaker construes a given object as

¹⁶ One might suggest that the relevant interpretation for the *ko*-NP in examples like (i), based on The Constitution of Japan: Article 9, second sentence, is also an instance of a covariant interpretation.

(i) *Zenkoo-no mokuteki-o tassuru tame, riku-kai-kuu-gun*
 preceding.paragraph-GEN aim-ACC accomplish to land see air-force
sonota ikanaru senryoku-mo ko-re-o hozisi-nai.
 other every war.potential-MO this-thing-ACC maintain-not

'In order to accomplish the aim of the preceding paragraph, *no matter what kind of war potential* (land, sea, air forces, and so on) we shall never maintain *this*.'

We would, however, like to adopt Mikami's (1972: 184-186) suggestion that this use of *ko*-NP is quite limited and can be considered as falling outside the core aspects of modern Japanese.

Mikami observes that the Asahi Newspaper (July 5, 1954: page 1) quotes Article 9 as in (ii), without *ko-re*, and suggests that the use of *ko-re* as in (i) is limited to the special style of translation from Chinese (*Kanbun-kundoku*).

(ii) *Zenki-no mokuteki-o tassuru tame riku-kai-kuu-gun*
 above.noted-GEN aim-ACC accomplish to land see air-force
sonota-no senryoku-wa hozisi-nai.
 other-GEN war.potential-TOP maintain-not

'In order to accomplish the aim noted above, as for land, sea and air forces, as well as other war potential, we shall never maintain.'

Mikami (1972: 186) also cites the statistical results reported by Ide (1952: 7-12) in regard to the uses of *kore* and *sore* in question, in support of his suggestion noted above.

proximal and *distal* is, however, affected a great deal by non-grammatical factors; see section 4.2. The choice between *this* and *that* in English also seems to be sensitive to the considerations of the sort we discussed in section 4.2 in regard to the choice between *proximal* and *distal*. Not a particularly surprising result. We in fact expect that the demonstrative systems in many languages can be characterized in terms of (55) (cf. Kinsui et al. 2002) although the demonstratives of some languages might be differentiated along the dimensions not mentioned in (55).

6. Concluding remarks

The major results of this paper can be summarized as follows.

- (56) Both the deictic and non-deictic uses of the demonstratives in modern Japanese can be described on the basis of their linguistic characterization as given in (57).
- (57) a. A *ko*-NP must be D-indexed; and it is marked as [Proximal].
b. A *so*-NP cannot be D-indexed (and it is neither [Proximal] nor [Distal]).
c. An *a*-NP must be D-indexed; and it is marked as [Distal].

It thus seems plausible that a linguistic object is marked [Proximal] or [Distal] only if it is D-indexed; and if such is indeed the case, it would provide us with a connection between (55a) and (55b), and hence between (i) the general properties of *ko/so/a*-NPs on the one hand and (ii) the fact that a *so*-NP can be 'bound' by a quantificational NP, while an *a*-NP and a *ko*-NP cannot.

It is significant to note that the properties in (57) are expressed in terms of theoretical primitives that we maintain are available in UG. Given the view, which we adopt, that the grammar is an autonomous system, the relevant concepts in (57) must be independent from pragmatic considerations. The linguistic markings [Proximal] and [Distal] are thus understood to exist independently of the speaker and the hearer.

It is a matter of course, however, that language can be put to use. When it is used, the outputs of the generative procedure will be assessed, so to speak, by the cognitive agent (the speaker) as to their compatibility with his/her cognitive intentions. NPs marked [Proximal], i.e., *ko*-NPs, provide a means, as it were, for the cognitive agent (the speaker) to express objects that s/he construes cognitively as *proximal*, and NPs marked [Distal], i.e., *a*-NPs, objects that s/he construes cognitively as *distal*. As we have discussed in section 4.2, whether a given object is construed cognitively as *proximal* or *distal* is a matter outside grammar. It is for this reason that the choice between a *ko*-NP and an *a*-NP is contingent upon how the speaker views the world and other non-linguistic factors, both in their deictic and non-deictic uses. It is also for this reason that the bases for the relevant choice seem to become even more difficult to comprehend in the presence of the hearer, which presumably introduces additional non-linguistic factors in the cognitive agent's (i.e., the speaker's) determination in regard to whether to construe a given object cognitively as *proximal* or *distal*.

The choice between a *so*-NP on the one hand and a *ko*- or *a*-NP on the other, however, is controlled linguistically and is not affected by non-linguistic factors, as long as we consider their non-deictic uses (in sharp contrast with the choice between *ko*-NPs and *a*-NPs). In their deictic uses as well, *so*-NPs differ from *a*-NPs and *ko*-NPs; in a monologue, the former cannot be used to refer deictically to a specific object, while the latter two can.

This leaves us with a puzzle: why are *so*-NPs usable deictically in the presence of a hearer? Orthogonal to this puzzle, we believe, is the question: how 'flexible' is the relevant part of the cognitive system that allows the cognitive agent to construe an object as *proximal* or *distal*? Our account of why *so*-NPs are usable in the presence of a hearer consists of two parts. One is that the presence of the hearer can give rise to a situation in which construing an object as *distal* results in conflicts between the speaker's point of view and the hearer's point of view; but see Appendix. The other is that there is a marked operation that gives rise to what can serve as an antecedent for a *so*-NP on the basis of some visual information.

The presence of the hearer creates a complex array of factors in regard to how to assess the relevant compatibility between the output of the generative procedure and the cognitive intentions. It seems clear therefore that we have a significantly better chance of discovering the properties of the language faculty proper if we concentrate on linguistic phenomena that do not get affected by the presence of the hearer. For similar reasons, one can concentrate on the distribution of bound variable anaphora, as opposed to that of coreference, to obtain insight into the formal properties of the language faculty; cf. Reinhart 1983: chap. 7. The empirical demonstration of the formal similarities of *a*-NPs and *ko*-NPs as discussed above has in fact been made possible as the result of works on anaphora such as Ueyama 1998 and Hoji et al. 1999, which pursue this general line of thinking.

We must however also recognize the importance of understanding the properties of the cognitive system that interfaces with grammar. After all, our introspective judgments, which at the moment are the most reliable source of empirical data in linguistic science (at least the part of it that deals with 'meanings'), are based not only

on our grammatical knowledge but also on the relevant cognitive considerations. It is in fact studies on cognitive aspects of the relevant phenomena such as Kuroda 1979 and Takubo & Kinsui 1996, 1997 that have laid the foundation for Ueyama's (1998) theory. It is thus hoped that further studies on these topics in the general directions we have taken will lead us to a better understanding of not only the language faculty proper but also the relevant cognitive aspects of the human mind.

Appendix: On Kuroda's characterizations of demonstrative NPs

Kuroda 1979 can be understood as having laid the foundation for the approach pursued here. In this appendix, we will review the relevant aspects of Kuroda 1979.¹⁷

Let us first consider (4), repeated here.

- (4) Kuno's (1973: 290) characterization of the *non-deictic uses* of *so/a*-NPs (slightly adapted):
- A *so*-NP is used for referring to something that is not known personally to either the speaker or the hearer or has not been a shared experience between them.
 - An *a*-NP is used for referring to something (at a distance either in time or space) that the speaker knows both s/he and the hearer know personally or have experience in.

Kuno's proposal is based on observations like the following.¹⁸ The acceptability markings are Kuno's (1973).

- (58) *Kinoo, Yamada-san-ni hazimete aimasita. {A/*so}-no hito,*
 yesterday Mr.Yamada-DAT first.time met DISTAL/NEUTRAL-GEN person
zuibun kawatta hito desu-ne.
 very eccentric person is-SFP

'I met **Mr. Yamada** for the first time yesterday. **That man** is a very strange person, isn't he?'
 (Kuno 1973: 283, (5)A)

- (59) *Kinoo Yamada-toyuu hito-ni aimasita. {*A/so}-no*
 yesterday Mr.Yamada-was.called person-DAT met DISTAL/NEUTRAL-GEN
hito, *miti-ni mayotte komatteita node, tasukete agemasita.*
 person way-in lose.was in.trouble because helping gave (the favor of)

'Yesterday, I met **a man by the name of Yamada**. Since **he** lost his way and was having difficulties, I helped him.' (Kuno 1973: 284, (6)A-1)

According to Kuno, *a-no hito* is more appropriate than *so-no hito* in (58) because the speaker (presumably) knows that the person under discussion is known to both the speaker and the hearer.¹⁹ In (59), on the other hand, *so-no hito* is more appropriate than *a-no hito* because the use *-toyuu* in *Yamada-san-toyuu-hito* '(a) person named Mr. Yamada' indicates that the speaker assumes that the hearer does not know the person in question.

Kuroda (1979), however, argues as in (60).

- (60) The truly crucial factor in regard to the choice between the demonstratives *so-* and *a-* is not whether the speaker and hearer are familiar with the referent; rather, it is whether the speaker approaches/regards the referent as an object of conceptual knowledge or as an object of direct knowledge.²⁰ (Kuroda 1979: 102)

His proposal can be summarized as in (61).

- (61) Kuroda's (1979) characterization of *a-* and *so-*: (based on Kuroda 1979: 97)
- A*-NPs are to express an object of direct knowledge.
 - So*-NPs are to express an object of conceptual knowledge.

The most compelling argument for (60) and (61), and against the relevance of the 'hearer' in regard to the choice between the the demonstratives *so-* and *a-* (in their non-deictic uses), is based on the example in (62).

¹⁷ Kuroda 1979 is written in Japanese: its French version has appeared as Kuroda 1985.

¹⁸ Essentially the same observations are made in Matsushita 1978: 234-235; see note 5.

¹⁹ This can presumably be inferred from the use of the sentence-ending particle *ne*, (one of) the main discourse function(s) of which is to solicit an agreement from the hearer.

²⁰ This is our English translation of the relevant passage. Kuroda (1979: 97) points out that Kuno (1973) provides remarks such as "indirect knowledge does not belong to the category of [being familiar with him]," "in the absence of direct knowledge, the *so*-series is used," and so on, and that [Kuno] thus seems to add to the concept of "being familiar with or not" the concept of "whether it is direct knowledge or indirect knowledge." (The contents in the quotations here are also our translations of the relevant passage from Kuroda 1979.)

(62) *Kyoo Kanda-de kazi-ga atta yo.*
 today Kanda-LOC fire-NOM was SFP

A-no kazi-nokotodakara hito-ga nanninmo sinda to omou yo.
 DISTAL-GEN fire-because.of person-NOM many died QM think SFP

'There was **a fire** in Kanda today. Having enough knowledge of **that fire**, I believe that more than a few people got killed.' (Kuroda 1979: 101)

Kuroda (1979) states:

(63) This example may not sound perfect. Since the hearer does not in this case have the knowledge of the fire in Kanda, the speaker should not be able to use *ano kazi* [according to Kuno's (1973) characterization of the use of *so-* and *a-*]. If we replace *ano kazi* with *sono kazi*, however, complete unacceptability results. I suspect that we can perhaps accept [(62)] as it is, once we compare it with this impossible alternative [with *sono kazi*]. The use of *ano kazi no koto dakara* implies that the speaker makes the inference—based on his/her direct knowledge [of the fire] which the concept "the fire in Kanda" alone would never have given rise to—that people must have been killed [in the fire].²¹ (Kuroda 1979: 101)

The 'meaning' of *X no koto dakara ...* is something like 'Having enough direct knowledge of X, I believe I am entitled to make the inference about X that ...'. Recall that Kuroda claims that *so-* is chosen when "the speaker approaches/regards the referent as an object of conceptual knowledge" rather than "as an object of direct knowledge." Given the 'meaning' of *X no koto dakara*, we thus expect that the *X* of *X no koto dakara* cannot be a *so*-NP, due to the 'meaning' of ... *no koto dakara*. Kuroda's (1979: 99) example in (64) confirms this expectation.

(64) **Yamada-san toyuu hito-o matteiru no desu.**
 Mr. Yamada so.named person-ACC am.waiting COMP be

***So-no hito-nokotodakara kitto okuretekuru desyoo.**
 NEUTRAL-GEN person-because.of certainly will.come.late perhaps

'I am waiting for **a/the person named Mr. Yamada**. Knowing **him** well, I suspect that he will probably be late.' (Kuroda 1979: 99)

The 'meaning' of *X toyuu hito* is '(a) person named X'; cf. (59). If *X toyuu hito* '(a) person called X' is used to introduce an individual that is not shared by the speaker and the hearer in one way or another, the speaker who utters (64) either (i) does not know, hence is not familiar with, the person named Mr. Yamada, or (ii) thinks that the hearer does not know, and hence is not familiar with, the person named Mr. Yamada. Under Kuno's characterization of the uses of *so-* and *a-*, given in (4), we would therefore predict that *so-no hito* should be used rather than *a-no hito* in (64). As we have just observed in (64), however, *so-no hito* is not allowed in (64). The use of *a-no hito* in place of *so-no hito* makes (64) acceptable, as indicated in (65), which is based on Kuroda's (1979: 99) example.²²

(65) **Yamada-san toyuu hito-o matteiru no desu.**
 Mr. Yamada so.named person-ACC am.waiting COMP be

²¹ This is our translation of the relevant passage.

²² Kuroda (1979: 99) states that "the use of *ano hito no koto dakara* [in (i)] is possible because the speaker understands that the hearer's direct knowledge about Mr. Yamada suffices to provide the hearer with the basis for the speaker's inference, even if [the basis is] not presented to the hearer conceptually." (This is our translation of the relevant passage.)

(i) (Kuroda 1979: 99)

Yamada-san-o matteiru no desu.

Mr. Yamada-ACC am.waiting COMP be

A-no hito-nokotodakara kitto okuretekuru desyoo.

DISTAL-GEN person-because.of certainly will.come.late perhaps

'I am waiting for **Mr. Yamada**. Knowing **him** well, I suspect that he will probably be late.'

The acceptability of (65), however, suggests that the use of *a-no hito nokotodakara* in (i) does not necessarily mean that (the speaker understands that) the hearer knows the basis for the speaker's inference. The speaker can utter (65) when he knows Mr. Yamada well and at the same time knows that the hearer does not know Mr. Yamada at all, i.e., when it cannot be understood that the hearer has access to the basis for the speaker's inference. The acceptability of (65) thus seems to provide confirmation for Kuroda's thesis that a proper description of (the non-deictic uses of) *a-* and *so-* does not require the concept *the hearer*, perhaps in a way stronger than what is presented in Kuroda 1979.

Takubo & Kinsui (1996: 60-62) address the so-called 'paradox of mutual knowledge' and propose that "the description of the use of a linguistic form should not include assumptions about the hearer's knowledge." (The materials in the quotation is our translation of the relevant passage.)

A-no **hito-nokotodakara** *kitto* *okuretekuru* *desyoo.*
 DISTAL-GEN person-because.of certainly will.come.late perhaps

'I am waiting for **a/the person named Mr. Yamada**. Knowing **him** well, I suspect that he will probably be late.'

Kuroda's proposal in (61) has led to the *D-domain* and *I-domain* distinction in Kinsui & Takubo 1990, 1992 and Takubo & Kinsui 1996, 1997.²³ It is proposed in these works that the domain of discourse is "the cognitive interface between linguistic expressions and knowledge-base" and the domain of discourse is divided into "I-domain and D-domain" (Takubo & Kinsui 1996: 59). "D-domain is the domain of direct experiences related to reference by demonstration" whereas "I-domain is the domain of indirect experiences related to reference by description" (Takubo & Kinsui 1996: 65).²⁴ Takubo & Kinsui (1996: 72) conclude that "the *a*-demonstratives are markers that give an instruction to search in the D-domain for the object of reference" and "the *so*-demonstratives are markers that give an instruction to search in the I-domain for the object of reference." Ueyama's (1998) distinction between D-indexed and 'non-D-indexed' NPs draws from the insights of Kuroda (1979) and Takubo & Kinsui (1996, 1997). Our proposal, which extends Ueyama's theory to cover *ko-*, can thus be considered as indirectly extending (the spirit of) Kuroda's proposal in (61) to cover *ko-*.

Our account of the deictic *so*-NPs, however, departs from Kuroda's conceptually (although the empirical difference between the two is not obvious at least at the moment; see the discussion below). Our account makes crucial reference to the cognitive difference between *proximal* and *distal* (hence between *ko-* and *a-*, because of (i) their lexical markings as [Proximal] and [Distal], respectively, and (ii) the relation between these lexical markings and language use). We suggest in effect that the deictic use of *so*-NPs is possible only when neither *ko*-NPs nor *a*-NPs are usable.²⁵

Recall that (50) (p.113) contains "the speaker thinks that the hearer would construe the relevant object ... as *proximal*." Having to make reference to what the speaker assumes that the hearer thinks seems problematic, to the extent that it is not obvious how the speaker can tell what the hearer might think. Not making reference to what the hearer thinks, Kuroda's proposal does not face this problem. The reference to what the hearer thinks, however, can be avoided if we state the relevant portion of (50) as "the speaker thinks that s/he would construe the relevant object as *proximal* if s/he were where the hearer is."

Our account of the deictic *so*-NPs, incorporating the change just suggested, and Kuroda's can be summarized as follows.

Our account

- (66) An *a*-NP (i.e., *a-no NP*), which by hypothesis is marked linguistically as [Distal], cannot be used to express an object construed as in (67).
- (67) The speaker construes the relevant object as *distal*, and the speaker thinks that s/he would construe the relevant object as *proximal* if s/he were where the hearer is.
- (68) Given the first conjunct in (67), the speaker cannot use an expression that is linguistically marked as [Proximal], i.e., *ko-no NP*.
- (69) When neither *a-* nor *ko-* is usable, *so-* is used, because *so-* belongs to the same morphological and syntactic class as *a-* and *ko-*.

Kuroda's account

- (70) (=61)
 - a. *A*-NPs are to express an object of direct knowledge.
 - b. *So*-NPs are to express an object of conceptual knowledge.
- (71) The visual contact with an object O is sufficient for giving direct knowledge of O to the person who sees O.

²³ The distinction is also based on the dichotomy of 'knowledge by acquaintance' and 'knowledge by description' introduced in Russell 1912.

²⁴ The phrases in the quotation in this sentence are our translation of the relevant passage.

²⁵ We expect that our account, or an extension of it, can capture Mikami's observation that *ko* and *so* contrast with each other, but *a* and *so* do not. Mikami (1972: p.172, p.178) points out that there are many idiomatic expressions in which *a-* and *ko-* (or *so-* and *ko-*) are contrasted as in (i), but the *a-so* combination does not work in cases like (i).

(i) a. **a-ti ko-ti** 'here and there', **a-tira ko-tira** 'here and there', **a-nna ko-nna-de** 'after this and that, with all this', **a-re ko-re kangaeta sue** 'after thinking about this and that', ...
 b. **so-o ko-o siteiru uti ni** 'while doing this and that', **so-ko ko-ko-ni** 'here and there', ...

We must leave further discussion to a separate occasion.

(72) If the object O is by the hearer (*kikite no soba*), the speaker must accept that the hearer is in a better position than the speaker in regard to the recognition of O and must accept that the hearer can therefore have some direct knowledge of O that the speaker cannot attain.

(73) (72) forces the speaker to present O as something other than his/her own direct knowledge.

(74) Hence *so*-NPs are used in these cases.

Let us consider (75).

(75) a. *Kimi-no sugu yoko-ni aru a-no hon-o hiraite kudasai.*
you-GEN right.away side-LOC exist that-GEN book-ACC open please

'Please open **that book** that is right next to you.'

b. **#Kimi-ga tenimotteiru a-no hon-o hiraite kudasai.*
you-NOM is.holding that-GEN book-ACC open please

'Please open **that book** that you are holding.'

Under Kuroda's account, we would have to understand the notion of 'being by' in such a way that the book in question need not be considered as 'being by' the hearer in (75a) but it does in (75b). In other words, the notion of 'being by' (*soba*) that is relevant in (72) cannot simply be based on physical distance. Similarly, under our account, the speaker must think that s/he would construe the object in question to be *proximal* in (75b) but not in (75a), if s/he were the hearer. It therefore does not seem clear exactly when the object is (considered to be) 'by' the hearer (under Kuroda's account) or when "the speaker thinks that s/he would construe the relevant object as *proximal* if s/he were the hearer" (under our account).²⁶

While we accept Kuroda's (70) (=61)), we do not accept the claim in (76), which in effect is made in Kuroda 1979: sec. 5.

(76) The non-deictic use of *so*-NPs is possible without a linguistic antecedent.

(76) goes directly against (77), which is one of the major consequences of Ueyama's (1998) theory of anaphoric relations and the lexical specifications of *so*-.²⁷

(77) The non-deictic use of *so*-NPs is not possible without a linguistic antecedent.

Before we proceed, some terminological clarification is perhaps in order. Kuroda uses (78) instead of (79).²⁸

(78) a. *dokuritu-teki yoohoo* 'independent use'

b. *syoooo-teki yoohoo* 'anaphoric use'

(79) a. deictic use

b. non-deictic use

Kuroda's (78a) and (78b) do not quite correspond to (79a) and (79b), respectively. His (78a) and (78b) seem to correspond to (80a) and (80b) instead.

(80) a. the use without (what appears to be) a linguistic antecedent

b. the use with (what appears to be) a linguistic antecedent

Given that (80a) includes the deictic use, (81) thus seems to be a more accurate statement than (76) of what is intended in Kuroda 1979.

(81) The use without (what appears to be) a linguistic antecedent is possible for *so*-NPs.

(81) by itself however seems trivial since *so*-NPs can be used deictically. But Kuroda's attempted demonstration of (81) is, or rather would, be significant since he conducts the relevant experiment by excluding the hearer. Given that the deictic *so*- is not possible in the absence of the hearer, the possible *so*- in (81) is necessarily non-deictic *so*-. If we incorporate this aspect of his experiment in the relevant statement, (81) will therefore become (82), and we seem to revert to (76), after all.

(82) The use without (what appears to be) a linguistic antecedent is possible for non-deictic *so*-.

²⁶ See note 14.

²⁷ We are suppressing the qualification that (77) holds only of individual-denoting *so*-NPs; see note 7.

²⁸ The term *deictic* here makes crucial reference to 'visible (to the speaker)'. See (2) and the remarks that follow it.

With the terminological clarification just given, we will continue to represent Kuroda's claim in question as in (76).

In support of (76), Kuroda provides (83) and (84).

- (83) [Suppose that it has been discovered through a careful medical examination that the speaker has a stomach ulcer. (Assuming that the speaker does not have any pain or any symptom, this means that the speaker has learned about the existence of the ulcer not by his/her own direct experience but by some conceptual understanding.) When s/he wakes up, the thought of the ulcer comes to mind. S/he wonders (*omou*):]
*Ittai so-re-wa donna iro-o siteiru nodarooka*²⁹
 on-earth that-thing-TOP what.kind color-ACC is.doing I.wonder
 'I wonder what kind of color **that** is.'
- (84) [Having been asked to write an essay, the speaker is wondering whether he should take on the task. Something vague comes to mind, but the speaker does not quite understand what it is. It is not clear to him how the topic might develop [which is understandable if he does not quite understand what it is (*imada sore-ga dono yoo na koto de aru ka yoku wakaranai*)]. But he thinks that once he decides to write on it (*sono koto*) [i.e., on some vague topic although he does not quite understand what it is] and starts thinking (about it) a little, the idea will perhaps start shaping itself. He thinks:]
So-no koto-demo kaite miyooka.
 that-GEN thing-PRT write shall.I
 'Shall I write about **that**?'

It is not clear how acceptable (84) is; we and the speakers we have consulted with do not find it acceptable. In regard to (83), speakers' reactions seem mixed. Kuroda's (1979) remarks in his section 6 suggest that what he has in mind is a situation where the speaker has been notified of the existence of the ulcer but does not feel any physical discomfort. The acceptability of (83) (for some speakers) can then be understood as being due to the possibility, to varying degrees, of some linguistic expression(s) (at some point in the past) serving as a linguistic antecedent for the *so-NP* in (83). In an attempt to examine the validity of (76), we might conduct a thought experiment as follows. The speaker, who is an expert him/herself in the field that deals with ulcers, just received a set of numerical figures that indicate the results of the test that has been performed to check his/her medical condition. By looking at the figures by him/herself, s/he can immediately tell, because of his/her expertise, that s/he has an ulcer, despite the fact that s/he does not have any physical discomfort whatsoever. S/he wonders about the color of the ulcer, and utters (85); see note 29.

- (85) #*Ittai {so/a}-no kaiyoo-wa donna iro-o siteiru nodarooka.*
 on-earth that-GEN ulcer-TOP what.kind color-ACC is.doing I.wonder
 'I wonder what kind of color **that ulcer** is.'

The knowledge of the ulcer s/he has thus acquired cannot be direct knowledge, and that explains the unacceptability of (85) with *a-no kaiyoo*. If knowledge is either direct knowledge or conceptual knowledge, it must therefore be conceptual knowledge. If (76) were to hold, (85) should therefore be acceptable with *so-no kaiyoo*. Such however does not seem to be the case. We thus conclude at this point that (76) cannot be upheld and continue to maintain (77).

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²⁹ We have been informed that few speakers of English would consider "What color is the ulcer?" to be an appropriate question and the English translation given in (83) is likely to be considered as a literal translation of a Japanese metaphor. The original sentence in (83), however, does not have a flavor of a metaphor and is not a particularly strange Japanese sentence, apart from the issue of its felicitousness under situations of the sort given in (83).

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