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Evidentiality, experiencers, and the syntax of sentience in Japanese

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1. Introduction

The phenomena examined in this paper are related to certain predicates of direct experience in Japanese. These predicates have three interesting properties:

1. They restrict their experiencer subjects to first person in the declarative and second person in the interrogative.
2. Evidential markers (at the clausal or the lexical level) lift this restriction.
3. The binding domain for the long-distance anaphor *jibun* is the same as the evidential domains that lift the person constraint.

These facts are remarkable because the association between speech act, speaker and hearer, evidentiality, and long distance anaphora seems to have some syntactic repercussions, yet is unexplained in a current understanding of generative syntax.

Much of the data presented in this paper is not new in the literature. Japanese experiencer predicates and the binding properties of the long distance anaphor *jibun* are well-known and well-described phenomena, and I owe much to others who have worked in these areas. However, my contribution is to approach these facts from a different direction. I will argue that some stylistic or discoursal distinctions in Japanese have a syntactic basis. I introduce the idea of point of view arguments as entities linked to phrase structure, governed by syntactic principles and interacting with syntactic structures. I build on the idea that certain functional projections are

dedicated to point of view and constitute a syntax of sentience. This paper brings some aspects of language that have more often been regarded as matters of context and discourse structure, into the domain of syntax. Very ordinary tools are used for this project.

I do not intend to argue that pragmatics plays no role at all in these phenomena, but to articulate an alternative solution in a syntactic domain that intersects with pragmatics in a clearly defined way. These phenomena have not been generally regarded as part of a unified system. This work proposes to unify these phenomena under one system at the syntax-discourse interface.

This project leads toward the question of how syntax encodes knowledge as relative to different 'minds'; it leads towards a natural grammar of mind.[1] This paper argues that the syntax of human language has a syntactic means of encoding knowledge as relative to different 'minds' -- a syntax of sentience. For the sake of exploration a strong view of the role of syntax is taken in this paper. This new work is part of a larger project casting a wide net. Although it may be speculative in some places, the extended plan for a syntax of sentience should be clear. At the very least this departure should yield some interesting research questions and testable predictions.

The reader will find some variability in the phonetic transcription systems used to represent Japanese where examples are cited from other authors, as there are several conventions for transcribing and romanizing the language. This will not affect the argumentation in the paper.

This paper is organized as follows. Section 2 outlines the three properties of Japanese predicates of direct experience which are the subject of the paper. Section 3 introduces a syntax of sentience, including two functional projections for speech act and evidentiality, and discusses their manifestation in Japanese. Section 4 returns to the facts laid out in Section 2, and provides analyses of each of them using the tools laid out in Sections 3. Section 5 compares this analysis with other treatments of these and related phenomena in the literature, and ends with a brief conclusion.

2. Three properties of Japanese predicates of direct experience

2.1. A person constraint on the subject

Certain Japanese predicates of direct experience, in the so-called reportive style (Kuroda (1973)), restrict their subjects to first or second person, depending on the speech act. These are stative predicates of basic sensation and experience which are morphologically adjectives (described by Kuroda (1973), Kuno (1973), Aoki (1986)). In a declarative sentence, the subject is restricted to first person. (TOP = topic marker, COP = copula, NOM = nominative case marker, DES = desiderative morphology, PRES = present tense. The copula *desu* is optional in the sentences (1)-(7).)[2] [3]

(1) Watashi/*anata/*kare wa samui desu
I /you /he TOP cold COP-PRES

'I am cold.' / *'You are cold.' / *'He is cold.'

(2) Watashi/*anata/*kare wa sabishii desu

I / you / he TOP lonely COP-PRES

'I am lonely.' / *'You are lonely.' / *'He is lonely.'

When used in a question, the predicates require a second person subject (a fact observed by Kuno 1973):

(3) *Watashi /anata/*kare wa samui desu ka?

I / you /he TOP cold COP-question

*'Am I cold?'/ 'Are you cold?'/ *'Is he cold?'

(4) *Watashi /anata/*kare wa sabishii desu ka?

I / you / he TOP lonely COP-question

*'Am I lonely?' / 'Are you lonely?' / *'Is he lonely?'

The predicate *samui* can also be used without a thematic subject, in which case a first person is understood in the declarative (5), and second person in the interrogative (6):

(5) Kyoo wa samui desu.

today TOP cold COP-PRES

Today it is cold. /Today I am cold. / *Today you are cold / *Today he is cold.

(6) Kyoo wa samui desu ka

today TOP cold COP-PRES Question

Today is it cold? / *Today am I cold? / Today are you cold? / *Today is he cold?

This constraint in (5)-(7) is not related to the presence of a null argument. In Japanese (unlike Romance) a null argument is not restricted in person:

(7) Amerikajin desu.

American COP-PRES

'I/you/he/she/we/they am/are/is (an) American(s).'

The reader might ask at this point, whether these starred sentences are ungrammatical or merely awkward. While some of the comparable sentences in English may seem somewhat odd, these judgments about the Japanese sentences are more clearly ungrammatical; Japanese speakers react more strongly against them than do English speakers looking at comparable sentences.[4] These constraints on the person of the subject appear when the sentences are used in a particular grammatical style: what Kuroda (1973) labeled the reportive style. Japanese speakers will find the reportive style enforced by the sentence-final particle *yo*, which implies a sense of the speaker saying "I am telling you". (It can also add a sense of urgency; and it seems to mark new information for the hearer.)

(8) *Mary wa sabishii yo

TOP lonely-PRESENT -YO

'Mary is lonely -YO.'

(9) *Mary wa atukatta yo

TOP hot-PAST-YO

'Mary was hot -YO.'

(Kuroda (1973), examples (27), (29), p. 384)

(10) Watashi wa samui yo

I TOP cold-YO

'I am cold.'

In the reportive style the sentences are understood as the reports of a narrator or speaker, who may be referred to in the sentence as the "I" of the sentence, or who may not be referred to in the sentence at all. In either case the narrator is "still human: he is not omniscient and cannot enter into character's minds. The story is told from one point of view, the narrator's" (Kuroda (1973), p. 383).

There are two significant generalizations concerning these predicates of direct experience. First, they place a constraint on the person of their subject, so that the subject must be first or second person, or some combination of first and second person. Second, the person of the subject must agree, in some sense, with the speech act.

Many linguists have observed that there is a fundamental distinction between first and second person on the one hand, and third person on the other (Benveniste (1956), Bloomfield (1938), Forchheimer (1953), Halle (1997), Noyer (1992), Ritter and Harley (2002)). Only the participants in the speech act -- the speaker and the addressee, represented by first and second person -- have true grammatical person. Languages often distinguish between participant and non-participant person in their morphosyntax. Predicates of direct experience may be described simply as differing from regular predicates, in requiring a subject with the grammatical person features.

This kind of person restriction on an argument is odd under conventional assumptions. This restriction cannot be understood as selection. Selectional

restrictions can be overriden, making a sentence odd but not ungrammatical, which does not seem to be the case with these sentences. Nor is this subcategorization; even though it is a constraint on a syntactic feature it says nothing about the syntactic constituent required by the predicate. Yet it does seem to be some kind of lexical property of the predicate that it requires a first or second person subject. However, it has not been assumed that we can have a lexical feature on a predicate affecting discourse factors such as the speech act.

Another approach would be to regard the phenomenon as pragmatic, or as simply a matter of usage. However, the restriction is clearly a lexical property of individual predicates, not solely dependent on the context of usage, and it is not clear how general pragmatic properties would be marked on individual lexical items. I will argue that these facts involve some syntax, intersecting with pragmatics in a narrowly defined way.

2.2. Evidentiality lifts the person constraint

There are certain morphosyntactic conditions under which the person constraint on subjects of predicates of direct experience is lifted. Certain clausal or verbal morphology, some clearly marking evidentiality, removes the person constraint.

2.2.1 Clausal evidentiality: *-node,* and *-noda,* and *-noni* in adjuncts

Certain kinds of clause-level morphology such as *ni tigainai,* and *no* in *noda, node,* and *noni* remove the person restrictions on the subject.

(11) Mary wa sabishii no da
TOP lonely
'Mary is lonely.' (Kuroda (1973), p. 381 # 23)

(12) Mary wa sabishii ni tigainai
TOP lonely 'there-is-no-mistake'
'Mary must be lonely.' (Kuroda (1973), p. 379, #11)

No has been analyzed as a marker of evidentiality by Simpson (1998). Both *no da* and *ni-tigainai* impart a sense of commentary on the assertion or the state of affairs represented by the predicate. Kuroda (1973) describes the function of *no da* in the following way:

> "...*no da* somehow serves as a marker to indicate that some 'second order' assertion, so to speak, is made with respect to the proposition expressed by the sentence to which *no da* is attached." (Kuroda (1973), p. 380-381) [5]

Likewise, *ni-tigainai* in (12) is also a commentary by the speaker on the truth of the proposition that Mary is lonely. I will call these evidentials although they may have some evidential and some epistemic sense to them.[6]

A minimal pair can be found with different adjunct types. Compare evidential *node* ('because') (14), with non-evidential *toki* ('when') (13), in subordinate clauses. Evidential *node* ('because') removes the person restriction; non-evidential *toki* ('when') does not. (With *toki*, the only reading is one in which the subject of *samukatta* is a quasi-argument.) (Examples from Shinko Tamura, p.c.)

(13) Kare wa samukatta **toki,** dambou o ireta.
He TOP cold-PAST when, put-on-heat-PAST
'When it was cold, he put on the heat.'
'*When he felt cold, he put on the heat.'

(14) Kare wa samukatta **node**, dambou o ireta.
He TOP cold-PAST because, put-on-heat-PAST
'Because it was cold, he put on the heat.'
'Because he felt cold, he put on the heat.' (Shinko Tamura, p.c.)

While the non-thematic interpretation of *samui* is possible in both types of adjunct clauses above, the thematic interpretation, where *kare* ('he') is the subject of *samui*, is only possible with *node*. A third person subject of *samui* is only possible in the adjunct clause with *node*; the *toki* adjunct clause preserves the person constraint on the subject.[7]

Bellert (1977) observed that questioning sentences with evidential adverbs results in questioning a higher proposition introduced by the evidential adverb.[8]

(15) Evidently/apparently /probably Benjamin is undertaking the voyage this year.

a. *Is evidently/ apparently/ probably Benjamin undertaking the voyage this year?

b. *??Is Benjamin evidently/ apparently/ probably undertaking the voyage this year?

c. Is it evident/ apparent (to you) that Benjamin is undertaking the voyage this year?

Following Bellert's observation, the evidence from questioning sentences containing these adjuncts is consistent with the evidential status of *node* and the non-evidential status of *toki*. When sentences containing certain embedded clauses with *node* and *toki* are questioned, a higher proposition must be questioned with the *node* clauses, but not with the *toki* clauses.[9]

(16) a. Mary wa John ga butta **toki** nakimasita.

hit when cried

'Mary cried when John hit (her).'

b. Mary wa John ga butta toki nakimasita ka?

'Did Mary cry...'

(17) a. Mary wa John ga butta **node** nakimasita.

because

'Mary cried because John hit (her).'

b. *Mary wa John ga butta node nakimasita ka?

'Did Mary cry...'

c. Mary wa John ga butta node naita no desu ka?

'Is it the case that...'

(Kuno (1973), p. 202 #(4)-(5))[10]

2.2.2. Lexical evidentiality: *-garu*

The *-garu* evidential marker (discussed by Kuroda (1973), Kuno (1973), and Aoki (1986)) is part of the verbal morphological system which adds the sense of 'appearing to be __'. This form appears on the verb stem, followed by the inflectional

morphology. Kuno (1973) describes its meaning as: "to show a sign of, to behave like *-ing*" (Kuno (1973), p. 84). When this morpheme is appended to the stem of a predicate of direct experience, the person constraint is lifted:

(18) Mary wa sabishigatte iru yo

TOP lonely-GARU-PRESENT -YO

'Mary appears to be lonely -YO.'

(19) Mary wa atugatta yo

TOP hot-GARU-PAST -YO

'Mary appeared to be hot-YO.'

(Kuroda (1973), examples (28,30), p. 384)

There are a number of pairs of sensation predicates such as these in Japanese, with one member an adjective without *-garu*, requiring person constraints on its subject; and the other member a verb with *-garu*, and without person restrictions on its subjects. We find, for example: *sabishii* / *sabishigaru* ('be lonely'), *samui / samugaru* ('be cold'), *kanashii / kanashigaru* ('be sad'), *atui* / *atugaru* ('be hot'). Though there are a number of these pairs, *-garu* is not productive, and the pairs must be listed.

Note that *-garu* does not change the specification of the argument as an experiencer: the experiencer role is still there, but without the person specification. It is possible to understand inanimate objects or body parts in the construction with *-garu*, but in that case the inanimate object has to be understood as an experiencer.

(20) kuruma ga samugatteiru

car NOM cold-GARU-COP-INF-PRES

'The car is feeling cold.'

This sentence is not ungrammatical, but a little odd. It indicates that the speaker regards the car as capable of feeling in the way a human experiencer would feel.

2.2.3 Desiderative

The person effect has also been noted with desideratives (Aoki (1986); S.M.=Subject marker, DESID.=desiderative):

(21) Watashi wa mizu ga nom-ita -i
I TOP water S.M. drink -DESID.-NONPAST
'I want to drink water.'

(22) *Kare wa mizu ga nom -ita -i
He TOP water S.M. drink -DESID.-NONPAST
'He wants to drink water.'

2.2.4 Nominalization

Kuroda (1973) also observed that the person constraint is lifted under nominalization of a clause. The sentences below with nominalized clauses containing *sabishii* ('lonely') and *sabishigaru*, permit a third person subject within the clauses in both cases. (Glosses in these examples were added by the author.)

(23) Mary ga sabishii koto wa dare mo
SUB lonely-TNS the-fact-that TOP nobody
utagawanai
doubt-NEG-PRESENT

'No one doubts that Mary is lonely'

(24) Mary ga sabishigatte iru koto wa
SUB lonely-GARU-TNS/ASP the-fact-that TOP
dare mo utagawanai
nobody doubt-NEG-PRESENT
'No one doubts that Mary is lonely'
(Kuroda (1973), examples 9-10, p. 379)[11]

2.3 The long-distance anaphor *jibun* has the same evidential domains

The Japanese long-distance anaphor *jibun* has been well-studied in the binding literature. It is a typical long-distance anaphor; it has no person, number, or gender, and it must be animate. It has the usual properties of a long-distance anaphor in that it can be be locally bound (25) and it can also be bound long-distance (26)-(27):

(25) Hanako$_i$ wa jibun$_i$ o hometa.
Hanako TOP self ACC praised
Hanako$_i$ praised herself$_i$.

(26) Taroo$_i$ wa [Hanako ga zibun$_i$ o kiratteiru] koto o sitteiru.
Taroo TOP Hanako NOM self ACC hate COMP ACC know
'Taroo$_i$ knows that Hanako hates him$_i$.'
(Iida (1996), p. 11, #25)

(27) [Zibun$_i$ no hatumeisita omotya] ga kyoozyu$_i$ ni bakudai-na
self GEN invented toy NOM professor to big
zaisan o motarasita.

fortune ACC brought

'The toy that he$_i$ invented brought an unexpected fortune to the professor$_i$.'

(Iida (1996), p. 209 #135)

Kuroda (1973) observed that the domains for the long-distance binding of the anaphor *jibun* out of the clause parallel the domains of the person constraint on direct experiencers. In (28)-(29) we see a minimal pair: the evidential connective *node* is transparent while the nonevidential *toki* is not. (30) shows that *noni h*as the same effect as *node*.[12]

(28) Takasi$_i$ wa [Yosiko ga mizu o zibun$_i$ no ue ni kobosita node]

Takasi$_i$ TOP [Yosiko Subj water Obj self$_i$ Gen on Loc spilled because]

nurete-simatta.

wet-got

'Takasi$_i$ got wet because Yosiko spilled water on him$_i$'

(29) *Takasi$_i$ wa [Yosiko ga mizu o zibun$_i$ no ue ni kobosita toki]

Takasi$_i$ TOP [Yosiko Subj water Obj self$_i$ Gen on Loc spilled when]

nurete-simatta.

wet-got

'Takasi$_i$ got wet when Yosiko spilled water on him$_i$'

(Sells (1987), p. 466, #60,61)

(30) Taroo$_i$ wa [Hanako ga zibun$_i$ o tataita noni] hitokoto mo

Taroo TOP Hanako NOM self ACC hit though one-word even

iwanakatta.

said-not

'Taroo$_i$ said nothing though Mary hit him$_i$'

(Iida (1996), p. 37, #52)

Long distance binding of anaphora has been linked to point of view, both in Japanese and in other languages (Zribi-Hertz (1989), Koster and Reuland (1991)). Iida (1996) claims that *jibun* takes as its antecedent the holder of 'deictic perspective'. Examples like the following support her claim:

(31) Taroo$_i$ wa kare$_i$ no migigawa ni hon o oita.

Taroo TOP self GEN right on book ACC put

'Taroo$_i$ put the book on his$_i$ right.'

'Taroo$_i$ put the book on the right of him$_i$ (from the speaker's perspective).'

(32) Taroo$_i$ wa jibun$_i$ no migigawa ni hon o oita.

Taroo TOP self GEN right on book ACC put

'Taroo$_i$ put the book on his$_i$ right.'

*'Taroo$_i$ put the book on the right of him$_i$ (from the speaker's perspective).'

(Iida (1996), p. 162, #32, 33)

When the pronoun *kare* ('his') is used to refer to Taroo in (31), the interpretation is ambiguous between Taroo's and the speaker's perspectives. When *jibun* is used instead (32), only the interpretation from Taroo's perspective is possible.

Kuroda (1973) also observed that in the 'non-reportive' style *jibun* can be coreferential with the matrix subject, from within an adjunct clause with *toki*. Compare (33) (non-reportive) and (34) (reportive):

(33) John$_i$ wa [Bill$_j$ ga zibun $_{i/j}$ o hometa toki] Mary no soba ni ita

'John was by Mary when Bill praised himself.'

(34) John$_i$ wa [Bill$_j$ ga zibun $*_{i/j}$ o hometa toki] Mary no soba ni ita yo

'John was by Mary when Bill praised himself.'

(Kuroda (1973) p. 385, #33, 35)

At this juncture it would be useful to give an overview of the facts laid out in section 2.

- Japanese predicates of direct experience demonstrate a person/speech act constraint on their subjects, such that the subject must be first person in the declarative and second person in the interrogative.
- This constraint is lifted under evidential markers on the clause or the verb, and also in the desiderative construction and in nominalized clauses.
- Finally, the long-distance anaphor *jibun* has the same binding domains as the domains for the lifting of the person constraint in the predicates of direct experience.

In Section 3 I turn to an overview of a *Syntax of Sentience*, which will be employed in Section 4 for an analysis of these Japanese facts.

3. Syntax of the right periphery and the syntax of sentience

This section presents the theoretical proposals for a *Syntax of Sentience* with which I propose to explain and unify the facts in Section 2. The proposal includes: two syntactic projections in the periphery of the clause relating to sentience (3.1.1-3.1.2); a set of discourse or sentience roles, universally available in human grammars and

associated with these projections (3.2-3.3); a system of morphosyntactic features associated with these projections (3.5); a syntax of questions which treats the declarative/interrogative switch as a kind of passivization (3.4); and a treatment of experiencer thematic roles as lexically marked for some of those morphosyntactic features (3.6). Each of these separate parts of the proposal arises independently out of a different thread of research. A brief overview of the particular research thread is provided in each section. I cannot argue in depth for each of these parts of the proposal in one paper. However, I would like to argue that the fact that such a range of facts and literatures dovetail together in this proposal is an argument in its favor.

3.1 Syntactic projections in the right periphery

3.1.1 The Speech Act projection

This section introduces the idea of a Speech Act Projection in Japanese headed by speech act particles introduced in Section 2.

Recent work on the articulation of the fine structure of the CP has argued that there is a Speech Act projection (or Force projection) whose head encodes illocutionary force, which is at the top of the clausal structure (Rizzi (1997), Rivero (1994), Ambar (1999), (2002), Cinque (1999), Uriagerecka (1995)).[13] In some languages, where there are morphemes such as sentence particles that indicate whether the sentence is a statement or a question, the head is overt. In a language without these illocutionary markers, the head would be implicit. We have seen in Section 2 that

Japanese has the speech-act particles *yo* and *ka* that occur sentence-finally in the right periphery and indicate a declarative or interrogative sentence. Adopting this proposal for Japanese, these particles head speech act projections in the right periphery which take scope over the rest of the clause:

(35) Kazuko ga kinoo Tokyo e ikimashita **yo.**
Kazuko TOP yesterday Tokyo to went YO
'Yesterday Kazuko went to Tokyo (I'm telling you).'
[SP [IP Kazuko wa kinoo Tokyo e ikimashi ta] yo SP]

(36) Kazuko ga kinoo Tokyo e ikimashita **ka**?
Kazuko TOP yesterday Tokyo to went QUESTION
'Did Kazuko go to Tokyo yesterday?'
[SP [IP Kazuko ga kinoo Tokyo e ikimashi ta] ka SP]

As Kuroda (1973) originally noted, the speech act head *yo* enforces the reportive mode. Since Japanese speakers can understand a sentence as being in the reportive mode even when it does not conclude with a speech act particle, the projection may be headed by an implicit particle. The non-reportive mode, on the other hand, shows no speech act particle. This morphosyntactic evidence suggests that the reportive style has a speech act projection while the non-reportive style has none. We return to this in section 3.4.

Speas and Tenny (2003) (henceforth S&T), observing that there is a very small and constrained set of *grammaticizeable* speech acts (where the language has a special marker for that particular speech act), develop the syntax of the Speech Act

Projection to predict this small set of speech acts. Among these are the declaratives and interrogatives, to which we return in section 3.5.[14]

The research developing the Speech Act Projection has largely come from investigations of the Romance languages. To the best of this author's knowledge this paper is the first foray into employing the Speech Act Projection for syntactic analysis in a non-Romance language other than English.

3.1.2 The Evidentiality projection

This section introduces the idea that evidential markers like *node* head an Evidentiality Projection in Japanese.

Proposals for a functional projection for evidentiality are not found as far back in the generative syntax literature as are proposals for a speech act projection. However, Cinque (1999) has proposed such a structure, based on cross-linguistic research and evidence. Morpho-syntactic markers of evidentiality are found in the verbal morphology of many languages. (See Garrett (2001) for Tibetan.)

Speas and Tenny (2003) argue for a *Sentience* projection in the left (right) periphery, below the Speech Act projection, which is based on Cinque's evidential projection. For S&T, unlike Cinque, the Speech Act and Sentience projections comprise the syntactic skeleton of a *grammar of sentience*. This spare structure negotiates between the various points of view that are grammatically encoded within a sentence.

S&T motivate these structures by showing that the interactions between them predict the small range of grammaticizeable speech acts across languages, as well as certain contrasts between declarative and interrogative meanings, which we return to in section 3.4. Importing the idea of an evidential projection into Japanese, I take the functional projection for evidentiality to be instantiated by clausal evidential morphology such as *node*. Furthermore, the existence of an Evidential or Sentience Phrase distinguishes the *node* ('because') phrases from the *toki* ('when') phrases. Henceforth I refer to this phrase as the Sentience/Evidentiality Phrase.

In (37) we see a Sentience/Evidentiality projection headed by *node* in the embedded clause. In (38) we see a *toki* adjunct, having no evidential projection in the embedded clause:

(37) [[IP Kare wa samukatta] **node** EvidP]
He TOP cold-PAST because
'Because it was cold…..'

(38) [IP Kare wa samukatta] **toki**
He TOP cold-PAST when
'When it was cold….'

Further support for this structure comes from Sawada and Larson (2004). Building on an observation by Hopper and Thompson (1973),[15] they argue that *because*-clauses have a larger semantic and syntactic domain than *when*- clauses; and *because*- clauses are distinguished from *when*- clauses by the presence of an additional syntactic projection. (See Larson (2004) for more discussion of differences between *because* and *when* clauses.)

One might argue that *node* selects for an evidential projection, rather than heading the projection. This is a matter of the degree to which *node* appears to be a grammatical morpheme of functional content, as opposed to a full-fledged lexical item carrying its own semantic 'flavors' along with its functional content. I follow Simpson (1998) and Horie (1997) in treating these as grammaticized elements in Japanese.[16] However, this approach may not extend to comparable items in other languages (i.e., English *because* might select its Evidential Phrase). We may see elements in different stages of grammaticization from lexical adjunct-heading item, to head. I set this issue aside for the purposes of this paper. Under either view the evidential item is responsible for introducing an Evidential Phrase into the syntax.

3.2. Sentience roles

In this section the three basic *sentience roles* of speaker, addressee, and evidential role are introduced.

Another line of research has investigated *sentience* or *discourse roles*. These are like thematic roles, but they refer to necessarily sentient entities, and serve as point of view anchors for predicates that make implicit reference to some sentient individual's point of view. These kinds of entities encompass what are variably referred to in the literature as *discourse roles* (Sells (1987), Kamp (1984)), *logophoric roles* (Minkhoff (1994)), or *point of view roles* (Speas and Tenny (2003)). The idea has also been articulated in Zribi-Hertz (1989); and Mitchell (1986) and

Partee (1989) have written on embedded contexts for point of view anchors. The literature on point of view and logophoricity has also identified phenomena in which truth is anchored to the point of view of a sentient entity. (See Hagège (1974), Clements (1975), Sells (1987), Iida (1996), Maling (1984), Culy (1994), Koopman and Sportiche (1989), Mitchell (1986), Banfield (1982), and Zribi-Hertz (1989).)

For a simple example consider a prepositional phrase like *behind the women* in *The child is behind the women.* The PP is ambiguous between a sense in which the child is behind the women from the point of view of the speaker, or from the point of view of the women. In the first case, the speaker cannot see the child, regardless of which way the women are facing. In the second case the women cannot see the child because they are facing away from her, independently of where the speaker is standing. Natural language also has many items which appear to be lexically marked as speaker-oriented, always reflecting the point of view of the speaker. Many evaluative elements including adverbs (*unfortunately*), adjectives (*damn*), and NP-epithets (*the bastard*) represent the point of view of the speaker -- the point of view anchor. (In the following examples the subscript **spkr** indicates the speaker's point of view; and the subscript *k* indicates someone else's point of view.)

(39) a. **Unfortunately**$_{spkr}$, Marco won the lottery.

b. Marco met his **damn**$_{spkr}$ cousin.

c. (c.f., Marco met Jill's$_k$ **beloved**$_k$ cousin.)

d. Marco got run over by his neighbor. Marco should sue **the bastard**$_{spkr}$.

(39b) and (39c) make a minimal pair. In (39b) *her damn cousin* is evaluated from the point of view of the speaker, because it is the speaker who is calling the cousin

damn. In (39c) the cousin is evaluated from the point of view of Martha, since it is by Martha that the cousin is beloved. With each of these words (*behind, damn, beloved*) is associated some implicit or explicit sentient evaluator necessary for the determination of its truth value. Potts (2005) addresses the semantics of these speaker-oriented evaluative elements.

Natural language has lexical items which make reference to some sentient being who is responsible for evaluating the truth of a proposition based on some kind of evidence, or who holds the evidence for the truth of the proposition in their head. We can call this an evidential role. In English, evidential verbs (*appears, seems*) and adverbs (*evidently, apparently*) refer to this sentient entity:

(40) a. The bicyclist has **evidently**$_{spkr}$/**apparently**$_{spkr}$ escaped injury in the crash.

b. The bicyclist **appears**$_{spk}$/**seems**$_{spkr}$ to have escaped injury in the crash.

In these examples the evidential role and the speaker role coincide, but they are split apart in the interrogative, motivating a basic evidential role distinct from the speaker role. We return to this in section 3.4. Hopper and Thompson's observation that *because* clauses are assertions, whereas *when* clauses are not, provides another illustration of the evidential role. Intuitively, an assertion must be an assertion of the truth of a proposition *by someone* – by a sentient entity capable of possessing an epistemic state. The *because*-clause introduces an evidential role, and the *when*-clause does not.

A few researchers have addressed the question of how many and which sentience roles are basic primitives of natural language; anything from one to three or more

basic universal roles have been proposed.[17] It is generally agreed that Speaker must be one basic sentience role, and many agree that Addressee is another. This observation goes back at least as far as Fillmore (1971) who associates an utterance with a *centre*, which includes the speaker and the addressee (as well as the spatiotemporal location for the utterance). Here I follow Cantrall (1974), Banfield (1982), and Speas and Tenny (2003), who handle point of view phenomena with the roles of speaker, hearer, and one other generalized role. I build on the work of Speas and Tenny who argue that these three roles are the basic primitive and universally available sentience roles provided by syntax. The motivations for the third role – the evidential role – will be further discussed in section 3.4.

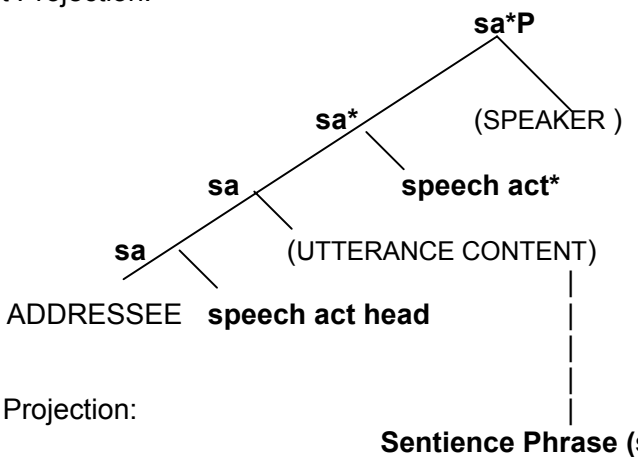
3.3 Integrating sentience roles and syntactic projections

This section introduces the phrase structure syntax which was developed in S&T and is here adapted for Japanese. The structure integrates the Speech Act and Evidentiality Projections with the three sentience roles of Speaker, Addressee and Evidential anchor.

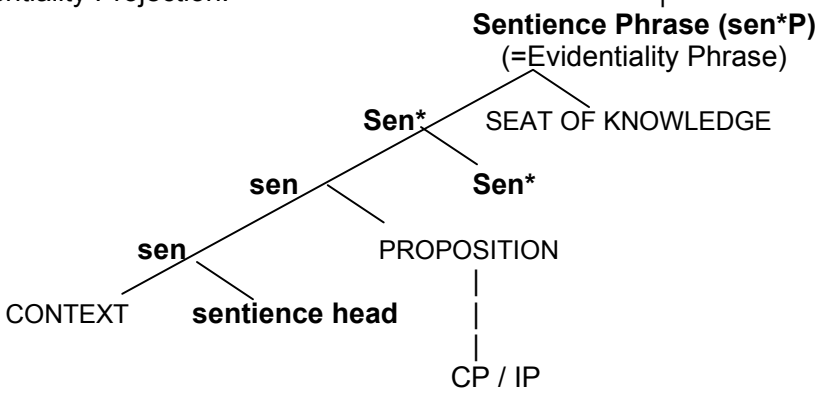
S&T make the strong claim that speaker and addressee are related in the syntactic projection of the Speech Act in the same way that thematic roles are related in the VP. The speaker, the addressee, and the utterance are all thematic arguments in the projection. Intuitively, the highest argument of the Speech Act projection, the Speaker, is the “agent” of the speech act. The “theme” of the speech act is the

information conveyed, which we represent as “Utterance Content”. The “goal” of the speech act head is the addressee:

(41) The Speech Act Projection:



(42) The Evidentiality Projection:



These structures are Larsonian-style lexical structures (Larson (1988)), constrained in form and size by basic computational principles for lexical projections, in the spirit of work by Hale and Keyser (1993), (1998), (1999) and others. The full projections have inner and outer (starred) projections.[1819]

The Sentience/Evidentiality Phrase below the Speech Act Phrase has three arguments, labeled above as the proposition, the context, and the seat of knowledge. This phrase is the syntactic expansion of the ‘utterance.’ Intuitively, evidentiality relates a proposition with some sentient mind that evaluates the truth of the

proposition, based on some knowledge, evidence, or context known to this mind. (See Speas (to appear) for discussion of context as an argument.) This truth-evaluator is the third sentience role – the evidential role – and its locus is the specifier position of the projection. In the default case, a speech act role controls the reference of the evidential role which it c-commands, so that they will be coreferent. Thus far we have not seen any example where the speaker and evidential role are not coreferent, but we will see in section 3.4 how they part company.[20]

3.4 The interrogative flip and the syntax of questions

In this section the interrogative flip is illustrated and a syntactic account of the flip is provided. The interrogative flip is motivation for distinguishing the third sentience role – the evidential role – from the speaker and hearer roles.

Declarative and interrogative sentences differ in an important way in their point of view anchoring. When a sentence is switched from declarative to interrogative, evidentials, *in a reading where they maintain their strictly evidential sense,* shift from being speaker-anchored (indicated by the subscript **spkr**) to being addressee-anchored (indicated by the subscript **adr**) (a-b). Evaluatives do not (c). In the interrogatives the addressee – not the speaker – is able to tell what 'appears to have happened' to the bicyclist; and it is the addressee who is granted that responsibility.

(43) a. Has the bicyclist **evidently**$_{adr}$/**apparently**$_{adr}$ escaped injury in the crash?

b. Does the bicyclist **appear**$_{adr}$/**seem**$_{adr}$ to have escaped injury in the crash?

c. Did Marco meet his **damn**$_{spkr}$ cousin?

Similarly, certain discourse-related adverbs in a question express attitudes of the addressee rather than of the speaker.

(44) a. Mary evidently knew the victim. (must be evident to speaker)

b. Who evidently knew the victim? (must be evident to addressee)

(45) a. Honestly, Mary knew the victim. (speaker claims to be honest)

b. Honestly, who knew the victim? (request that addressee be honest)

For an example of the interrogative flip in Japanese, consider the term *furusato* (lit. 'old village', loosely translated as 'ancestral village'.) In the declarative its default meaning is the speaker's village, while in the interrogative the default is the addressee's village. (*Samui* used as below with inanimate, non-experiencer subjects is not subject to the person constraints discussed in this paper.)

(46) furusato wa samui desu

ancestral village-TOP cold-COP

'(My) ancestral village is cold'

(47) furusato wa samui desu ka

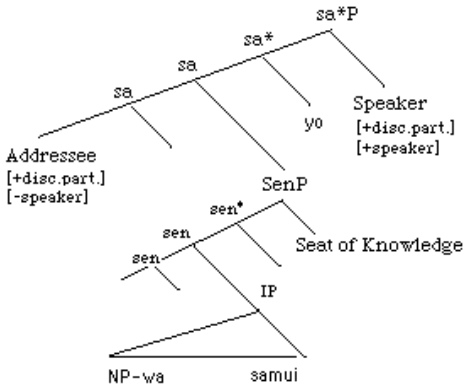
ancestral village-TOP cold-COP-ka

'Is (your) ancestral village cold?'

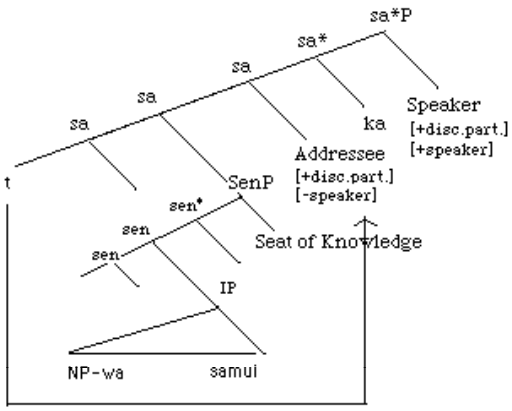
The declarative and interrogative may be characterized (grammatically) as mediating between the discourse participants of speaker and addressee, and the evidential role (the seat of knowledge). Following S&T, switching a declarative sentence to an interrogative sentence involves a simple flip of the evidential role with respect to the discourse participants (speaker and addressee). (See also Gunlogson (2003).) S&T argue that this interrogative flip is a kind of passivization in the Speech Act

domain, parallel to the one given for dative shift by Larson (1988). The complement of the lower head moves to the specifier position, and the former specifier of this head is demoted to an adjoined position. Compare (48) and (49). For simplicity it is a somewhat schematic representation, omitting irrelevant details. (The feature marking on the sentience roles is addressed in section 3.5):

(48) Declarative



(49) Interrogative



In the interrogative structure, the addressee is now the closest c-commander of the evidential argument. Therefore the addressee controls the evidential argument in an interrogative, while the speaker controls it in the declarative. The interrogative flip is

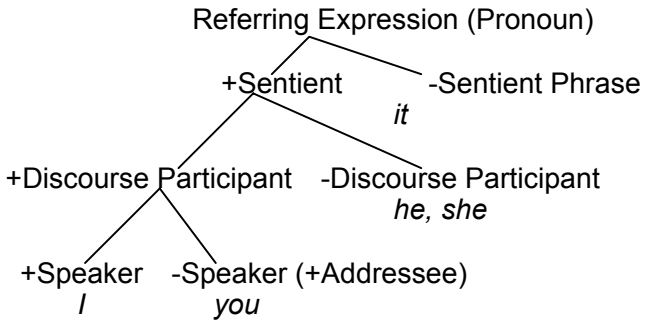
one motivation for the third sentience role – the evidential role – to be distinguished from speaker and addressee.

3.5 Features

In this section we introduce three ideas: (i) referring expressions (pronouns, NPs, variables, and operators) may be specified with a set of morphosyntactic features referring to sentient entities; (ii) the feature [+sentient] is associated with the specifier position of the Sentience/Evidentiality Projection; and features for first and second person are associated with the Speech Act Projection; (iii) referential items marked with these features undergo movement to their associated projections.

Another thread of research dovetailing with the structures introduced in sections 3.3 and 3.4 is research into pronoun features by Harley and Ritter (2002). They lay out a universal feature geometry for pronouns, in which the three features of discourse participant (1st or 2nd person), speaker, and addressee are hierarchically organized. These three features are the entirety of the sentience-oriented features needed for pronouns in the Harley-Ritter system.[21] If we add a general feature for sentience to the repertoire of features in order to subsume the three features under it, we have the following adaptation of the Harley-Ritter system.[22]

(50) *Adaptation of Harley and Ritter (left branch only)*



The introduction of the feature [+sentient] is supported by Harley and Ritter's work (Ritter p.c.) and has been proposed by Hanson (2003) in the context of that work. The feature [+sentient] indicates that the entity referred to can have epistemic states. This feature hierarchy says that a referring expression can be specified with the features [+/-sentient], [+/-discourse participant], and [+/-speaker]. A referring expression includes NPs, pronouns, variables, and operators.

The hierarchy of morphosyntactic features in (50) parallels the phrase structure introduced in section 3.3. If we take seriously the idea of a feature-driven, minimalist syntax, this is not surprising. The feature [+sentience] is associated with the Sentience/Evidentiality Projection, and more particularly with the specifier position. Intuitively, this is a projection of predicates taking as argument a sentient entity -- an entity with epistemic states. The features [+discourse participant] and [+/- speaker] are associated with the Speech Act Projection: [+discourse participant] with both speaker and addressee, and [+/- speaker] with one or the other of the roles. Intuitively, the Speech Act Projection is the projection of predicates having to do with the relation between speaker and addressee, or between first and second person.

Therefore the projection should be named the First and Second Person Projection. In the rest of this paper I refer to this projection as the First/Second Person Projection.

Given all this, and taking seriously Chomsky's (1995) view of a feature-driven minimalist syntax, we predict that that referential items marked [+sentient] undergo movement to the specifier of the Sentience/Evidentiality Projection, including operators binding variables for point of view anchors. There are proposals in the literature for just this type of operator. The Sentience/Evidentiality Projection can host the Point of View operators proposed by Hollendbrandse and Roeper (1999), or the Logophoric Operators proposed by Koopman and Sportiche (1989) (all of which involve necessarily sentient entities). Blain and Dechaine (2005) have proposed operators that move to an Evidential Phrase in Cree. Hara (2004) has argued that there is an island-sensitive movement of an implicature operator associated with the Japanese contrastive topic *wa* to a clause-initial position, involved in the computing of implicatures associated with particular attitude bearers. She employs the Evidential projection of S&T as the site to which the operators move in her analysis. Hara (2004) also notes an asymmetry in this operator movement between *toki* and *node* adjunct clauses, predicted by this analysis, which shows that the movement is possible with *node* clauses but not *toki* clauses. There are also proposals in the literature for operators of first and second person, as predicted in the approach taken here. Tsoulas and Kural (1998) have proposed that first and second person pronouns are variables bound by operators for speaker and addressee, somewhere above the CP. The S&T phrase structure provides the syntactic sites for those

operators in the Speech Act Phrase. The Speech Act Projection with the speaker node also provides a syntactic locus for the semantic property of self-ascription, which has been argued to be independently necessary in natural language semantics (Chierchia (1989)).

We return briefly to the difference between the reportive and non-reportive styles in Japanese. Recall that morphosyntactic evidence suggests that the presence of a Speech Act Phrase (actually the First and Second Person Projection) provides a syntactic distinction between the reportive and the non-reportive styles, with the non-reportive style lacking a speech act projection. But what does it mean for a linguistic utterance to have no speech act projection? It does not mean that the phrase is not utterable by a speaker to an addressee in the context of some discourse. It simply means that the linguistic string has a structure which does not support explicit reference to 1st or 2nd person. Intuitively, a speech act projection is the locus for the syntactic representation of the discourse participants of first and second person. If there is no speech act projection, no 1st or 2nd person is implicated in the syntax of the clause.[23]

3.6 Experiencers

This section introduces two lexical semantic proposals: (i) the experiencer thematic role is marked as [+sentient] by the verb that assigns it; (ii) the Japanese LDA *jibun*, is lexically marked as [+sentient] and also as self-ascribing.

The subjects of direct experiencer predicates like *samui* ('cold') and *sabishii* ('lonely') bear the experiencer thematic role. The *experiencer* thematic role associated with psychological predicates has many peculiar properties; the phenomena discussed in this paper may be added to the sizeable list of interesting phenomena associated with psych verbs. Psych verbs are known in particular for their unusual binding behavior. Experiencer arguments appear to be able to bind anaphors they do not c-command (Postal (1970) and (1971), Giorgi (1984), Pesetsky (1987), Belletti and Rizzi (1988), Stowell (1986)). Also, experiencer arguments appear to be unprincipled as to how they link to syntax. They pose problems for such otherwise robust generalizations as the *Uniformity of Theta Assignment Hypothesis* (UTAH) (Baker (1988)) and the Universal Alignment Hypothesis (UAH) (Perlmutter and Postal (1984)); a problem taken on by Pesetsky (1995).

Under the approach I am taking here, the extraordinary properties of experiencers follow from the experiencer thematic role being assigned the feature [+sentient] by its predicate. After all, an experiencer must be sentient. The movement of experiencer-NPs to specifier (or adjoined) position of the Sentience/Evidentiality Projection is predicted to be possible at some interpretive level, giving them their extraordinary binding privileges (Tenny (2004)). This is not a new idea; Stowell (1986) and Campbell and Martin (1989), in the context of Government and Binding Theory, proposed an Experiencer-Raising operation to account for a range of binding problems posed by experiencers.[24] There have also been references to the feature of animacy in the linguistic literature, as having some sort of grammatical relevance. What is really at issue is the property of *sentience*: the property of being

able to possess an epistemic state; the proposal here is that the feature of animacy should be understood as sentience. Intuitively, lexical elements bearing or assigning [+sentient] or any other of the sentience-related features, participate in the syntax of sentience which encompasses the highest levels of phrase structure projection, and this is what gives them their distinguished properties.

Long distance anaphora (LDA) have often been observed in the literature to have the property of 'animacy'. Under the syntax of sentience approach, they are also lexically marked as [+sentient]; i.e., they are *experiencer pronouns*. I propose to treat the Japanese long distance anaphor *jibun* as an experiencer, whose [+sentient] feature forces an association with the specifier position of the Sentience/Evidentiality Projection. Following Huang and Liu (2001) in their treatment of the Mandarin LDA *ziji,* I treat *jibun* as a variable bound by an operator.

There is something more to be said about *jibun*. An anaphor like *jibun* has an additional element of meaning, besides the meanings indicated by [+sentient] and [+discourse participant]. *Jibun* refers to an individual who self-ascribes an epistemic state. I propose to treat *jibun* as marked by Chierchia's (1989) property of self-ascription, involving a self-ascription operator. First person is self–ascribing, (perhaps second person is also, in interrogative contexts). The relationship between self-ascription and the other sentience features has to be worked out in future research. For lack of space I cannot pursue it here. We return to self-ascription and *jibun* in section 4.7

3.7 The lexical semantics of sentience-marking predicates

This section introduces specific proposals for the lexical semantics of three predicates introduced in section 2.

Certain predicates mark selected arguments with the features of the sentience system: [+/-discourse participant] and [+/-speaker]. This is the proposal for *samui:* it lexically marks its experiencer predicate with the features: [+sentient, +discourse participant]. Predicative morphology can have argument-structure-altering properties, and we predict this is true in the domain of sentience as well. Two predicative morphemes relating to sentience were discussed in section 2: *-garu* (lexical evidentiality) and *–tai* (morphological desiderative). Like many elements of verbal morphology, these are argument-structure-altering morphemes. The evidential *-garu* is analyzed as a morpheme that changes the experiencer argument of the root verb from [+sentient, +discourse participant] into [+sentient, -discourse participant]. Intuitively, it keeps the requirement that the argument be an experiencer, but removes the requirement that it must be a first or second person, self-ascribing direct experiencer.

The desiderative *–tai* is analyzed as adding a new argument (the one who desires something) with the features [+sentient, +discourse participant]. When the new argument is introduced, the agent argument is suppressed:

(51)	nomu ('drink')	[y, x] agent theme
(52)	nom-itai ('want-to-drink')	[z, (y), x] desid., (agent), theme [+sent]

[+disc.part.]

This is in the spirit of Mitchell (1986) who treats some lexical items as introducing a point of view argument through their lexical semantics. Morphological operations in which a new external argument is added to the argument structure and the old one is suppressed, are also familiar from the causative morphology of some languages, e.g., this example from Chichewa (Baker (1988)):

(53) Kambuku a-ku-umb-its-a mtsuko kwa kadzidzi
leopard SP-PAST-mold-CAUS-ASP waterpot to owl
'The leopard is having the owl mold a waterpot.'

In this example we see a verb with one causer argument (the agent 'owl') and one theme argument ('waterpot') undergoing a morphological operation in which a new causative argument ('leopard') is added to the argument structure, suppressing the old causative argument and making it syntactically inert:

(54) umb ('mold'): [CAUSER1, Theme]
umb-its ('mold-CAUSE'): [CAUSER2, (CAUSER1), Theme]

Intuitively, I treat the Japanese desiderative in exactly parallel fashion.

A summary of the lexical properties relating to sentience for the three Japanese forms is below:

(55)

			Highest argument
samui:			[+sen., +disc.part.]
-garu:	[+sen., +disc.part.]	→	[+sen., -disc.part.]
–tai:			[+sen., +disc.part.]

4. A Syntax of Sentience Analysis of the Facts in Section 2

In this section the facts laid out in Section 2 are analyzed in terms of the theory of the syntax of sentience outlined in Section 3.

4.1 *Samui* in the reportive mode

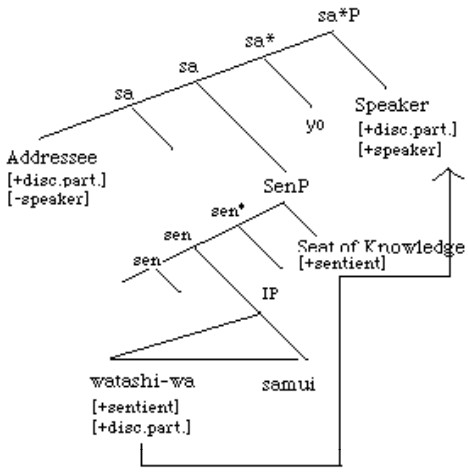
Predicates like *samui* have an experiencer argument, bearing the features [+sentient] and [+discourse participant]. The [+sentient] feature on the experiencer NP forces it to raise to the Sentience/Evidentiality projection. The [+discourse participant] feature forces it to raise again to the First/Second Person projection, associated with the feature [+discourse participant]. In the declarative, the speaker projection (associated with [+speaker]) is the nearest c-commander; in the interrogative, the addressee projection (associated with [-speaker]) is nearest. In raising to these positions, the NP must be compatible with the additional feature associated with these positions, which is 1st person in the declarative, and 2nd person in the interrogative. This yields the person constraint of section 2.1. (The copula *desu* is omitted for simplicity and consistency.)

(64) Declarative

Watashi wa samui yo

I TOP cold-PRES YO

'I am cold YO'

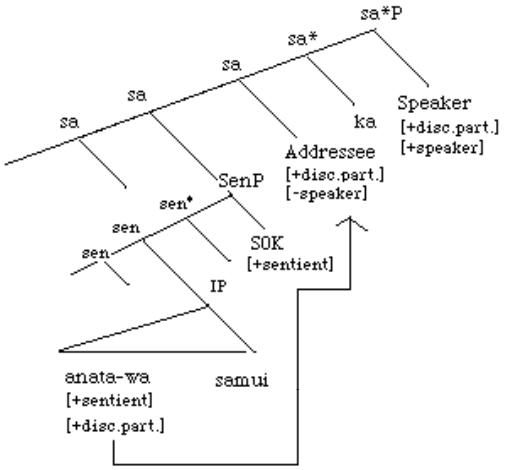


(65) Interrogative

Anata wa samui ka?

you TOP cold KA

'Are you cold?'



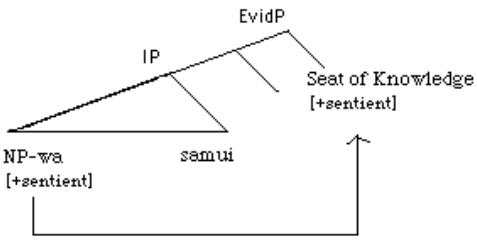
4.2 *Samui* in the non-reportive mode

Kuroda (1973) noted that the person constraint on *samui* holds in the reportive mode but not in the non-reportive mode. We analyze a sentence in the non-reportive mode as having no First/Second Person Phrase. The experiencer NP that bears the features [+sentience, +discourse participant] assigned by *samui,* can raise to the Sentience/Evidentiality projection, but cannot raise from there to a Speech Act projection. The [+discourse participant] feature cannot be activated, which means the person constraint cannot be activated. (I employ simplified structures whenever possible for the sake of presentation.)

(66) Kare wa samui

He TOP cold-PRES

'He is cold' (non-reportive)



4.3 Lexical evidentiality: *samugaru*

The output of *samu+garu* is a predicate with an experiencer argument marked with the features for [+sentient, -discourse participant] (section 3.7). With this combination of features, the experiencer NP can raise to the Sentience/Evidentiality Phrase but cannot raise to the First/Second Person Phrase to activate a person constraint.

The [-discourse participant] feature deserves some discussion. This feature predicts that *samugaru* would not co-occur with first or second person subjects. The facts here are not clear to this author. For many speakers, the *samugaru* sentences have an anti-speaker constraint:

(56) *watashi- wa samugatte iru yo
I- TOP cold-GARU-PRESENT -YO
'I (appear to be) cold'

The feature [-speaker] would predict this but also rule out the first person in questions:

(57) *watashi- wa samugatte imasu ka
I- TOP cold-GARU-PRESENT -KA
'Do I (appear to be) cold'

The feature [-addressee] would rule out second person in declarative and interrogative:

(58) *anata- wa samugatte imasu yo
you- TOP cold-GARU-PRESENT -YO
'You (appear to be) cold'

(59) *anata- wa samugatte imasu ka
you- TOP cold-GARU-PRESENT -KA
'Do you (appear to be) cold?'

If all sentences (57) to (59) are indeed bad, so that speakers really prefer *–garu* forms only with the third person, then [-discourse participant] is the feature associated with *–garu.*[25] If the facts are more complex, or if acceptable contexts can

be found for all these sentences, then this is not explained by this feature. If the facts vary from person to person there may be different idiolects of feature properties.

Some facts about relative clauses do suggest a [-discourse participant] feature with *samugaru*. Kuroda (1973) posited that relative clauses also lifted the person constraint. The relative clauses below can occur with or without *-garu*, and do not have a first or second person subject (Kuroda (1973), examples 7-8, p. 379. Glosses were added by the author.):

(60) atui hito
hot-TNS man
'hot man'

(61) atugatte iru hito
hot-GARU-TNS man
'hot man'

However, on closer examination, the person constraint appears to be active in relative clauses. *Samui* and *samugaru* have some interesting differences in meaning that show up in relative clauses. Ayumi Matsuo (p.c.) pointed out a difference between the following:

(62) a. Samui hito wa dare desu ka?
cold person TOP who COP QUESTION
'Who is/are the cold person(s)?'

b. Samugatteiru hito wa dare desu ka?
cold-GARU person TOP who COP QUESTION

'Who is/are the cold person(s)?'

In (62a) the teacher is asking the whole class, who among them is cold. In (62b) the teacher is asking one student, who is or are the cold people in the class? In (a) the implicit 2nd person evaluator of affirmative truth (the indivdual(s) who identify themselves as cold) must be direct experiencers or self-ascribers. In (b) the 2nd person evaluator is not a direct experiencer – self-ascription is not required. This person identifies a set of individuals other than herself who are cold. She is an external observer of 3rd persons.

4.4. Desiderative

The desiderative morpheme *–tai* introduces a new argument with the features [+sentient, +discourse participant] (section 3.7). The complex predicate *nomitai* (*nomu* +*tai*, meaning 'want to drink') has the same features associated with the experiencer argument of *samui,* and the analysis proceeds in parallel.

It is also possible to add *–garu* to this complex (*nomita+garu => nomitagaru* (loosely glossed as 'to appear to want to drink'). *–Garu* acts on *nomitai* just as it does on *samui,* changing the discourse participant feature to [-discourse participant]. *Nomitagaru* behaves as any other *–garu* verb.

4.5 Clausal evidentiality: *samui* in *node* and *toki* adjuncts

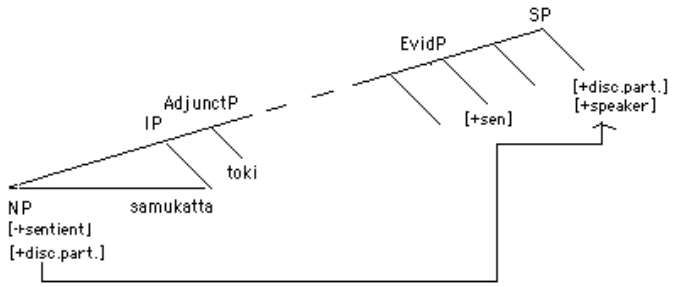
The experiencer of *samui* bears the features [+sentience, +discourse participant]. From within the non-evidential *toki* adjunct clause, this experiencer NP raises to the nearest c-commanding Sentience/Evidentiality Phrase projection, which is at the top of the matrix clause adjacent to the First/Second Person Phrase. From this position the NP can raise to the First/Second Person projection, with the features of 1st or 2nd person, and the person constraint on the experiencer NP results. The structure below is a highly schematic representation of a generalized sentence showing only the embedded clause, enclosed in brackets:

(63) {=14)

Kare wa [(null-NP) samukatta **toki],** dambou o ireta.

He TOP cold-PAST when, put-on-heat-PAST

'*When he felt cold, he put on the heat.'



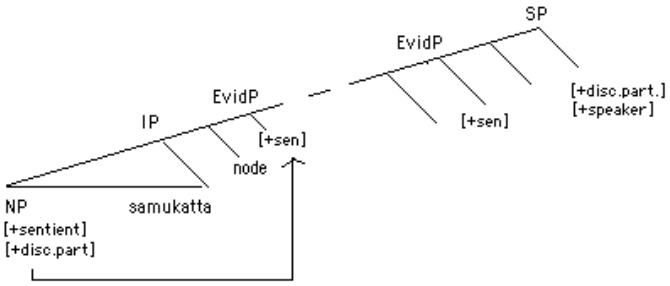
Within the evidential *node* adjunct clause however, the experiencer NP has a nearer Sentience/Evidentiality projection to which it can raise. The NP raises to this intermediate Sentience/Evidential Phrase. But from here it cannot raise to the matrix First/Second Person projection, which is not adjacent. The intermediate Sentience/Evidentiality projection has a blocking effect on movement of the experiencer NP to the matrix sentience projection. Since the NP cannot raise to the

matrix First/Second Person it is not required to agree with the 1st and 2nd person features, and no person constraint is activated. The structure below is a highly schematic representation of a generalized sentence showing only the embedded clause, enclosed in brackets:

(64) (=15)

Kare wa [(null-NP) samukatta **node]**, dambou o ireta.

He TOP cold-PAST because, put-on-heat-PAST



'Because he felt cold, he put on the heat.'

The presence of evidential projections in different types of adjuncts might show some interesting cross-linguistic variation, and needs further study. Also, the ability of long-distance anaphors to bind out of adjunct clauses would seem to be subject to cross-linguistic (and perhaps parametric) variation. For example, in Icelandic, unlike Japanese, long-distance binding of anaphora out of adverbial clauses is generally prohibited (Maling (1984)).

4.6 Nominalization

Kuroda's observation that the person constraint is lifted under nominalization makes sense taken together with Simpson's (1998) analysis of nominalizing *no* as an

evidential head of a mood phrase. I take as a working hypothesis the idea that nominalization in Japanese inherently involves closing off the clause with an evidential projection. NPs are parallel to IPs in many ways, and arguments can be made that they have the same functional projections as clauses (Cinque p.c.), although these morphosyntactic elements on NPs are harder to find.[26] As a direction for this research, this hypothesis predicts that nominalized clauses will have the same syntactic behavior as *node* adjunct clauses, due to the Sentience/Evidentiality projection. If nominalization closes off the clause with an Sentience/Evidentiality Phrase, the analysis of the person constraint in these structures is exactly the same as for evidential adjuncts like *node* clauses.

4.7 The long-distance anaphor *jibun*

It is important to remember that we deal here only with *jibun* in its long-distance usage. Other uses of *jibun* may have other properties, which I do not address in this paper. *Jibun,* in its long distance usage, is analyzed as a variable bound by an operator which bears the feature [+sentience]. This *sentience operator* raises to the nearest c-commanding Sentience/Evidentiality projection. In the evidential adjunct headed by *node* or *noni*, this is the Sentience/Evidentiality projection at the top of the adjunct. (Whether the adjunct clause is adjoined at the VP level or at the IP level is not a concern here.) From this position an NP in the matrix clause can bind the operator, even though *jibun* itself is in the embedded clause. (The relevant sentences are repeated here from Section 2. These are schematized

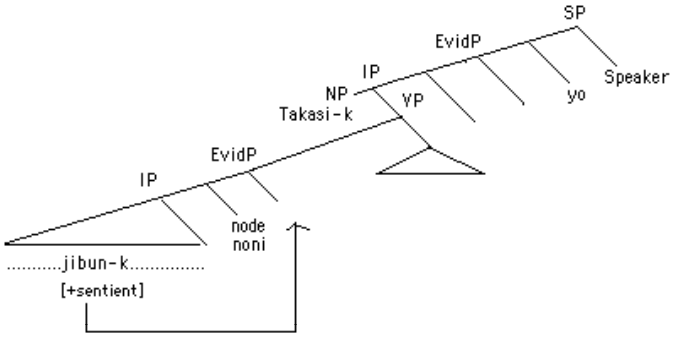
representations showing relevant parts of the structures. The particle YO is included only to show that the sentence is in the reportive mode.)

(65) (=30) (Sells (1987), p. 466, #60)

Takasi¡ wa [Yosiko ga mizu o zibun¡ no ue ni kobosita node] nurete-simatta.

Takasi¡ TOP [Yosiko Subj water Obj self¡ Gen on Loc spilled because] wet-got

'Takasi¡ got wet because Yosiko spilled water on him¡



Under this approach, the reference of *jibun* is local and clause-bound like other anaphora; except that *jibun* has the special property of optionally bearing the [+sentient] feature and raising to the Sentience/Evidentiality Phrase, where it can be locally bound in the next clause up. This gives *jibun* its long-distance binding properties, as well as the requirement that it represent a sentient being (the animacy constraint). I assume that this analysis may be extended to long distance anaphora in other languages.

In the case of an adjunct clause with *toki,* the nearest c-commanding Evidential Phrase is the highest, matrix-level one. When the sentience operator raises to this position it is in a local relationship with the NP Takashi, and should not be proscribed

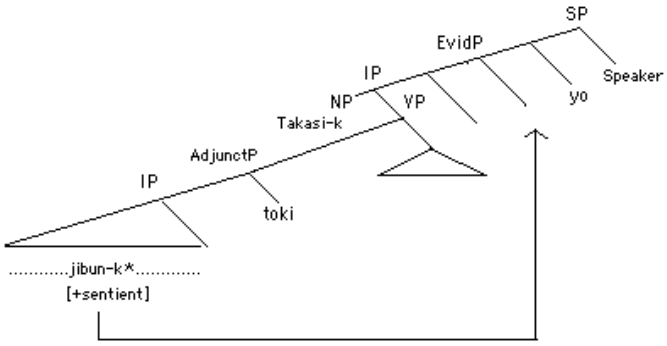
from being bound by Takashi for locality reasons. However, the binding is not possible:

(66) (=31) (Sells (1987), p. 466, #61)

*Takasi¡ wa [Yosiko ga mizu o zibun¡ no ue ni kobosita toki] nurete-simatta.

Takasi¡ TOP [Yosiko Subj water Obj self¡ Gen on Loc spilled when] wet-got

'Takasi¡ got wet when Yosiko spilled water on him¡'

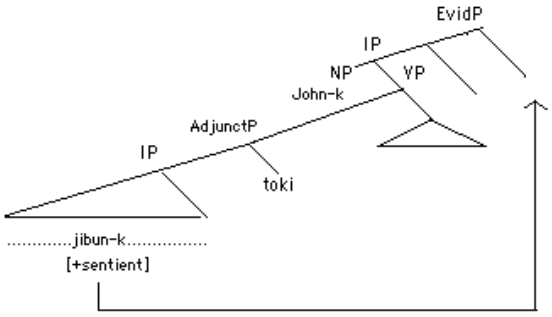


Interestingly, when there is no First/Second Person projection present the binding becomes possible. Recall Kuroda's observation that in the 'non-reportive' style *jibun* can be coreferential with the matrix subject, from within an adjunct clause with *toki:*

(67) (=35)

John¡ wa [Bill$_j$ ga zibun $_{i/j}$ o hometa toki] Mary no soba ni ita

'John was by Mary when Bill praised himself.' Kuroda (1973) p. 385, #33)



The problem with binding out of the *toki* clause in the reportive mode arises because the sentience operator associated with *jibun* is adjacent to the First/Second Person projection. I have proposed that jibun is a kind of a self-ascription operator, invoking Chierchia's (1989) property of self-ascription (section 3.6). *Jibun* refers to an individual who self-ascribes an epistemic state. In other words, in (66) Takashi must perceive or experience Yosiko's water-spilling as happening to himself. Secondly, there can only be one self-ascription operator to a clause; and the 1st person involves self-ascription. (One could after all talk about the speaker in the third person.) A conflict results if both Takashi and the speaker introduce self-ascription in the same clause. The role of self ascription in the grammar of sentience has to be worked out in future research.

Deictic verbs of motion such as *kuru* ('come') and *iku* ('go') behave differently with respect to *jibun*. Long distance binding of *jibun* is possible with *kuru* (80) but not with *iku* (81) (Sells (1987), pp.464-465, #53,54):

(68) Takasi¡ wa [Yosiko ga zibun¡ o tazunete-kita node] uresigatta
Takasi¡ Top [Yosiko Subj self¡ Obj visit-came because] happy
'Takasi¡ was happy because Yosiko came to visit him¡'

(69) *Takasi$_i$ wa [Yosiko ga zibun$_i$ o tazunete-itta node] uresigatta
Takasi$_i$ Top [Yosiko Subj self$_i$ Obj visit-went because] happy
'Takasi$_i$ was happy because Yosiko went to visit him$_i$'

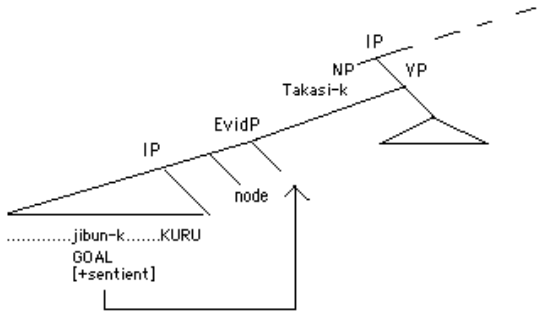
Kuru and *iku* have different argument structures with respect to point of view and sentience. *Kuru* ('come') reports the event from the point of view of a sentient perceiver at the goal (*Takasi* in the examples above). *Iku* ('go') reports from the point of view of a sentient perceiver at the source (implicit in the examples above).

(70) a. KURU ('come'): [x GO from w to y from point of view of y]
SOURCE GOAL
[+sentient]

b. IKU ('go'): [x GO from w to y from point of view of w]
SOURCE GOAL
[+sentient]

Each of these verbs marks one of its arguments with the feature [+sentient]. *Jibun* is the goal in both sentences above, but only with *kuru* (’come’) is it also marked as [+sentient] by the verb.

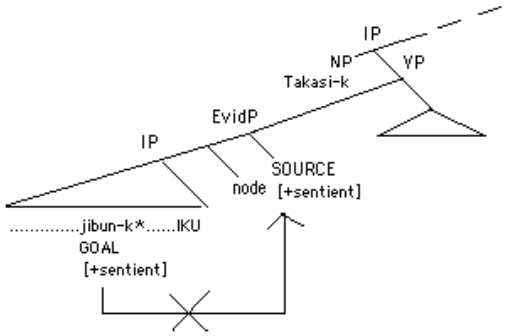
(71)



With the verb iku (‘go’) there is a conflict in indexings: the verb marks the source as [+sentient] but *jibun,* the goal, is also marked [+sentient]. The [+sentient] referential item must raise to the specifier position of the Sentience/Evidentiality Phrase, of

which there is only one for the clause. Therefore there can only be one [+sentient] referential item per Sentience/Evidentiality Phrase, so a conflict in indexings results, and *jibun* cannot be interpreted as a long distance anaphor.

(72)



There is an extensive literature on the Japanese long-distance anaphor *jibun*, and I limit myself to some general observations. To early generative linguists it appeared that *jibun* had a syntactic constraint; it could bind to subjects but not to non-subjects (Kuroda (1965), Kuno (1973), Akatsuka (1971) and others). However, it also became apparent that when *jibun* behaved as a long-distance anaphor it could bind to non-subjects. These kinds of facts gave rise to a bifurcation between syntactic and non-syntactic approaches. Some analyses of *jibun*-binding have taken a mostly syntactic approach, without reference to discourse properties (Saito and Hoji (1983), Katada (1988), and others). On the other track, it has become clear to many authors that some semantic or discourse factor plays a role as well as a syntactic one, and various proposals have emerged along those lines. The phenomenon has been described in terms of 'direct internal feeling' (Kuno (1972)), 'empathy' (Kuno and

Kaburaki (1977)), or 'logophoricity' (Kameyama (1984)). One of the most thorough attempts to sort out the syntactic and the non-syntactic or discourse elements in *jibun*-binding may be found in Iida (1996). Iida divides up the phenomenon into binding among coarguments, which is subject to syntactic constraints, and non-coargument binding, which is subject to a point of view constraint. This is also similar to the approach taken by Reinhart and Reuland (1993), who distinguish between syntactic and non-syntactic binding. Iida claims that where *jibun* does not take the subject as its antecedent, it is taking an antecedent based on point of view. She argues that *jibun* can take a non-subject antecedent 'when the speaker identifies herself with the nonsubject' (Iida (1996), p. 181). My treatment of *jibun*-binding is in the spirit of Iida (1996). Under this approach we can represent 'speaker identification with some NP-argument' structurally, by the [+sentient] feature of *jibun* forcing it to raise to take a higher scope in the clause.

5. Sentience in the literature and the need for some syntax.

Some important accounts of point of view phenomena have advanced our understanding of the effects of sentience in grammar. These accounts shed light on different phenomena, but they do not unify the range of Japanese phenomena laid out in Section 2 and analyzed in Section 4.

Sells (1987) and Zribi-Hertz (1989) were important contributions to our understanding of point of view. Sells (1987), following Kamp (1984), proposes a general model for point of view employing three discourse roles in a hierarchical

relationship. Sells (1987), and Iida and Sells (1986), explain some of the Japanese facts about *jibun,* based on the idea that *jibun* refers to a discourse argument. Zribi-Hertz (1989) demonstrates the discourse-binding properties of long-distance reflexives in English. She introduces the concepts of a Subject of Consciousness (a term used by Banfield (1979)), a Minimal Subject of Consciousness, and a Domain of Point of View. These elements of discourse structure could handle some of the Japanese facts such as the reportive/non-reportive distinction. However, neither of these accounts can integrate long-distance *jibun* binding with evidentiality, or with person/speech-act agreement, or with the direct experiencer facts of Japanese. Neither of these models has an explicit connection to syntax or syntactic structure, other than a loose association between a discourse argument and a clause.

There have also been important contributions to our understandings of point of view in Japanese. Kamio (1991) and (1997), introducing the idea of the speaker and hearer's respective *territories of information*, claimed that the direct experiencer predicates forbid non-first person subjects (in the declarative) because the information they contain is not in the speaker's territory of information in Japanese. Kamio's theory offers many insights into discourse properties of Japanese utterances, but it has no syntactic component, and it is not clear, for instance, how one would treat embedded clauses that can reflect switches in point of view. Takubo and Kinsui (1977) argue, contrary to Kamio, that only the speaker's domain of knowledge or information is necessary to characterize Japanese discourse phenomena such as the predicates of direct experience. They use Fauconnier's (1994) bipartite distinction of mental domains: the D-domain (which holds directly

accessible information obtained by direct or past experience), and the I-domain (which holds information only indirectly accessible, and obtained by hearsay, inference etc.) to explain the first person requirement of the direct experiencer predicates. They can support their claim that a hearer's domain of knowledge does not need to be posited, so long as they only consider declarative sentences. It is not clear how they could account for the interrogative flip. Neither Kamio's nor Takubo and Kinsui's theory has a syntactic component. None of these approaches can integrate the striking range of facts associated with the direct experiencer predicates in Japanese, or explain all the syntax-like aspects of these facts.

The Japanese facts are striking because they show syntax-like locality effects. Clausal morphemes in adjunct clauses have 'blocking' effects on the person constraint, and speech-act markers such as *yo* appear to need to be 'adjacent' to a sentience operator to enforce the reportive mode. A loose association of a discourse argument to the clause, such as we have with the Sells or Zribi-Hertz models, does not explain why certain effects come specifically with evidentiality, nor why evidential morphosyntax occurs 'below' speech-act morphosyntax.

Furthermore, the interrogative flip shows that we must posit more than one set of discourse arguments. The speaker/hearer set of arguments (as employed in Kamio or Takubo and Kinsui) is not sufficient by itself; nor is a Subject of Consciousness argument (as in Zribi-Hertz) sufficient by itself. We need to have both speaker/hearer and an independent sentient argument with a point of view. The two projections employed in this paper give us those three arguments, as well as some constraints

on the interactions between them. Sells (1987), who argues for the necessity of multiple discourse roles, observes that they seem to show some hierarchical organization. The syntactic treatment outlined here predicts some of these hierarchical scope-like properties, as a result of the syntactic scope relations between elements of the two projections.

Discourse arguments are central in some semantic and pragmatic accounts of these phenomena, yet they have been largely ignored in syntactic approaches. Conversely, the syntax-like scopal and locality properties of certain discourse elements are addressed by syntactic approaches to discourse phenomena, but ignored in some purely semantic or pragmatic approaches. The *Syntax of Sentience* outlined in Section 3 integrates both aspects of the phenomena at the syntax/semantics/discourse interface.

Although there are many questions still to be asked about the framework developed in this paper, the paper takes a strong stand: that there is a *syntax of sentience* at the outer periphery of the clause where the syntax/discourse interface is located, and where natural language encodes mind.

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Notes

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[1] Kuroda (1973) realized this when he entitled his seminal paper, "Where epistemology, style and grammar meet: a case study from Japanese." I owe much to Kuroda's seminal paper, which first interested me in the topic.

[2] Although the topic marker *wa* and the nominative case marker *ga* have different properties in Japanese, for the purposes of this paper I have not found it necessary to address them separately. Hara (2004) has shown that contrastive *wa* has special

properties interacting with an individual's knowledge or epistemic state. It also has focus-like properties, and this paper will look at facts without the effects of focus. All instances of the topic marker *wa* in this paper are not the contrastive *wa.*

[3] Chungmin Lee informs me that these facts in Japanese are largely parallel to the facts in Korean. The comparative syntax of the two languages should provide more insight into these facts.

[4] Some speakers have informed me that among younger Japanese, sentences like *Kare wa samui desu* are not as bad; the phenomenon may be disappearing in the language.

[5] *Noda* might be analyzed as a conjunction of the nominalizer *no* and the copula *da*. Maynard (1999) shows however, that *da* can be either used either as a true copula, or it can behave as a modality indicator expressing the speaker's attitude towards the assertion. This latter use supports the analysis of *noda* as an evidential. McGloin (1980) also claims that *no desu* (the formal version of *no da)* can be used to express the speaker's subjective judgement about the information. Kamio (1997) describes *noda* as expressing "information which is difficult to have access to" (Kamio (1997), p. 65).

[6] Eric McReady (p.c.) reminds me that there are other modals useable with *samui* which have evidential content: *hazu* and *kamoshirenai*. (See Asher and McReady (2004).) *Samui* is also acceptable with 3rd person subjects when used with these modals.

[7] A reviewer suggests two possible counter-examples which are variations on (13) and (14):

(13') Kare-wa samui-toki-mo danbou-d o ire-nai

he-top cold-when-even put-on-heat-neg

'Even when it is/he feels cold, he doesn't put on the heat.'

(14') #/* [Erika-ga samukatta node] Ken-wa danbou-o ireta.

Erika-nom felt cold because Ken-top put-on-heat-past

Intended reading: 'Ken put the heat on because Erika felt cold.'

In (14') the particle *mo* is a focus particle. Focus interacts with the sentience system in interesting ways, and may in fact be a part of it. (For example, focus can sometimes reflect the speaker's focus as opposed to someone else's.) I cannot develop this further in this paper, but hope to return to it in future work. This paper addresses only facts that are focus-neutral. For more comments on focus see Tenny (2004).

Regarding (15'), I have no explanation yet, but can only suggest there is an interaction in the sentience system with respect to *samui,* between subject marker *ga*, and the position of the topic marked with *wa*, and control. This is for future work.

[8] Many English speakers find the sentences in (16) acceptable. These speakers have relaxed a prohibition on questioning sentences with evidential adverbs.

[9] A reviewer points out that the same contrast appears with questions that contain an adjunct wh-phrase *naze* ('why'). *Node* and *naze* have in common that they refer to 'reasons why'; which in turn refers to something about which an individual epistemic judgement can be made. Observers of the same situation can make private judgements based on evidence they hold, about why something happened. This is in contrast to temporal adjuncts like *toki* adjuncts; *when* something happened is less open to different judgments by observers. So *node* and *naze* would share some evidential content.

[10] Kuno attributes the observation of the ungrammaticality of (b) to Kuroda.

[11] The parallel sentence using the nominalizer *no* is more awkward for other reasons:

?Mary ga sabishii no wa dare mo utagawanai
SUB lonely-TNS the-fact-that TOP nobody doubt-NEG-PRESENT
'No one doubts that Mary is lonely'

The nominalizer *koto* is used to encode more abstract and indirect meanings, while the nominalizer *no* is used to encode more concrete and direct meanings (Horie (1997)).

[12] Huang and Liu (2001) have found similar effects for Mandarin Chinese *ziji,* which shows an asymmetry with respect to *because* and *when* clauses.

[13] The idea that the speech act has a syntactic representation, however, goes back at least as far as the Generative Semantics literature. In the context of that literature, Ross (1970) argued that every English declarative sentence is derived from a structure in which it is embedded under a higher clause meaning something like, "I say to you that ___". This proposal made the speech act the top node of the syntactic/semantic deep structures employed by generative semanticists. A version of the proposal may also be found in Banfield (1982).

[14] I do not mean to suggest here that this is all there is to a speech act -- of course there is much more information, and more subtle information, contained in the speech act markers of a language than is discussed above. Not all varieties of possible speech acts identified by pragmaticians and philosophers will be represented syntactically. And speech acts themselves, as philosophical or pragmatic entities, are much more complex. Speas and Tenny emphasize that the

grammaticized Speech Acts indicated syntactically within the Speech Act Projection do not correspond to all the different types of illocutionary acts that are possible – these must remain in the pragmatics of the language. Only a small set of basic speaker/addressee relations is grammaticized in a spare, stylized template, which the users of the language can then employ in creative ways to communicate with each other. Other 'flavors' the particle *yo* may impart for example (perhaps strength of assertion, etc.) would not represented in this grammatical structure, but rather in an extended pragmatics.

[15] Hopper and Thompson (1973) observed that *when-* adverbial clauses (and other temporal adverbial *before-* and *after-* clauses) have content that is presupposed, whereas the content of *because-* clauses is asserted.

[16] Simpson (1998) has argued that the *no* at the end of relative and nominalized clauses in Japanese is evidentiality. He argues that this *no* has been reanalyzed in Japanese "as the head of a Mood Phrase dominating Tense and representing speaker assertion of the truth of a statement" (Simpson (1998)). According to Horie (1997), *node* and *noni* are fully grammaticalized conjunctions of the nominalizer *no*, with the particles *de* and *ni*. Other, not fully grammaticalized combinations also occur, such as *no o* (*no*+Accusative) and *no ga* (*no*+Nominative). See also Miyagawa and Nakamura (1991) for some more observations about *node*. Asher and McReady (2004) make the general comment that Japanese has grammaticized some linguistic phenomena which European languages have not, and that among these are discourse relations that are obligatorily marked in modally subordinate contexts.

[17] Many treatments of grammatical phenomena involving point of view have treated it as monolithic, assuming that there is only one kind of sentience role. Other authors

have differentiated among different types of sentience roles. Sells (1987) following the discourse model developed by Kamp (1984), establishes three primitive discourse roles: SOURCE (loosely Speaker), SELF (loosely, evidential and experiencer arguments), and PIVOT (locus of spatiotemporal orientation). Other authors have handled point of view phenomena with the roles of speaker, hearer, and one other generalized role (Cantrall (1974), Banfield (1982), Speas and Tenny (2003). This paper follows the third approach, building on the work of Speas and Tenny.

[18] For the purposes of this paper, I remain agnostic about what the relation of these projections is to the Topic and Focus projections proposed within a split CP such as in Rizzi (1997):

(i) [ForceP force-head [TopP topic-head [FocP focus-head [FinP finite-head [IP]]]]]

Further research will show whether the Sentience, Topic, and Focus Phrases are interspersed or overlap. It may be the case that focus movement employs the sentience system or the Sentience Phrase, as there seem to be some interactions between focus and speaker point of view.

[19] For some critique of details in the execution of Speas and Tenny's proposal see Gartner and Steinbach (2005).

[20] If these discourse arguments occupying specifier positions, why don't we see them in the morphosyntax of the language? It is not a surprise that these arguments should not have obvious morphosyntactic correlates in a language, even though the predicates (heads) do. In general, we often find morphology 'shrunken' or sometimes merged in functional projections; and more so in the morphosyntactic elements at the periphery of the clause. In any case, these discourse or point of view arguments

do have syntactic reality in expressions like *It seems to me that John is a fool* or *According to John, I am a fool*.

[21] The feature [+Animate] in Harley and Ritter's system refers to noun class, and is not the same as the feature for sentience introduced here.

[22] Harley and Ritter argue that a feature for Addressee must be specified independently in the feature system for some configurations in some languages. This adaptation is not meant to argue against this, but to simply cast these ideas in their simplest form.

[23] A reviewer informs me that speaker-oriented epithets may be possible in this construction. Preliminary work on the *Computation of Point of View* in collaboration with Sandiway Fong and Brian MacWhinney suggests that speaker-orientation is globally available.

[24] It has long been observed that backwards binding of regular anaphora is possible with psych verbs. (e.g., *Rumors about herself$_i$ usually scare Marge$_i$*.) Pesetsky (1987) proposes that verbs with experiencer objects have an implicit infinitival clause with Tough movement (reducing the phenomenon to c-command in another structure). Postal (1971) proposd a psych movement. Stowell (1986) proposed raising of certain arguments at LF, including experiencers. Martin (1989) specifically proposed Experiencer Raising, an optional raising of NPs bearing the experiencer role to a second subject position. But these accounts give no explanation of why experiencers have these special properties. Under my account, this follows naturally because experiencers are related to a syntax of sentience which is higher in the tree.

[25] It is my sense that these sentences are not acceptable unless *–garu* can also impart volitionality. It is not clear whether speakers can generally do this in the

declarative and interrogative. An anonymous reviewer suggests the sentence below as an example of –*garu* imparting volitionality when used in the imperative:

Kanasii nara motto kanasi-gare-yo.

Sad-conditional more sad-GARU-YO

'If you are sad, why don't you show it more?'

The imperative introduces another speech act, and that must be taken into account. The role of volitionality in the syntax of sentience is something that needs to be worked out. I hope to return to these questions in the future.

[26] Tenny (2004) argues for evidential phrases in English CPs and NPs.