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Focus Projection in Japanese

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1 Introduction

In this paper I will present some data concerning focus in Japanese, some of them well-known, others less so.¹ The particular interest of these data is this: In matrix clauses Japanese subjects marked with the particle *ga* are interpreted as being in narrow focus in exactly those environments where English subjects bearing a H* pitch accent receive this interpretation. Assuming that pitch accent assignment in English is the realization of an abstract focus feature, the obvious conclusion is that this abstract focus feature is realized in Japanese as the particle *ga*. While the realization of focus is different in the two languages, however, the rules for focus projection are the same (hence the identical pattern of interpretations).

The problem with this approach is that the pattern of interpretations of *ga*-marked subjects in embedded clauses is not the same as that of accented subjects in English. If the rules for focus projection are essentially the same across these two languages (the assumption which would allow us to account for the striking similarity in matrix clause interpretations) then this divergence is mysterious. The challenge, then, is to come up with an analysis which preserves an explanation for the partial similarity in the behavior of *ga*-marked subjects in Japanese and accented subjects in English, but which accounts for the divergence in embedded contexts.

Although this paper is largely about Japanese, it aims to provide an analysis that extends to the behavior of focus in English. One of the results is that we will be led to revise our understanding of how focus works in English also.

¹I am indebted to Yasuo Ishii, Anthony Kroch, Kenjiro Matsuda, Beatrice Santorini, and Enric Vallduví for their help with various aspects of this paper. They should not, of course, be held responsible for the use that I have made of their comments and judgments.

2 The problem

2.1 Subjects in main clauses

As pointed out in Kuroda 1965 and commented on many times since, subject NPs marked with *ga* may receive one of two interpretations, referred to in Kuno 1973 as “neutral description” and “exhaustive listing.” A sentence like (1) is ambiguous:²

- (1) John-*ga* kita.
 John-*ga* came
 ‘John came.’

On the neutral description reading this sentence is a straightforward announcement of the event of John’s arrival; on the exhaustive listing reading it means something like “of all the people salient at this point in the discourse, it was John who came.”

Kuroda notes, however, that this ambiguity is not always present. If the predicate is individual-level, in the sense of Carlson 1977, Kratzer 1989 (that is, roughly, it denotes a permanent property), a subject marked with *ga* can only receive the exhaustive listing reading. (2) is such an example; it is interpreted roughly as “of all the people salient at this point in the discourse, it is John who is smart.”

- (2) John-*ga* kasikoi.
 John-*ga* smart
 ‘John is smart.’

The neutral description reading is not available for this sentence.

I take the exhaustive listing interpretation of a *ga*-marked subject to amount to narrow focus on that constituent. For one thing, as pointed out in Shibatani 1990, the “exhaustiveness” is a Gricean implicature, rather than an entailment. Exactly the same is true of narrow focus in a language like English (see Horn 1981, Vallduví 1992). For example, in the Japanese exchange in (3), just as in the free English translation, speaker B is not perceived as contradicting her/himself, in contrast to the example in (4):³

- (3) A: Dare-*ga* kasikoi no ka?
 who-*ga* smart *nmz qu*
 ‘Who is smart?’
 B: John-*ga* kasikoi. Sorekara, Mary-*mo* kasikoi.
 John-*ga* smart and Mary-also smart
 ‘JOHN is smart. And MARY is smart too.’

²In this and following examples Japanese *wa* and *ga* are glossed as themselves. This is in order to avoid begging the question of their analysis, which is part of the subject of this paper. Abbreviations used in the glosses are as follows: *acc* accusative; *cond* conditional; *F* focus; *gen* genitive; *L* link; *nmz* nominalizer; *prt* particle; *qu* question particle.

³In the English glosses, and in subsequent examples in English, SMALL CAPS represent the location of a pitch accent, which, following Selkirk 1984, I take to be the realization of the focus feature in English (this is discussed in more detail below).

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- (4) A: Dare-ga kasikoi no ka?
 who-*ga* smart *nmz qu*
 'Who is smart?'
- B: John-dake-ga kasikoi. # Sorekara, Mary-mo kasikoi.
 John-only-*ga* smart and Mary-also smart
 'Only JOHN is smart. # And MARY is smart too.'

The interpretation of the "exhaustive listing" reading as narrow focus is also that given in Diesing 1988, and is, I believe, assumed by a number of other researchers.

The contrast between Japanese examples like (1) and (2) looks exactly parallel to the contrast observed in English when subjects are given a H* pitch accent.⁴ Selkirk 1984 argues that pitch accent on an object can be interpreted either as narrow focus on that constituent or as wide focus on the entire VP, as indicated in (5):

- (5) a. A: What did Mary do last night?
 B: She [_F watched KOJAK].
- b. A: Did Mary watch M*A*S*H last night?
 B: No, she watched [_F KOJAK].

Pitch accent on a subject, on the other hand, is generally interpreted as narrow focus on that constituent, as illustrated in (6). As Selkirk points out, neither of these is appropriate as a response to the question "What happened?":⁵

- (6) a. [_FJOHN] eloped.
 b. [_FJOHN] was dancing.

Selkirk notes a number of exceptions to the generalization that a pitch accent on the subject results in narrow focus, as pointed out by Jackendoff 1972, Berman and Szamosi 1972, Bresnan 1972, Bolinger 1972, and Schmerling 1976, among others. The exceptions noted by Selkirk involve unaccusative verbs; Diesing 1988 adds that stage-level predicates behave in the same way. Thus, as indicated by the bracketing, (7a,b) can only be interpreted with narrow focus on the subject, but (8a,b) can be interpreted with wide focus: the entire sentence can constitute "new information":⁶

- (7) a. [_F The EMPEROR] is playing pool.
 b. [_F BLOWFISH] are poisonous.
- (8) a. [_F The EMPEROR arrived].
 b. [_F BLOWFISH are available].

Diesing 1988 proposes to explain the contrast between (7) and (8) in a unified way. First, focus cannot project from the external subject position (that is, the position in which the subjects of unergative and transitive verbs and individual-level

⁴See Pierrehumbert and Hirschberg 1990, Steedman 1991, and references therein for a detailed description of the intonation contour that marks focus in English.

⁵These examples are slightly adapted from Selkirk 1984, p. 217. As will be discussed, the claim that examples like (6) can never be interpreted with wide focus does not in fact appear to be correct.

⁶Some of the following examples are adapted from Diesing 1988. Since narrow focus is always possible, it is not always indicated in the examples if a wider focus is available.

predicates are generated): this accounts for the interpretation of (7a,b). Second, Diesing argues that the subjects of unaccusative verbs and of stage-level predicates are generated inside the VP. Assuming that the trace of the subject is "visible" to focus projection, in (8a,b) focus will be able to project from the VP-internal trace and a wide-focus reading will be available.

Pointing out the similar pattern of the Japanese data, Diesing further proposes that *ga* is a realization of the focus feature in Japanese; that is to say, it corresponds to the assignation of a pitch accent in English. Her analysis of (7) and (8) then extends directly to the contrast between (2) and (1).

2.2 Embedded clauses

As evident from Diesing's examples, in English an external subject (the subject of an individual-level predicate or an unergative or transitive verb) that receives a pitch accent gives rise to a reading of narrow focus in embedded clauses, as well as in matrix clauses. Some examples are given in (9) and (10):

- (9) a. I only said that [_F the EMPEROR] was playing pool.
 b. I only said that [_F BLOWFISH] are poisonous.
- (10) a. He's only interested in places where [_F the EMPEROR] plays pool.
 b. He'll only be in trouble if [_F BLOWFISH] are poisonous.

This is exactly as we would expect from a theory like that of Selkirk 1984, in which focus can be recursively "projected" from a focused node to an immediately dominating node. Since examples like those in (7) indicated that focus cannot be projected to the sentence from an external subject, there is no reason to expect it to be able to project any further when the sentence is embedded.

Also expected is the availability of a wide-focus reading for the accented subjects of unaccusatives and stage-level predicates in embedded contexts:⁷

- (11) a. I only said that [_F the EMPEROR arrived].
 b. I only said that [_F BLOWFISH are available].
 c. He's only interested in places where [_F BLOWFISH are available].
 d. He'll only be in trouble if [_F the EMPEROR arrives].

Focus projection is possible here exactly as in the matrix clauses in (8).

In contrast to accented subjects in English, however, external subjects marked with *ga* in Japanese do not behave in the same way in embedded clauses as in matrix clauses. That is to say, they are not necessarily interpreted as narrow focus. Thus, the entire *if*-clause in (12B) is in focus, as is the entire embedded clause in (13):

- (12) A: Doo sitara anata-no ki-ga kawaru no ka?
 how you-*gen* mind-*ga* change *nmz qu*
 'Under what circumstances would you change your mind?'

⁷Some of these examples may also have an interpretation where focus projects right up into the matrix clause; for our purposes here it is enough to note that it can project beyond the subject.

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B: [_F John-ga Mary-yori kasikokattara].
 John-ga Mary-than smart-*cond*
 '(I would change my mind) if John was smarter than Mary.'

- (13) Mary-wa [_F John-ga kasikoi koto-o] wasurete-ita.
 Mary-wa John-ga smart fact-*acc* forgot
 'Mary forgot that John is smart.'

Notice that if the subject is assigned a pitch accent in the corresponding English sentences this forces a reading of narrow focus, as schematized in (14) and (15):

- (14) A: Under what circumstances would you change your mind?
 B: If [_F JOHN] was smarter than Mary.
 (15) Mary forgot that [_F JOHN] is smart.

The subjects of stage-level predicates and unaccusative verbs in Japanese behave in embedded clauses just as in matrix clauses: a subject marked with *ga* is not necessarily interpreted as being in narrow focus. Compare (16) with (1) above:

- (16) Mary-wa [_F John-ga kita koto-o] wasurete-ita.
 Mary-wa John-ga came fact-*acc* forgot
 'Mary forgot that John had come.'

Thus in embedded clauses we lose the contrast between *ga*-marked external subjects on the one hand, and *ga*-marked subjects of unaccusatives and stage-level predicates on the other.

3 Towards a solution

3.1 "Ga" is not a focus marker

How can we understand this partial similarity between accented subjects in English and *ga*-marked subjects in Japanese? If we continue to maintain that *ga* is a marker of focus in Japanese then we will be forced to somehow parameterize the projection of focus. This would be an unwelcome result, particularly since in matrix clauses the projection appears to obey the same principles in the two languages.

Instead we must abandon the idea that *ga* is a marker of focus. Rather, it is simply the instantiation of nominative case in this language. This is an attractive proposal for other reasons. Most notably, as pointed out in Shibatani 1990, only subjects can be marked with *ga*. Since we must assume that it is possible to focus objects and other arguments in Japanese, if *ga* were a focus marker it should be able to appear freely on these other elements; but it cannot.⁸

Another indication that *ga*-marking in Japanese is not equivalent to pitch accent assignment in English is that Japanese *dareka* (someone) can (and in some cases must) be marked *ga* when it is in subject position and the entire sentence is

⁸This is a slight oversimplification: there is a small class of verbs that allow their objects to be marked with *ga*. However, this possibility does not affect the focus interpretation of the sentence.

in focus. Pitch accent assignment to *someone* in English in the same context results in a narrow focus interpretation, as illustrated in (17)—(19). For these exchanges, imagine that A and B are inside; A hears a noise outside, and B goes to the window:

- (17) A: What's going on?
 B1: [_F Someone's ARRIVED].
 B2: [_F JOHN's arrived].

If B intends her/his answers to be interpreted as all-new information, the most natural pitch accent assignment is on the predicate if the subject is *someone* (as in (17B1)), and on the subject only if it is a "content" NP (as in (17B2)). Note in particular that in this context pitch accent assignment to *someone* is not natural:⁹

- (18) A: What's going on?
 B: # [_F SOMEONE]'s arrived.

In Japanese, on the other hand, the subject in both cases is marked with *ga*, and in both cases the reading can be one of all-new information, as illustrated in (19):

- (19) A: Nani-ga okotte-iru no?
 what-*ga* happening-be *nmz*?
 'What's going on?'
 B1: Dareka-ga kita.
 someone-*ga* came
 '[_F Someone's ARRIVED].'
 B2: John-ga kita.
 John-*ga* came
 '[_F JOHN's arrived].'

What we don't want to do, however, is throw out the baby with the bathwater. If *ga* is not a focus marker, how can we explain the pattern of interpretations in main clauses that Diesing showed to neatly match the pattern found with focused subjects in English? The key here is to consider another difference between Japanese and English: Japanese has a grammaticalized topic marker, *wa*. Thus, I will argue, the crucial fact about *ga*-marked subjects in Japanese is not so much that they are marked with *ga* as that they are *not* marked with *wa*.

3.2 Information Structure

I am assuming the view of "information packaging" in sentences developed in Vallduví 1992. In this view, there is a level of representation called INFORMATION STRUCTURE, at which INFORMATION PACKAGING is encoded. The role of information packaging is to optimize the entry of information into the knowledge-store of the hearer.

⁹There doesn't have to be very much "content" for the subject to be accentable in this context: compare (18B) with (i), where the accented *some guy* allows focus projection:

- (i) [_F Some GUY's arrived].

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In Vallduví's system there are three primitives of I[nformation] Structure: a sentence may be articulated into FOCUS and GROUND, and the ground may itself be composed of a LINK and a TAIL, as set out in (20):

- (20) $S = \{ \text{focus, ground} \}$
 $\text{ground} = \{ \text{link, tail} \}$

Different combinations of these primitives correspond to different instructions about what part of the sentence constitutes INFORMATION, and how that information is to be input into the knowledge-store.

Very roughly, these concepts are to be understood as follows. The FOCUS is the only *informative* part of the sentence; it is the part that constitutes new information. It is important to realize that newness of information does not equate to newness of discourse entity (see, among others, Rooth 1985, Prince 1986, Vallduví 1992). For example, in (21a), from Prince 1986, what is new is not the discourse entity *the shirt*, but rather the fact that this constituent instantiates the variable in the open proposition in (21b):

- (21) a. She gave the SHIRT to Harry.
 b. She gave x to Harry.

The focus, then, is what the speaker intends to be added to the hearer's knowledge-store.

The complement of the focus is the GROUND—salient knowledge that the speaker assumes to be part of the hearer's beliefs. The ground may be further divided into LINK and TAIL. The LINK corresponds to a large extent to what in some frameworks is called the *topic*. Vallduví adapts the metaphor of Heim 1983 and proposes that the knowledge-store should be thought of as a collection of *file cards*, each of which acts as an address. The knowledge-store is modified and updated by creating new file cards and by entering information in ones that already exist. A link is an address pointer: it instructs the hearer to go to the address it denotes in their knowledge store so that the information in the sentence will be entered on that card. So a sentence that consists of a link and a focus, as schematized in (22a) corresponds to the instruction given informally in (22b):

- (22) a. [L JOHN] [F loves OPERA].
 b. 'I instruct you to go to the address "John" and add the information that he loves opera.'

What about the TAIL? Since the tail is knowledge that the speaker assumes is part of the hearer's store, it is already represented on a file card. Consequently, it corresponds to an instruction to add information in a particular place in the file card: the hearer is to substitute the new information for some "gap" in the knowledge in that card. Thus, for example, it may be that the speaker believes part of the hearer's salient knowledge about John to be that he loves something. That is to say, the speaker believes something like (23) to be on the hearer's file card addressed by *John*:

- (23) $\exists x : \text{loves}(\text{John}, x)$.

A sentence consisting of link, focus, and tail, as schematized roughly in (24a), then, corresponds to the instruction given informally in (24b):

- (24) a. [_L John] [_T loves] [_F OPERA]
 b. 'I instruct you to go to the address *John*, and substitute *opera* for *x* in the proposition *loves(John,x)*.'

3.3 Focus in Japanese

Given this background, how can we account for the interpretations of *ga*? Recall that the problem is to find an analysis that does justice to both of the following facts:

- (25) a. *Ga*-marked subjects of individual-level predicates are interpreted as being in narrow focus; *ga*-marked subject of stage-level predicates are not necessarily interpreted as being in narrow focus.
 b. This distinction is neutralized in embedded contexts.

3.3.1 Main clauses

As discussed in Section 3.1, the observation noted in (25b) and other facts suggest that *ga* should not be taken to be a focus marker, but is instead simply a marker of nominative case. While Japanese does not then have a lexical marker for FOCUS, however, I assume that it does have a marker for LINKS. This is the function of *wa*. In fact it is not clear whether one would want to say that *wa* is a marker of linkhood, or whether it is associated with a particular position—most likely Spec(CP)—and it is this position that is specialized for links. For my purposes here it is not necessary to resolve this question, however. I take it then that if an argument is a link it must be marked with *wa*. Evidently it follows that a *ga*-marked subject cannot be a link, but must instead be either part or all of the TAIL, or part or all of the FOCUS.

Vallduví argues that of the three informational primitives—link, focus, and tail—the only one that is necessarily present in a sentence is the focus, since this is the part that conveys information. However, since the information has to be entered somewhere in the knowledge-store—that is to say, it has to be entered on some card in the file system—if the sentence does not have an overt link, I assume that the link must be recoverable from the context. In sentences with stage-level predicates, the Davidsonian event argument referring to the slice of time and space at which the event takes place is always available as a link, and as a result an entire sentence of the type in (1) can be interpreted as being in focus: the information will be entered under the address of the event argument (Gundel 1974, Erteschik-Shir 1992).

If the predicate is individual-level, however, there is no such event argument. Consequently, another link must be found. If the subject is marked with *wa*, it can fill this role, as in (26):

- (26) a. John-wa kasikoi.
 John-*wa* smart
 'John is smart'
 b. [_L John-wa][_F kasikoi]

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However, if the subject is marked with *ga*, it cannot be interpreted as the link (recall that arguments that are to be interpreted as links must be marked with *wa*), and some other link must be found. One possibility is that the predicate is the link. When a predicate is a (non-contrastive) link it does not have to be marked with *wa*. In this case the only remaining possibility for the focus is the subject, giving rise to the narrow focus or "exhaustive listing" reading for a sentence like (2), repeated here as (27):

(27) [_F John-ga][_L kasikoi]

There is however the possibility that some link can be recovered from the context, even in the case of an individual-level predicate. In this case we predict that the interpretation need not be one of narrow focus on the subject, since the entire sentence could constitute the focus. This prediction is borne out. Consider for example the exchange in (28):

(28) A: Atarasii sigoto-no mondai-wa nan desu ka?
 new work-*gen* problem-*wa* what be *qu*
 'What's the problem with your new job?'

B: Ofisu-ga tiisaisi, kyuuryoo-ga yasuisi, uwayaku-ga hidoi desu.
 office-*ga* small-and pay-*ga* low-and boss-*ga* terrible be
 'The office is small, the pay is low, and the boss is terrible.'

The sentences in (28B) do not have to be interpreted with narrow focus on the subject. Rather, the question provides "problems with B's new job" as the link, leaving open the possibility that all the material in the response will be new information to be filed under this address. Similarly, the exchange in (29) is felicitous because the question supplies "the best thing about New Haven" as the link:

(29) A: Sorejaa, New Haven-de ichiban ii mono-wa nani?
 so New Haven-in most good thing-*wa* what
 'So what's the best thing about New Haven?'

B: Tatemono-ga kirei da.
 building-*ga* beautiful be
 'The buildings are beautiful.'

The predicates in (28) and (29) are clearly individual-level; furthermore, there is no reason to suppose that any "coercion" into a stage-level reading is taking place.

In (28) and (29) the *ga*-marked subjects are clearly *part* of the focus. There are other cases, however, in which a *ga*-marked subject is not part of the focus, but instead (part of the) TAIL: that is, the non-focal, non-link part of a sentence. Consider for example (30) (bearing in mind that the translation is free: in the Japanese the subject of *hikui/takai* (tall/short) is not *Mary*, but *se* (back, spine)):

(30) A: Mary-wa John-yori se-ga hikui desu ka?
 Mary-*wa* John-than back-*ga* low be *qu*
 'Is Mary shorter than John?'

- B: *lie, Mary-wa totemo se-ga takai desu yo.*
no Mary-wa very back-ga tall be prt
 'No, Mary is very tall.'

The focus of the question and the answer is the predicate, and does not include the *ga*-marked subject *se* (back). Since this is not marked with *wa* it cannot be the link; since it is not part of the focus it must be the tail. This would of course not be possible if *ga* were in fact a focus marker.

3.3.2 Embedded clauses

Thus far we have been considering matrix clauses only, and we have seen that it is possible to account for the interpretations of *ga*-marked subjects without supposing that *ga* is a focus marker. Now we need to address the questions of why the pattern of interpretations in embedded clauses is so different.

In order to answer this question we have to assume that I-Structure representations are fundamentally different from S-Structure representations, in the following way. At S-Structure the largest non-recursive structure is a CP: a sentence containing embedded clauses is necessarily recursive. The largest non-recursive I-Structure domain, however, must be able to be larger than a single CP.¹⁰ Maximally it may correspond to a matrix clause together with all its embedded clauses and their embedded clauses, and so on. It follows that while this I-Structure domain must have a focus and a link (the latter, as we have seen, need not be overtly present in the syntax but must at least be recoverable from context) this is not true of all the embedded clauses. For example, in each of the exchanges in (31) and (32) the entire complement clause (*that John is dishonest* and *John-ga syooziki-de nai*, respectively) is part of the link:

- (31) A: What do you think of the allegations that John is a liar?
 B: [_L The allegations that John is dishonest] [_F are FALSE].
- (32) A: *John-ga usotuki-da to-yuu hinan-o doo omou?*
John-ga liar-be that allegation-acc how think
 'What do you think of the allegations that John is a liar?'
 B: *John-ga syooziki-de nai to-yuu hinan-wa ayamari-da.*
John-ga honest-be not that allegation-wa falsehood-be
 '[_L The allegations that John is not honest] are [_F FALSE].'

The focus of B's response in (32) is *ayamari-da* (be false), and the link is *John-ga syooziki-de nai hinan* (the allegations that John is not honest); there is no reason to suppose that the complement clause embedded in the subject NP contains either focus or link. Thus there is nothing forcing a reading of focus on the subject of the embedded clause, which therefore gets a "neutral" reading.¹¹ Note the contrast with (33), in which the same sentence appears as a matrix clause:

¹⁰For an opposing point of view, see Partee 1991, pp. 177-178.

¹¹Note that the interpretation given to (32B) is the one associated with the equivalent English sentence where there the pitch accent is *not* on the embedded subject NP.

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- (33) John-ga syooziki-de nai.
 John-*ga* honest-be not
 '[_F JOHN] isn't honest.'

Because this is a matrix clause, it must contain a focus. As discussed before, it must also be possible to file the information constituting the focus on an appropriate file card: that is to say, if a link is not overtly present, one must be recoverable from the context. Since the link is not *John* (or it would have to be marked by *wa*), and there is no event argument present to act as a link (since *syooziki-de nai* is an individual-level predicate), without an appropriate context the best candidate for a link is the predicate, leaving *John* as the only remaining possibility for the focus.

The example in (32) shows that a *ga*-marked subject need not be interpreted as focused when it is embedded inside a link; it is of course also possible to embed a clause with a *ga*-marked subject inside the focus. Consider example (34):

- (34) A: Doo sitara anata-no ki-ga kawaru no ka?
 how you-*gen* mind-*ga* change *nmz qu*
 'Under what circumstances would you change your mind?'
 B: John-ga kasikokattara.
 John-*ga* smart-*cond*
 '(I would change my mind) [_F if John was smart].'

Here the focus of B's response—the part that carries new information—is the entire *if*-clause. Note that in the equivalent sentence in English, pitch accent assignment to the subject of the embedded clause gives rise to a narrow focus interpretation:

- (35) I'd change my mind if [_F JOHN] was smart.

The impossibility of a wider focus reading indicates that focus cannot project from this position; hence, if we wish to maintain the theoretically attractive position that basic principles of focus projection do not vary from language to language, we must conclude that *John-ga* is not focused in (34).

4 Conclusion

The problem addressed in this paper is the partial overlap in the interpretation of *ga*-marked subjects in Japanese and accented subjects in English. I have argued that the proposal that *ga* is a focus marker can explain why there is an overlap, but not why it is only partial. Instead, I have proposed that the crucial fact about *ga*-marked subjects is that they are not LINKS. Since this leaves them free to be focused (and in some cases this interpretation will be forced) there is an overlap with the interpretation of accented subjects in English. But since *ga*-marked subjects can, in the general case, also be neither link nor focus, the overlap with accented subjects in English (which are always focused) is only partial.

An important general point that emerges from this analysis is that we need the tripartite structure proposed in Vallduví 1992 (see also Halliday 1967, Dahl 1974, Välimaa-Blum 1988): we need to distinguish not only between focus and non-focus,

but also between link and non-link. As we have seen, *ga* cannot be a focus marker (or we cannot explain why it is not so interpreted in *e.g.* embedded clauses). But in order to explain why, in some matrix clauses with individual-level predicates, *ga*-marked subjects *are* interpreted as being in focus, we have to appeal to the idea that a *ga*-marked subject cannot be a link. This means that we need to include link, focus, and non-link, non-focus, in our I-Structure representations or their equivalent; neither a topic/comment, nor a focus/non-focus articulation is sufficient on its own.

Appendix

Since, as I have argued, *ga* is not a focus-marker, it is to be expected that *ga*-marked subjects of individual-level predicates need not be interpreted as being in narrow focus; (28)—(32) and (34) are some examples. Assuming, however, that pitch accent assignment in English is the realization of focus in this language, the proposal of Diesing 1988 predicts that accented subjects of individual-level predicates must be interpreted as being in narrow focus in English. In some cases this appears to be so (as in the contrast between the possible wide focus in the Japanese examples in (12), (13) and the obligatorily narrow focus in the English examples in (14), (15)).

However, it emerges that pitch accent assignment to the subject of an individual-level predicate in English does not always result in narrow focus:

- (36) A: What's the problem with your new job?
 B: [_F My OFFICE is small], [_F the PAY is low], and [_F my BOSS is horrible].
- (37) A: So what do you like best about New Haven?
 B: [_F The BUILDINGS are great.]

Here, although the subjects are focused and the predicates unequivocally individual-level, wide-focus readings are available as long as there is a link recoverable from the context, so that the predicate itself does not have to be interpreted as the link.

As this suggests, focus projection from the subject is not determined uniquely by the predicate. Consider further the following exchange, in which A and B are at a party; A knows (and B is aware that A knows) that B lives in New Haven, and B has to drive to get home:

- (38) A: Why do you want to leave early?
 B: # [_F NEW HAVEN]'s dangerous.

Pitch accent assignment to the subject, as indicated here, is extremely awkward. In the same context, however, (39) allows a wide focus reading:

- (39) A: Why do you want to leave early?
 B: [_F The ROADS are dangerous].

The explanation for this must have to do with how information is filed in the knowledge store. If a sentence is to be interpreted as all-focus, some link has to be recoverable from the context. As discussed above, in the case of a stage-level predicate the event argument can be the link. But there is no event argument in

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the case of an individual-level predicate. The problem with interpreting a sentence like (38B) is that it is hard to come up with a link under which to file information like *New Haven is dangerous*. Why should this be so? It suggests that the link for a sentence like (38B) cannot in fact be *reasons why B doesn't want to go home late*, but must be some *entity* evoked by the discourse, like *route*. If this were the case, then the distinction between (38B) and (39B) would be that the (purported) fact that New Haven is dangerous is not a fact "about" the route, while the fact that the roads *on the route* are dangerous is.

One reason to think that this proposal is on the right track is that there is a very interesting parallel with Japanese constructions with overt topics. Kuno 1973, pp. 69–76, states that a sentence like (40) allows only an "exhaustive listing" interpretation (narrow focus, in our terms) of the subject *ki* (trees) if *kirei* (pretty) is taken to denote a permanent state.¹²

- (40) Ki-ga kirei desu.
trees-*ga* pretty be
'[_F (The) trees] are pretty.'

However, Kuno points out, if a suitable *wa*-phrase (a link, in our terms) is provided, a "neutral description" (wide focus) interpretation is possible:

- (41) Yama-wa ki-ga kirei desu.
mountains-*wa* trees-*ga* pretty be
'The mountains are such that [_F (their) trees are pretty].'

This is exactly what I have hypothesized is going on in an example like (39) in English, except that in the Japanese example the link is overt.

Kuno further points out that supplying a *wa*-phrase does not invariably allow a *ga*-marked subject of an individual-level predicate to get a neutral description interpretation. For example, (42a) allows a neutral interpretation of *dansei* (boys); but (42b) allows only the exhaustive listing (narrow focus) interpretation of *John*:

- (42) a. Kono kurasu-wa dansei-ga yoku dekiru.
this class-*wa* males-*ga* well can
'Speaking of this class, [_F the boys do well].'
b. Kono kurasu-wa John-ga yoku dekiru.
this class-*wa* John-*ga* well can
'Speaking of this class, [_F John] does well.'

Notice how this contrast parallels that between (39B) and (38B). And while Kuno does not put it this way, subsequent authors have argued that the distinction arises because sentences like *John-ga yoku dekiru* (John does well) cannot be construed as being information "about" the *wa*-phrase (Shirai 1986 and references therein). This is parallel to the explanation I have offered for the English pattern in (38), (39).

Now that we have seen that projection of focus from the subject is not determined exclusively by the stage-level/individual-level status of the predicate we can reassess the type of contrast Diesing pointed out for examples like (43):

¹²The focus annotations, and some other details of the translations in this and following examples are my interpretations of Kuno's description; they are not in his text.

- (43) a. [_FTICKETS] are expensive.
 b. [_FTICKETS are available].

Note that despite the favored reading of narrow focus in (43a), it is easy to set up a context where focus projects from the subject of *expensive*:

- (44) A: Why aren't you going to the concert?
 B: [_F The TICKETS are expensive].

The contrast in (43) arises from the stage-level/individual-level contrast in a more indirect way. As shown by Diesing 1988, 1992, bare plural subjects of individual-level predicates can only receive a generic interpretation, while bare plural subjects of stage-level predicates may receive either a generic or an existential interpretation. The failure of projection in (43a) is to be attributed to the obligatorily generic interpretation of the subject: this makes it hard to consider this sentence to be "about" anything else (that is, to have a link recovered from context).

While this issue requires detailed study, these data demonstrate clearly that focus projection has more to do with the information structure of the entire utterance than it has to do with the lexical properties of individual words.

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