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"Shells, Yolks, and Scrambled E.g.s"*

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1. Background and Proposal

Several important works appeared during 1980s, which provided us with a fresh view of ditransitive predicates, pointing out that such predicates in fact do not select double objects but a sentential complement, and hence an extra subject. For instance, Kayne (1981) proposed to analyze ditransitives as a type of causative predicate selecting a sentential complement with a phonetically empty abstract predicate denoting possession. Larson (1988), on the other hand, advocated regarding Dative Shift as passivization with the analysis of the oblique dative construction as active and the double object construction as passive. Finally, Aoun and Li (1989) attempted to reconcile both these proposals, claiming that the oblique dative construction be derived from the double object construction, a conclusion similar to that drawn by Dryer (1986).

In this paper, I will adopt and slightly revise Aoun and Li's analysis, and explore its consequences in the syntactic investigation of Japanese. In the rest of Section 1, I will provide a quick summary of the major theoretical assumptions adopted in this paper, and then spell out the details of the proposed analysis, comparing it with Larson's "VP-Shell analysis". Then in Section 2, I will provide motivation for adopting the proposed analysis over the VP-shell analysis for English. Finally in Section 3, I will propose and argue that the so-called free word order in Japanese should be at least partially reduced to the proposed analysis of the dative-double object alternation.¹

There are two hypotheses that I will make crucial use of. First, following Chomsky's (1992) minimalist hypothesis, I will adopt the notion of "convergence of derivation" as summarized in (1):

- (1) A derivation D converges if it yields a legitimate pair of formal representations (π , λ) in the following manner:
 - a. π is legitimate in the PF component.
 - b. λ is legitimate in the LF component.

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¹ The present work should be regarded as an initial and non-comprehensive sketch of the proposed analyses of the dative-double object alternation. I provide further arguments for, and the theoretical and empirical implications of, the proposed approach in Kitagawa (In preparation).

Then, crucially departing from Chomsky's position, I will adopt a Constraint informally stated in (2):

- (2) **Markedness due to PF-LF Mismatch:** (Kitagawa (1990))

If the pairing of π and λ provides contradictory instructions for the two performance systems (auditory-perceptual system and conceptual-intentional system), markedness is imposed on the derivation yielding the pair (π, λ) .

I will also adopt a particular version of the Internal Subject Hypothesis (ISH), which may be distinguished from other versions in two respects. First, this version of ISH is regarded crucially as a hypothesis concerning the syntactic representations at LF rather than at D-structure, and requires that the external argument of a predicate is θ -saturated within the maximal projection of the predicate at LF, as illustrated in (3): (cf. Kitagawa (1986), Koopman and Sportiche (1986), Kuroda (1988), et al.)

- (3) LF: [VP External arg [V' Internal arg V⁰]]; where External arg may be a trace.

Second, as illustrated in (4), it is combined with the head-directionality parameter and analyzes English as having VOS rather than SVO LF-order within a VP:

- (4) LF: We₁ [VP [V' love Amherst] t₁]

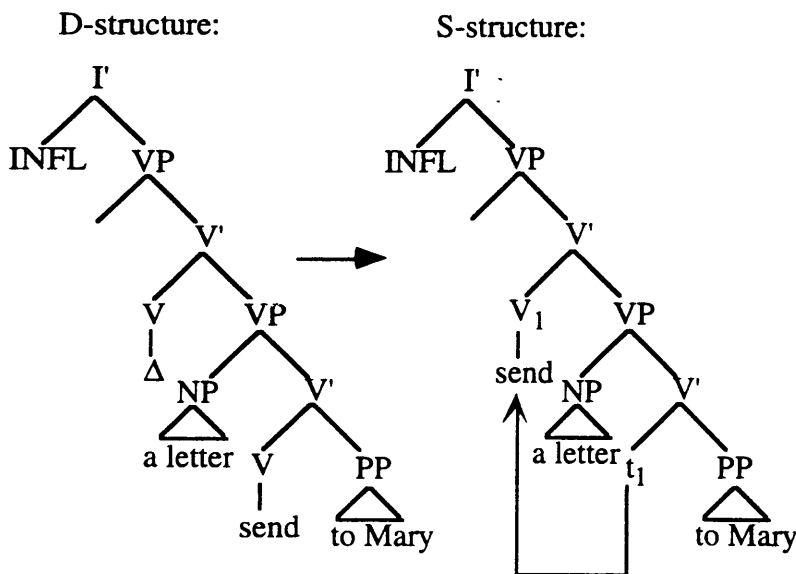
Kitagawa (1989) extends Belletti's (1988) 'Case for unaccusative' to unergative verbs, and argues for this hypothesis, pointing out that the post-verbal subject in English may surface overtly in the sentential extraposition and presentational there constructions as in (5), because the subject does not require Case in the former and it can receive Case VP-internally in the latter:

- (5) a. It [VP proves his innocence **that he has returned**].
 b. There [VP walked **three men** into the room].

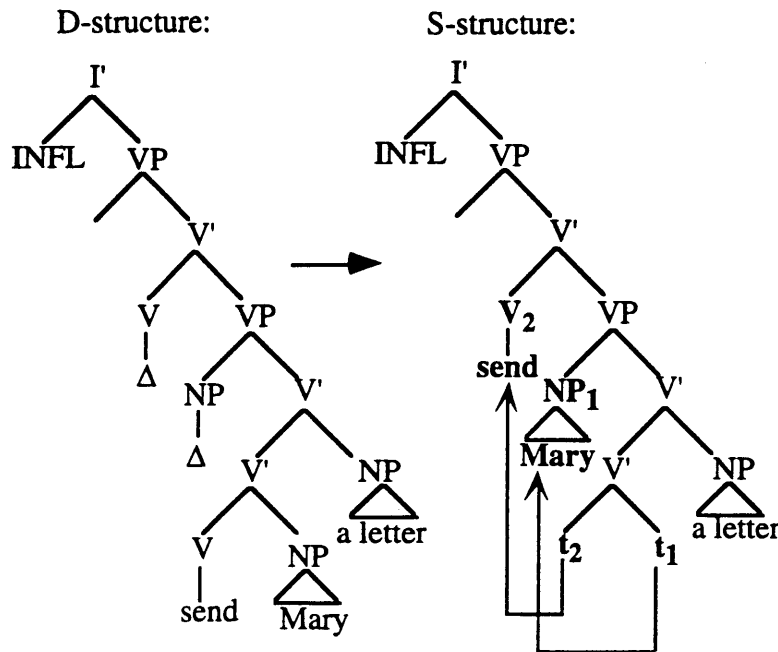
Let us now briefly review Larson's VP-shell analysis of dative-double object alternation, referring of the diagram (6):

- (6) The "VP-Shell" Analysis: (Larson (1988))

a. ODC = Active:



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b. DOC = Passive:

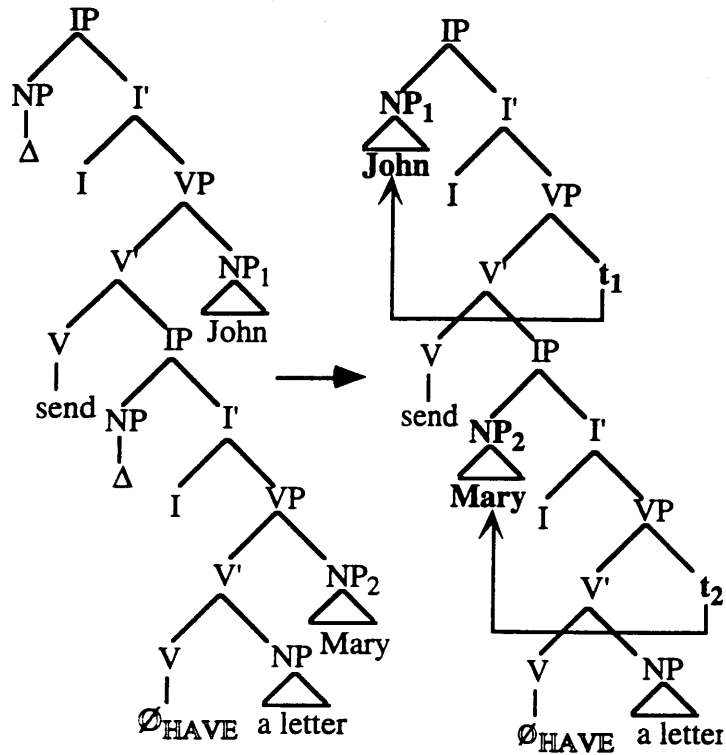
Some of the major features of this analysis is summarized in (7):

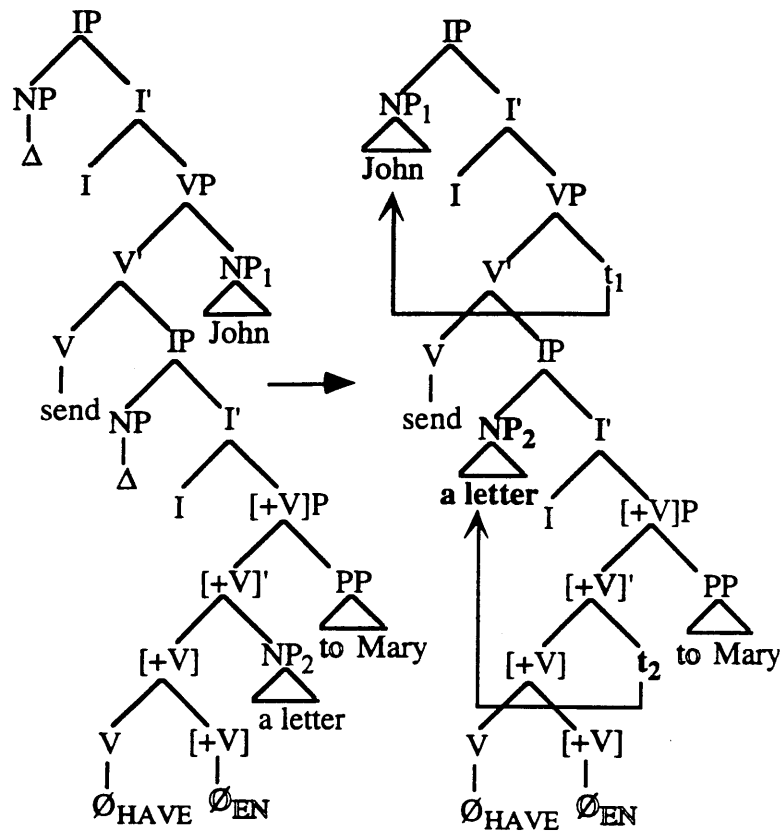
- (7) a. The Oblique Dative Construction (ODC) in (6a) is the active:
- (i) It involves a 'VP shell' headed by an empty V, which selects a VP.
 - (ii) The direct object a letter is the internal subject of the embedded VP.
 - (iii) The verb send and the indirect object to Mary make up an underlying constituent V'.
 - (iv) The verb send moves up to the empty V position in order to receive tense and agreement from INFL as well as to assign Case to the direct object a letter.
- b. The Double Object Construction (DOC) in (6b) is the passive:
- (i) It involves a 'VP shell' construction identical to that in ODC.
 - (ii) Due to dethematization, the subordinate subject a letter is realized as a V' adjunct.
 - (iii) Since the Inherent Case of the subordinate V send is absorbed, the indirect object Mary must move to a Case position.
 - (iv) The raised verb send inherits Structural Case from INFL and Case-marks the indirect object Mary.
 - (v) The subordinate V' send Mary is realized as a complex V and assigns Inherent Case originally associated with send.

The analysis I would like to support, the "Yolked VP" Analysis, is diagrammed in (8), and its major features are summarized in (9):

(8) The "Yolked VP" Analysis (English):

a. DOC = Active:



b. **ODC = Passive:**

- (9) a. The Double Object Construction (DOC) in (8a) is the active.
- (i) Ditransitive verbs are a type of causative verbs selecting an IP. (Kayne (Ibid.))
 - (ii) The complement IP contains a VP headed by an empty V (\emptyset_{HAVE}), which denotes an abstract (rather than concrete) notion of possession, and assigns Case to the direct object a letter.
 - (iii) The post-verbal VP-internal subjects John, and Mary move to a Case position in both matrix and subordinate clauses, the latter of which involves exceptional Case marking by the matrix V send.
 - (iv) The sentence yields an interpretation like "John caused an event in which Mary obtains a letter."
- b. The Oblique Dative Construction (ODC) in (8b) is the passive. (Aoun and Li (Ibid.))
- (i) It involves the causative construction as in DOC, except that the subordinate VP is headed by a passivized empty predicate ($\emptyset_{\text{HAVE}}\text{-}\emptyset_{\text{EN}}$)
 - (ii) The Absorb Case effect is induced by the empty passive morpheme \emptyset_{EN} , which forces the direct object a letter to move to a Case position.
 - (iii) The indirect object, now analyzed as the post-verbal VP-internal subject, can be Case-marked by to, a Case marker for external argument licensed by the empty passive morpheme \emptyset_{EN} , which is comparable to by in the regular passives.
 - (v) The sentence yields an interpretation like "John caused an event in which a letter is obtained by Mary."

In a sense, the proposed analysis represents a more specialized case of a causative construction as in (10):

- (10) a. Active-Causative: Please have [_{IP} the mechanic₁ [_{VP} fix *(the car) t₁]]
 b. Passive-Causative: Please have [_{IP} the car₁ [_{VP} fixed t₁ (by the mechanic)]]

Since the proposed analysis effectively eliminates an appeal to "VP-shell" by providing substance to its empty verb, let me pick up on the same metaphor and refer to this analysis as "Yolked VP" Analysis, for ease of reference. One crucial difference between the two analyses I would like to pay attention to is that, in the VP-shell analysis in (6), the direct object and indirect object are analyzed as being hierarchically reordered in the course of the syntactic derivation in the Double Object Construction in (6b) rather than in the Oblique Dative Construction in (6a). In the Yolked VP Analysis in (8), on the other hand, the analysis is totally opposite — it is the Oblique Dative Construction in (8b) that is analyzed as involving such reordering of the direct and indirect objects. The Double Object Construction in (8a) does not involve any such reordering. Keeping this distinction between the two analyses in mind, let me turn to Section 2, and offer evidence in support of the Yolked VP Analysis.

2.. Arguments for the "Yolked VP" Analysis in English:

2.1 "Implicit" Argument and Control

First, we all know that the external argument of the passivized verb need not always be expressed overtly, as illustrated by (11a):

- (11) a. Passive: JFK was assassinated (by the CIA).
 b. DOC: John sent Mary *(a letter).
 c. ODC: John sent a letter (to Mary).

Next, note the contrast between (11b) and (11c). This contrast typically shows that, save a few lexically controlled cases, it is the indirect object in ODC rather than the direct object in DOC that need not always be overtly expressed. (See also the contrast in (10) above in the causative construction.)

Moreover, it is well-known that the *by*-agent in passive can act as a controller even when it is not overtly expressed, as illustrated by (12a):

- (12) a. Passive: The boat was sunk (by them₁) [PRO₁ to collect the insurance money]
 b. ODC: The commander sent the order (to the platoon₁) [PRO₁ to retreat immediately]

As illustrated by (12b), the indirect object in the Oblique Dative Construction can also act as a controller even when it is not overtly expressed (Rizzi (1986)). Both these observations are naturally expected in the "Yolked VP" Analysis, in which ODC rather than DOC is regarded as a passive construction. They remain unaccounted for, on the other hand, if we adopt the "VP-shell" Analysis, in which DOC rather than ODC is analyzed as passive.

2.2 Weak Crossover

Second, as illustrated in (13a) below, the Double Object Construction exhibits a Weak Crossover effect when a bound variable interpretation is intended between a pronominal contained in the indirect object and a quantified expression appearing as a direct object:

- (13) At the time of release from jail:
 a. DOC: *The police do not always give back [its₁ owner] [every wallet]₁.
 b. ODC: (?)The police do not always give back [his₁ (own) wallet] [to every prisoner]₁.

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A similar interpretation in the Oblique Dative Construction as in (13b), on the other hand, is much easier to obtain, though it may not be perfect. The contrast here follows naturally if we adopt the "Yolked VP" Analysis. First, the Double Object Construction in (13a) is expected to exhibit a Weak Crossover violation, since the two arguments in question are in a hierarchical relation to induce such violation throughout its syntactic derivation. The Oblique Dative Construction in (13b), which is a passive, on the other hand, involves hierarchical reordering of the two arguments, and hence is expected to exhibit a reconstruction effect and to neutralize the Weak Crossover violation. Note that the "VP-shell" Analysis makes the completely opposite, and incorrect, prediction.

2.3 Binding

Third, the Oblique Dative Construction exhibits a range of facts concerning anaphor binding as in (14):

- (14) a. I presented [NP₁ Mary] to herself. (Larson (1988))
 b. *I presented [NP₁ herself] to Mary. (Ibid.)
 c. ?John gave [each other₁'s pictures] to the kids₁. (cf. Burzio (1981))

The facts in (14), in fact, are completely parallel to those in a passive construction as illustrated in (15):

- (15) a. [John and Mary]₁ were offended t₁ by each other₁.
 b. *Each other₁ were offended t₁ by [John and Mary]₁.
 c. ?[Each other₁'s pictures]₂ were destroyed t₂ by [John and Mary]₁

Again, the "Yolked VP" Analysis as in (14) below will allow us to assimilate the ODC paradigm in (14) to the passive paradigm in (15) by providing us with an identical account for both paradigms:

- (14') a. LF: I presented [IP Mary₁ [[Ø_{HAVE}-Ø_{EN} t₁] to herself]]
 b. LF: *I presented [IP herself₁ [[Ø_{HAVE}-Ø_{EN} t₁] to Mary]]
 c. LF: ?John gave [IP [each other₁'s pictures]₂ [[Ø_{HAVE}-Ø_{EN} t₂] to the kids₁.]

First, in both (14'a) and (15a), the antecedent (= the internal argument) has hierarchically moved across, and hence c-commands, the anaphor (= the external argument) at LF. These cases, therefore, yield successful anaphor binding. In (14'b) and (15b), on the other hand, the hierarchical relation between the anaphor and its antecedent at LF is reversed, and hence violates the Condition C (or D) of the Binding Theory. Finally, in (14c) and (15c), even if the anaphor is not c-commanded by its antecedent at surface, a reconstruction effect is induced at LF due to the application of the syntactic movement of the internal argument. Anaphor binding, therefore, becomes successful at LF, with the slight awkwardness often detected in the reconstruction effect induced by NP movement (cf. Belletti and Rizzi (1988)). Note again that, under the "VP-shell" Analysis, in which NP movement takes place in DOC rather than ODC, the grammaticality of the ODC in (14c) as well as its similarity to the passive in (15c) remains mysterious.

2.4 Q-scope

Larson (1990, 604-605) reports but does not account for observations made by Dave Lebeaux concerning the scope interpretation in ODC and DOC. As illustrated in (16a) below, a pair of quantified expressions like one and every appearing in this order exhibits rather clear scope ambiguity in ODC, permitting either expression to take scope over the other. It is quite difficult, on the other hand, to interpret every appearing in the DOC construction in (16b) as taking scope over one:

- (16) a. ODC: The teacher assigned [one problem] [to every student]. (Ambiguous)
 b. DOC: The teacher assigned [one student] [every problem]. (ONE > ∀ / ?*∀ > ONE)

Aoun and Li (1989, 166-167) also report a similar contrast with the examples in (17):

- (17) a. ODC: Mary gave [some book] [to everyone]. (Ambiguous)
 b. DOC: Mary gave [someone] [every book] ($\exists > \forall / ?*\forall > \exists$)

I believe that these facts will further support the "Yolked VP" Analysis, provided that we carefully review and untangle certain complications involved in the scope interpretation of quantified expressions.

2.4.1 Word order and Q-scope in Japanese

In the course of arguing for the movement analysis of free word order phenomena in Japanese, Kuroda (1970) and Hoji (1985) compared the scope interaction in the two Japanese sentences like (18 a-b) below, and concluded that hierarchical reordering of quantified phrases due to the application of Scrambling gives rise to scope ambiguity, while the lack of such an operation preserves the single scope relation reflecting the relative hierarchical relation of the two expressions at the surface. So, (18a) easily permits only the reading in which the quantified subject takes scope over the quantified object, while the scrambled sentence in (18b) permits either quantified expression to take the scope over the other with ease:²

- (18) a. Unscrambled: Dareka-ga daremo-o damasita
 (someone-nom everyone-acc deceived)
 — $ok\exists > \forall / ?*\forall > \exists$ (without focus on dareka)
 b. Scrambled: Dareka₁-o daremo-ga t₁ damasita
 (someone₁-acc everyone-nom t₁ deceived)
 — Ambiguous

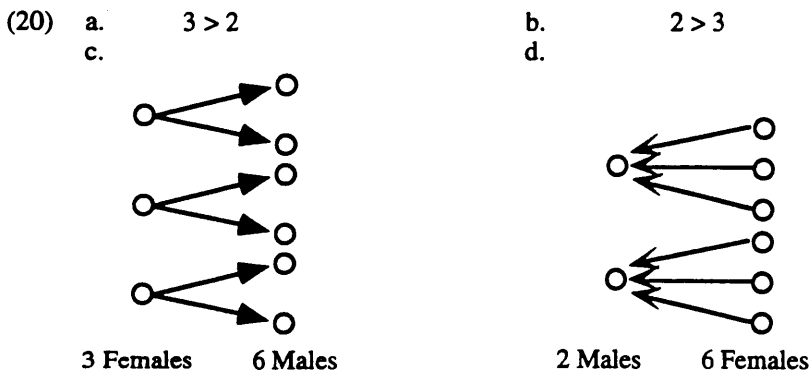
Basically the same contrast obtains when the sentence involves more than one numeral quantifiers as in (19 a-b):

- (19) a. Unscrambled: [sannin no zyosee-ga] [hutari no dansee-o] syootaisita
 ([three females-nom] [two males-acc] invited)
 — $ok3 > 2$ (= 3 Females 6 Males reading)
 — $?*2 > 3$ (= 2 Males 6 Females reading) without focus on 3
 b. Scrambled: [hutari no dansee-o]₁ [sannin no zyosee-ga] t₁ syootaisita
 ([two males-acc]₁ [three females-nom] t₁ invited)
 — $ok2 > 3$ (= 2 Males 6 Females reading)
 — $ok3 > 2$ (= 6 Males 3 Females reading)

The unscrambled sentence (19a) permits the scope interpretation as in (20a) below, which allows us to imagine a situation of three females each inviting two males, totalling six males, as illustrated in (20c). It is noticeably difficult, however, to obtain, at least without placing a focus on sannin 'three people,' the opposite scope relation in (20b), which will permit us to imagine a situation of two males each being invited by three females, totalling six females as depicted in (20d):

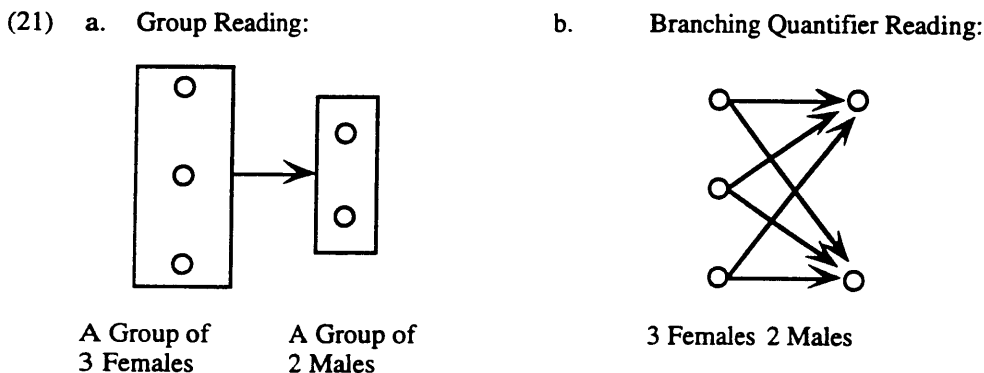
² The scope judgments here involve simplification. See Kitagawa (1990) for discussion. I also take up this issue in Kitagawa (In preparation).

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The scrambled sentence (19b), on the other hand, permits both scope interpretations in (20 a-b) without much trouble. We thus can imagine a situation involving six males as described in (20c) or one involving six females as described in (20d) with equal ease.

We may in fact obtain from the unscrambled sentence in (19a) the readings which permit us to imagine the involvement of only two males. Such additional readings, however, do not necessarily arise from additional scope interaction of quantifiers, as pointed out by Kuroda (1993). One such reading is the group reading as in (21a), and another is the branching quantifier reading as in (21b). Note that the situation compatible with the branching quantifier reading as described in (21b) is also compatible with the scope relation in (20a) as a subcase of the situation described in (20c) when the three females happen to have invited the same two males.



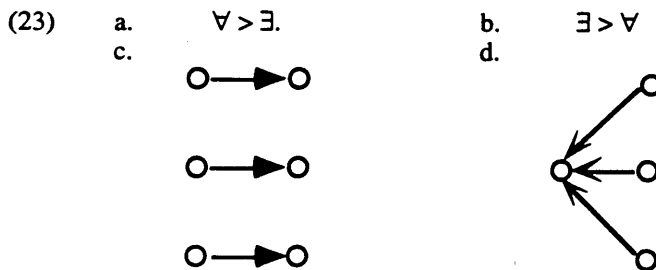
Let us here adopt Kuroda's and Hoji's generalization that the hierarchical reordering of quantified expressions yields scope ambiguity while absence of such reordering prohibits scope ambiguity in Japanese.

2.4.2 Word order and Q-scope in English

A relevant question which naturally arises here is if this generalization is only peculiar to Japanese, or it is of universal nature, or it is at least extendable to other languages. In English, for instance, quantified expressions are often believed to scopally interact rather freely based upon the ambiguous readings reported for the sentences as in (22):

- (22) a. **Everyone** loves **someone**. (Ambiguous)
- b. [**Every student**] solved [**two problems**]. (Ambiguous)

The ambiguity people detect in these sentences, however, will not necessarily preclude us from extending the generalization in question to English, since the reported intuition in (22a), for example, may arise not from the scope interaction but from the entailment relation between the two scope relations in (23a) and (23b), which typically permit us to imagine the situations described in (23c) and (23d), respectively:



Note, however, that the situation in (23d) is also compatible with the scope relation in (23a) as a subcase of the situation in (23c) when everyone happens to love one identical person. Thus, just as the availability of the branching quantifier reading in (21b) for the sentence (19a) above did not demonstrate the presence of any additional scope interaction, the availability of the reading that permits us to imagine the situation in (23d) does not necessarily demonstrate the presence of the scope relation in (23b). As a matter of fact, when we eliminate such entailment relation by reversing the hierarchical order of the quantified expression as in (24 a-b) below, many speakers find it either impossible or at least noticeably more difficult to interpret the sentence to exhibit the scope relation that does not coincide with the surface hierarchical relation of the quantified expressions:

- (24) a. Someone loves everyone. $(\exists > \forall / ?\forall > \exists)$
 b. Two students in my class solved every problem. $(TWO > \forall / ??\forall > TWO)$

Of particular interest to us here is the fact that virtually all speakers I have checked with reported that the same sentences come to exhibit scope ambiguity when the quantified subject is focused, as illustrated in (25), where a focused item is indicated by bold face capitals:

- (25) a. **SOMEONE** loves everyone. (Ambiguous)
 b. **TWO** students in my class solved every problem. (Ambiguous)

An equally interesting observation brought into my attention by Barry Schein (p.c.) is that focusing of an item other than the quantified subject in the same sentences rather completely eliminates scope ambiguity, and forces the scope interpretation reflecting the surface order of the quantified elements, as illustrated in (26):

- (26) a. Someone **LOVES** everyone.
 — $\exists > \forall / * \forall > \exists$
 b. Two students in my class **IMMEDIATELY** solved every problem.
 — $TWO > \forall / * \forall > TWO$

The correctness of this observation can be further confirmed by the awkwardness of the discourses in (27) and (28b) below, which contain the sentences (26a) and (26b), respectively. Note that both discourses require the scope interpretations that are prohibited in the sentences (26 a-b), which presumably induces the awkwardness, as pointed out to me by Chris Barker (p.c.):

- (27) #We all know that everyone is liked by at least one person. But in fact we can say something a little bit stronger, since [someone **LOVES** everyone].

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- (28) [Statement by a high school teacher] Some students are good at solving certain type of problems, and others are good at solving certain other type of problems. In yesterday's exam:
- ^{ok}Only **TWO** students immediately solved every problem.
 - #Only two students **IMMEDIATELY** solved every problem.

Note especially the contrast between (28a) and (28b), which arises solely from the difference in focusing.

Finally, let us examine scope ambiguity in sentences involving syntactic movement. Topicalization as in (29a) and passivization as in (29b) below permit either of the two quantified expressions, the moved one or the one that is crossed over, to take scope over the other, as indicated:

- (29) a. [Two problems from this textbook]₁, I asked three students to solve t₁ for me.
 — ^{ok}₂ > 3 (= 2 Problems 6 Students reading)
 — ^{ok}₃ > 2 (= 3 Students 6 Problems reading)
- b. [Two problems in this textbook]₁ have been solved t₁ by three students.
 — ^{ok}₂ > 3 (= 2 Problems 6 Students reading)
 — ^{ok}₃ > 2 (= 3 Students 6 Problems reading)

The contrast between (30) and (31) below also demonstrates that reordering of quantified elements by the application of Raising induces scope ambiguity:

- (30) a. It seems to **someone** [that **everyone on this list** is incompetent].
 b. It is unlikely to occur to **someone** [that **everyone on this list** is incompetent].
 — $\exists > \forall / * \forall > \exists$
- (31) a. **Someone**₁ seems to **everyone** [t₁ to be an ideal candidate].
 b. **Someone**₁ is expected t₁ to appear to **everyone** [t₁ to be an ideal candidate].
 — $\exists > \forall / \forall > \exists$

The contrast in (32) below also suggests that Raising applied in (31 a-b) above indeed has altered the hierarchical relation between the two quantified expressions:

- (32) a. *It seems to **him**₁ that **John**₁ is a genius.
 b. It seems to [**his**₁ sister] that **John**₁ is a genius.

Note that we can reduce the contrast in (32) to the Condition C (or D) of the Binding Theory when we assume that the subordinate subject is c-commanded by the NP-complement of the preposition to.

At this point, I would like to propose that the fuzziness and/or variations speakers report concerning the scope ambiguity of the sentences in (24) above arise(s) from the existence of the two possible analyses of each sentence, which may be quite unconsciously and randomly induced by the speakers — one involving focusing of the quantified subject, and the other not involving such focusing. When we can disambiguate the same sentences either by assigning clear focus stress on the quantified subject as in (25), or by suppressing such focusing as in (26) by shifting its location, on the other hand, we can eliminate fuzziness and/or variations of scope interpretation, as we have just observed.³ If this account is on the right track, we may now consider that no scope ambiguity is involved in the sentences in (25) when we succeed in abstracting away the focusing factors. Then, when we combine this result

³ Whether multiple foci in a single utterance is absolutely prohibited or not is irrelevant here. As long as focusing of an item other than the quantified subject discourages the speaker from further focus the latter item, the intended effect should surface.

with our observation concerning the scope interpretation induced by syntactic movement as in (31), it seems to naturally lead us to the following conclusion — that the generalization concerning the correlation between the application of syntactic movement and scope ambiguity reported on Japanese can be extended to English. That is, the hierarchical reordering of quantified expressions yields scope ambiguity while absence of such reordering prohibits scope ambiguity even in English.

When we return to Lebeaux's observation concerning the scope interpretation in the Oblique Dative Construction and the Double Object Construction (repeated in (33) below) with this conclusion, we obtain another argument for the "Yolked VP" Analysis of Dative-Double Object alternation:

- (33) a. ODC: The teacher assigned [one problem] [to every student]. (Ambiguous)
 b. DOC: The teacher assigned [one student] [every problem]. (ONE > \forall / ?* \forall > ONE)

Note that we can now ascribe the clear scope ambiguity in the ODC in (33a) to the presence of syntactic reordering due to the application of NP movement in passive, and the absence of such ambiguity in the DOC in (33b) to the absence of such reordering.⁴ The paradigms in (34) and (35) below provide further support of this account:

- (34) a. ODC: The teacher assigned [two problems from this textbook] [to three students].
 — ok₂ > 3 (= 2 Problems 6 Students reading)
 — ok₃ > 2 (= 3 Students 6 Problems reading)
 b. DOC: The teacher assigned [three students] [two problems from this textbook].
 — ok₃ > 2 (= 3 Students 6 Problems reading)
 — ??₂ > 3 (= 2 Problems 6 Students reading)
 c. DOC: The teacher assigned [**THREE** students] [two problems from this textbook].
 — ok₃ > 2 (= 3 Students 6 Problems reading)
 — ok₂ > 3 (= 2 Problems 6 Students reading)
 d. DOC: The teacher **IMMEDIATELY** assigned [three students] [two problems from this textbook].
 — ok₃ > 2 (= 3 Students 6 Problems reading)
 — *₂ > 3 (= 2 Problems 6 Students reading)
- (35) a. ODC: John sent [three kinds of cards] [to two children].
 — ok₃ > 2 (= 3 Kinds of Cards 6 Children reading)
 — ok₂ > 3 (= 2 Children 6 Kinds of Cards reading)
 b. DOC: John sent [two children] [three kinds of cards].
 — ok₂ > 3 (= 2 Children 6 Kinds of Cards reading)
 — ??₃ > 2 (= 3 Kinds of Cards 6 Children reading)
 c. DOC: John sent [**TWO** Children] [three kinds of cards].
 — ok₂ > 3 (= 2 Children 6 Kinds of Cards reading)
 — ok₃ > 2 (= 3 Kinds of Cards 6 Children reading)
 d. DOC: John **IMMEDIATELY** sent [two children] [three kinds of cards].
 — ok₂ > 3 (= 2 Children 6 Kinds of Cards reading)
 — *₃ > 2 (= 3 Kinds of Cards 6 Children reading)

One missing piece in the story here is an account of why and how focusing of items affects scope interpretation, which in fact is true not only in English but also in Japanese. Let me just mention here Kitagawa (1990) as a work that attempts to provide an account for similar facts in Japanese, which I suspect can be extended to English as well in the minimalist framework. I must, however, leave the

⁴ The example like (i) may be "ambiguously" interpreted due to the entailment relation mentioned in the text:

- (i) DOC: The teacher assigned [every student] [one problem].

pursuit of this topic for another occasion.⁵

3. "Yolked VP" Analysis in Japanese

3.1 Background and Proposal

3.1.1 Passive without NP-Movement

Let us now attempt to extend the "Yolked VP" Analysis to Japanese. Before going into the details, however, I will adopt and sketch out a particular analysis of a passive construction in Japanese, which was proposed by K. Hasegawa (1964) and Kuroda (1965, 1979) and recently defended by Kitagawa and Kuroda (1992). In this analysis, the so-called *ni*-direct passive in Japanese, unlike passive in English, is claimed to involve VP-complementation and control of *pro* by a θ -marked matrix subject, rather than to involve a simplex sentence in which NP-movement takes place to a non- θ -position. This analysis is illustrated in (1):

- (1) Taroo₁-ga [VP Sensei-ni *pro*₁ home]-rare-ta
 (Taroo₁-nom [VP Teacher-dat *pro*₁ praise]-PASSIVE-PAST)
 'Taroo was affected by the teacher's praising him.'

As part of the support for the complementation analysis, it has been pointed out that, in a direct passive sentence like (2) below, a subject-oriented adverb like *wazato* 'deliberately' may ambiguously express the intention of the person run over by the car or that of the driver of the approaching car:

- (2) *kare*₁-wa [VP *usiro-kara kita kuruma-ni wazato pro*₁ haner]-are ta
 (he₁-top [VP a-car-which-came-from-behind-dat intentionally *pro*₁ hit]-PASS-PAST)
 'He was deliberately hit by a car which came from behind.'

The absence of NP-movement can be also demonstrated when we observe Weak Crossover violation in the direct passive with an unmarked word order as in (3a) below, and its absence in a similar sentence as in (3b), which exhibits a marked word order induced by the application of Scrambling:

- (3) a. ?*[[e]₂ *pro*₁ nagutta hito₂]₃-ga dare₁-ni *pro*₃ uttaer-are-ta no
 ([[e]₂ *pro*₁ hit person₂]₃-nom who₁ -dat *pro*₃ sue-PASS-PAST Q)
 'By whom was the person that hit him sued?'
 b. [[e]₂ *pro*₁ nagutta hito₂]₃-ni dare₁-ga t₃ *pro*₁ uttaer-are-ta no
 ([[e]₂ *pro*₁ hit person₂]₃-dat who₁ -nom t₃ *pro*₁ sue-PASS-PAST Q)
 ↑
 'Who was sued by the person that he hit?'

By assuming that Scrambling does, while Passive does not, involve reordering of arguments, we correctly predict the contrast in (3), ascribing the absence of the Weak Crossover violation in (3b) to a reconstruction effect. I adopt this "no movement analysis" of Japanese passive for the rest of this paper.

⁵ See Footnote 2. Kitagawa (In preparation) examines other arguments that are alleged to support the "VP-shell" Analysis, and conclude that most of them are either invalid or they also support the "Yolked VP" Analysis equally well.

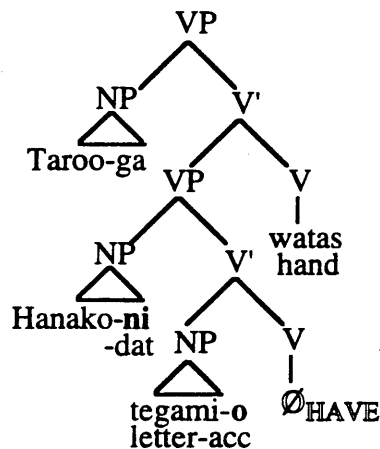
3.2 Free Word Order in Japanese

With this background in mind, let me now turn to the analyses of a ditransitive construction in Japanese, and make the following proposals. First, as illustrated in (4a) below, "Yolked VP" Analysis of the Double Object Construction in English can be directly extended to the ditransitive construction in Japanese, which involves underlying three arguments marked by *ga*, *ni*, and *o*, respectively, in this hierarchical order:

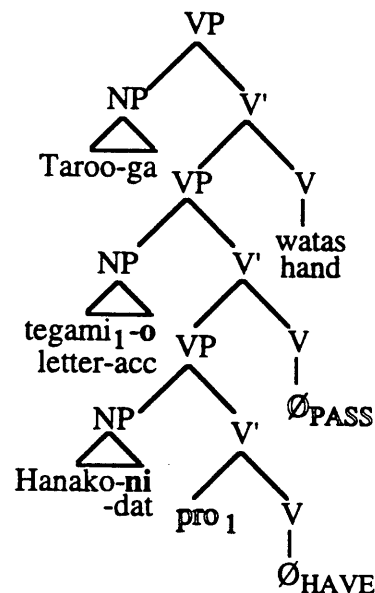
(4) "Yolked VP" Analysis (Japanese):

a. *ni-o* = DOC = Active:

LF:

b. *o-ni* = ODC = Passive:

LF:



The ditransitive verb like *watasu* 'to hand' again is analyzed as a type of causative predicate, this time selecting a VP complement, which contains an internal subject, and is headed by an empty verb denoting abstract possession. The matrix causative verb also assigns Case to the complement subject *Hanako-ni*, while the subordinate empty verb Case-marks the complement object *tegami-o* 'a letter'. Just as in English, the complement of the DOC here is regarded as an active construction.

Furthermore, I would like to propose that, as illustrated in (4b), the sentence containing a sequence of an *o*-marked argument and a *ni*-marked argument in this hierarchical order, which has traditionally been analyzed solely as a scrambled and hence derived version of the Double Object Construction, can be analyzed as the Oblique Dative Construction. Such a construction, in particular, can be analyzed in its LF representation, as involving a causative verb selecting a passive construction headed by a phonetically empty passive morpheme. This passive morpheme, in turn, selects a complement VP headed by another empty verb denoting abstract possession. The matrix causative verb in this construction assigns Accusative Case to the subject of the passive *tegami-o* 'a letter', and the passive morpheme assigns Dative Case to the subject of the most deeply embedded complement *Hanako-ni*. Note crucially, that the ODC in Japanese, unlike its counterpart in English, does not involve NP-movement even under this "Yolked VP" Analysis, since passive in Japanese involves control of *pro* in the complement by a θ -marked matrix subject, rather than NP-movement to a non- θ -position.

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There is no reason, however, to prohibit the application of Scrambling resulting in the reordering of the \bar{n} -marked and \bar{q} -marked arguments in either construction in (4a) and (4b). One interesting consequence of the "Yolked VP" Analysis combined with Scrambling, then, is that both of the accusative-dative $\bar{q}\bar{n}$ construction and the dative-accusative $\bar{n}\bar{q}$ construction can now be ambiguously analyzed as either involving syntactic reordering of arguments by Scrambling, or not involving such an operation. We will examine three empirical phenomena that can be naturally accounted for when we assume that such a state of affairs indeed exists.

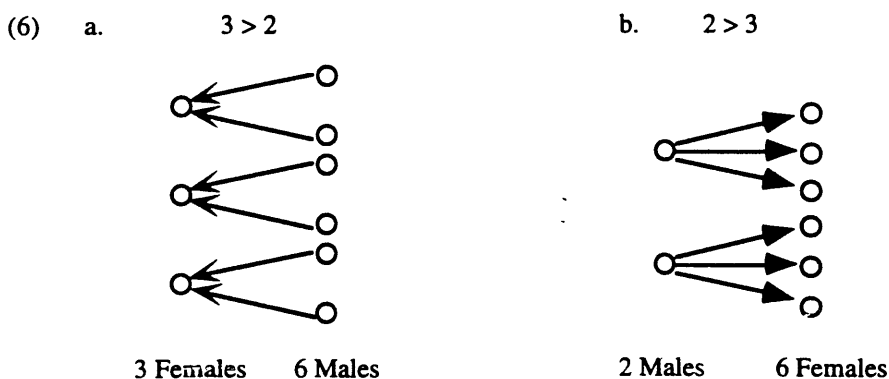
3.2.1 Q-scope

3.2.1.1 Unexpected Scope Ambiguity

First, painstakingly eliminating various factors that often prevent us from detecting pure scope interpretations, Kuroda (1993) reaches the conclusion that not only the $\bar{q}\bar{n}$ construction but also the $\bar{n}\bar{q}$ construction exhibits scope ambiguity, as illustrated in (5):

- (5) a. John-ga [*hutari-no dansei-o*] [*sannin-no zyosee-ni*] syookaisita
(John-nom [two males-acc] [three females-dat] introduced)
'John introduced two males to three females.'
— $ok_2 > 3 / (?)_3 > 2$
- b. John-ga [*sannin-no zyosee-ni*] [*hutari-no dansee-o*] syookaisita
(John-nom [three females-dat] [two males-acc] introduced)
— $ok_3 > 2 / ?_2 > 3$

I agree with Kuroda, since not only (5a) but also (5b) permits us to imagine either a situation like (6a), in which six males are involved, or a situation like (6b), in which six females are involved, perhaps with the markedness relation indicated for each example. Recall here that the group reading or the branching quantifier reading, in which exactly three females and two males are involved, cannot be regarded to represent any additional scope interpretation, for the reasons already discussed:



If this observation is indeed correct, the generalization concerning the application of syntactic reordering and scope ambiguity we have adopted above now forces us to assume that not only the $\bar{q}\bar{n}$ construction but also the $\bar{n}\bar{q}$ construction involves reordering of the arguments, and this in fact is what we expect in our "Yolked VP" Analysis, as pointed out above.

3.2.1.2 Disambiguation with Case Drop

Kuroda (Ibid., 38)) offers another interesting observation concerning scope interpretation. As illustrated in (7) below, when Case Drop of the accusative-marker \bar{q} takes place from the argument adjacent to a ditransitive verb in the Double Object Construction, the scope ambiguity that was

detected in the *ni-o* construction as in (5b) above suddenly and mysteriously disappears. As a result, the sentences permit only the scope relation reflecting the surface word order:

- (7) a. John-ga [sannin no onna ni] [hutari no otoko Ø] syookaisita ze/yo.
 (John-nom [three females-dat][two males-Ø] introduced (let me tell you))
 b. John-ga [sannin no onna ni] [hutari no otoko Ø] syookaisita no sitteta?
 ([John-nom [three females-dat][two males-Ø] introduced that] did-you-know?)
 — ok₃ > 2 (= 3 Females 6 Males reading)
 *2 > 3 (= 2 Males 6 Females reading) (Kuroda (Ibid.))

This rather clear but puzzling effect of Case Drop can be also naturally explained in our analysis when we follow Takezawa (1987) and assume that Case Drop is possible only from an argument adjacency to a Case assigning verb. Under this analysis of Case Drop, we can successfully analyze the sentences in (7) as instances of the DOC as in (4a), where Case Drop has taken place in a position adjacent to the empty verb denoting possession. Since our approach permits us to analyze the surface *ni-o* sequence as having been derived from the *o-ni* sequence in the ODC as in (4b) by the application of Scrambling, the sentences in (7) should also be subject to such an analysis. Crucially, however, if these sentences have been derived with the application of Scrambling in (4b), Case Drop should not have been possible, since the *o*-marked argument is not adjacent to a Case assigning or any kind of verb in this representation. The sentences in (7) therefore are subject to only a single analysis as in (4a), which naturally permits only a single scope relation between the two quantified expressions there. The "Yolked VP" Analysis thus provides us with a straightforward solution to the problem.

3.2.2 WCO and Reconstruction Effect

Finally, close examination of the Weak Crossover Phenomena will also lead us to the support of the "Yolked VP" Analysis.

3.2.2.1 Unexpectedly Mild WCO Violation

As illustrated by the contrast between (8) and (9) below, it has been repeatedly noted in the literature that a Weak Crossover violation is unexpectedly milder in the dative-accusative *ni-o* construction than in the nominative-accusative *ga-o* construction (Hoji (1985, 302, footnote 37), Kuroda (1993, 35)):

- (8) a. *[[e]₁ pro₂ hitome mita hito₁-ga] [dare₂-o] sukininattano? (Hoji (1985, 74))
 ([[e]₁ pro₂ glanced-at person₁-nom] [who₂-acc] fell in love?)
 'Who did the person that had glanced at him/her fall in love with?'
 b. *[azukatte [e]₁ pro₂ todokenikita kodomotati₁-ga] [nani₂-o] tabete kaetta no?
 ([entrusted-and [e]₁ pro₂ delivered children₁-nom] [what₂-acc] ate and went back?)
 'What did the children who delivered it ate?'
 c. *[[e]₁ pro₂ tyoorisita hito₂-ga] [nani₂-o] morituketano?
 ([[e]₁ pro₂ cooked person₂-nom] [what₂-acc] dished up?)
 'What did the person who had cooked it dish up?'
 (9) a. ??kim-wa [[e]₁ pro₂ tukutta kodomo₁-ni] [dono ningyoo₂-o] ageta no? (Hoji (Ibid., 60))
 (you-top [[e]₁ pro₂ made child₁-dat] [which doll₂-acc] gave?)
 'Which doll did you give to the child who made it?'
 b. ??kimi-wa [[e]₁ pro₂ hosigatta hito₁-ni] [nani₂-o] agetano?
 (you-top [[e]₁ pro₂ asked-for person₁ dat] [what₂-acc] gave?)
 'What did you give to the person who had desired it?'

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- c. ??kimi wa [[e]₁ pro₂ aitagatteita hito₁ ni] [dare₂ o] syookaisita no?
 (you-top [[e]₁ pro₂ desired to see person₁-dat] [who₂-acc] introduced?)
 'Who did you introduce to the person who had desired to see him/her?'

3.2.2.2 Unexpectedly Weak Reconstruction Effect

At the same time, as illustrated by the contrast between (10) and (11) below, the reconstruction effect in the *Q-ni* construction has also been reported to be unexpectedly more difficult compared to that in the *ga-Q* construction: (Hoji (Ibid., 74), Kuroda (Ibid.))

- (10) a. ok[pro₁ [e]₂ hitome mita hito₂-o]₃ [dare₁-ga] t₃ sukininattano? (Hoji (Ibid))
 ([pro₁ [e]₂ glanced-at person₂-acc]₃ [who₁-nom] t₃ fell in love?)
 'Who fell in love with the person whom (s)he had glanced at?'
 b. ok[azukatte pro₁ [e]₂ todokenikita ryoori₁-o]₃ [dare₁-ga] t₃ tabete kaetta no?
 ([entrusted-and pro₁ [e]₂ delivered food₁-acc]₃ [what₁-nom] t₃ ate and went back?)
 'Who ate the food that (s)he had delivered?'
 c. ok[pro₁ [e]₂ tyoorisita ryoori₂-o]₃ [dare₁-ga] t₃ morituketano?
 ([pro₁ [e]₂ cooked food₂-acc]₃ [who₁-nom] t₃ dished up?)
 'Who dished up the food that (s)he had cooked?'
- (11) a. ??kim-wa [pro₁ [e]₂ tukutta ningyoo₂-o]₃ [dono ko₁-ni] t₃ ageta no?
 (you-top [pro₁ [e]₂ made doll₂-acc]₃ [which child₁-dat] t₃ gave?)
 'To which child did you give the doll that (s)he had made?'
 b. ??kimi-wa [pro₁ [e]₂ hosigatta mono₂-o]₃ [dare₁-ni] t₃ ageta no?
 (you-top [pro₁ [e]₂ asked-for item₂-acc]₃ [who₁-dat] t₃ gave?)
 'To whom did you give what (s)he had desired?'
 c. ??kimi wa [pro₁ [e]₂ aitagatteita hito₂ o]₃ [dare₁ ni] t₃ syookaisita no?
 (you-top [pro₁ [e]₂ desired to see person₂-acc]₃ [who₁-dat] t₃ introduced?)
 'To whom did you introduce the person whom (s)he had desired to meet?'
 d. ??kimi wa [John₃-ga [[e]₃ [(nagaiaida) pro₁ [e]₂ kasiteita hon₂-o]₄
 [(ittai) dare₁ ni] t₄ utta ka] sitteimasuka (Hoji (Ibid., 125))
 (you-top [John₃-nom [[e]₃ [(for a long time) pro₁ [e]₂ lent book₂-acc]₄
 [(on earth) who₁ dat] t₄ sold] know?)
 'Do you know to whom John sold the book which he had lent to this person for a long time?'

What we are witnessing here, in other words, is another case of the neutralization of the *ni-Q* and *Q-ni* constructions. We are then able to offer an account for these observations by making an appeal to the structural ambiguity involved in both these constructions due to the possible application of Scrambling in (4a) and (4b). Furthermore, with the adoption of the hypothesis concerning the mismatch between π (PF) and λ (LF) we proposed at the outset of this paper (repeated below as (12) below), we can also provide an explanation for the intermediate degree of awkwardness each example in (9) and (11) exhibits:

- (12) markedness due to PF-LF Mismatch: (Kitagawa (1990))
 If the pairing of π and λ provides contradictory instructions for the two performance systems (auditory-perceptual system and conceptual-intentional system), markedness is imposed on the derivation yielding the pair (π , λ).

First, the language users' intuition on the Weak Crossover effect in the *ni-Q* construction as in (9) is interfered with by the potential reconstruction effect that may be induced by the application of Scrambling in the ODC construction in (4b). In quite a parallel way, the language users' intuition on

the Weak Crossover effect in the *Q-ni* construction as in (11) is also interfered with by the potential reconstruction effect that may be induced by the application of Scrambling in the DOC construction in (4a) (in Section 3). In both cases, however, the salvation of the sentence inducing a reconstruction effect will require the language users to associate the PF for the unscrambled construction, which is not accompanied by any focus intonation, with an LF for the scrambled construction involving the opposite word order and hence a totally distinct syntax and semantics.⁶ For instance, in order for the *ni-Q* construction in (9) to be salvaged, the PF of the *ni-Q* construction in (4a) must be associated with the scrambled version of the LF of the passive construction in (4b). I would like to propose here that the awkward status of both *ni-Q* and *Q-ni* constructions in (9) and (11) arises when such a mismatch between the PF and LF provides contradictory instructions for the two performance systems, one controlling auditory-perceptual performance and the other controlling conceptual-intentional performance, and hence Grammar imposes markedness on the derivation yielding this mismatched pair of two interface representations in accordance with the constraint proposed in (2) above. This account will provide us with numerous predictions with respect to the role of focusing in various grammatical phenomena, but once again, I must leave the pursuit of this topic for another occasion, referring the reader to Kitagawa (1990) as an initial attempt.

4 Summary and Further Possible Extensions

To sum up, I have argued, first, that the "Yolked VP" Analysis should be adopted over the "VP Shell" analysis in capturing the alternation between the Oblique Dative Construction (ODC) and the Double Object Construction (DOC) in English. The claim was supported through the investigation of quantifier scope, Weak Crossover, and binding theory. I then argued that the so-called free word phenomenon in Japanese is at least partly reducible to a similar "Yolked VP" Analysis, pointing out that both *ni-Q* and *Q-ni* word order in Japanese can be ambiguously analyzed as involving a base-generated DOC and ODC, respectively, or as involving Scrambling having applied in ODC and DOC, respectively. The proposal was supported by the investigation of otherwise puzzling facts concerning quantifier scope, Weak Crossover and Case Drop that are unexpectedly neutralized between the *ni-Q* and *Q-ni* constructions.

Finally, let us briefly point out that another possible advantage of adopting the "Yolked VP" Analysis is that it will permit us to capture the correlation between the availability of alternative forms of causatives and the possibility of dative-double object alternation in a given language, which is rather pervasively observed among different languages. For instance, since the "Yolked VP" Analysis in Japanese identifies the DOC in (4a) and the ODC in (4b) as the *ni*-causative and the *Q*-causative, respectively, it is only natural to assume that the *ni*-causative always involves an active complement and the *Q*-causative always involves a passive complement.

The "Yolked VP" Analysis seems to be also extendable to the analysis of the causative construction in many Bantu languages like Chichewa, which is known to alternate between the structures comparable to ODC and DOC (Baker (1988)). By introducing a syntactic passive into a causative construction, the "Yolked VP" Analysis can not only provide extra argument positions but also achieves an effect of making the causee "affected" in one way or another, which will allow us to dismiss Alsina's (1992) claim that causativization in these languages poses a serious problem to the Principles and Parameters Approach, having to involve double assignment of θ -roles to a single argument. Further pursuit of these topics, however, must be left for other occasions.

⁶ An underlying assumption here is that arguments in their base-generated positions in general are not accompanied by any special focus intonation. Kitagawa (1990) argues that, an argument in a dislocated (or marked) position can be regarded as having involved Scrambling, an instance of overt movement, only when it is accompanied by focus intonation.

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