Psychological Predicates and Point of View Roles: A Hyperprojection Analysis*

Keywords: *psychological predicate, backward binding, pivot, point of view projection*

1. Introduction

This paper proposes a hyperprojection analysis for experiencer-object psych verbs (EOPVs) such as *amuse, frighten* and *please* in English. We claim that the syntactic derivation of examples with an experiencer argument involves an invisible hyperprojection we call *Point-of-View Projection* (POVP) on top of ordinarily postulated functional projections such as Tense Phrase (TP). According to this analysis, a Pivot, namely, the one from whose point of view the report is made (Sells 1987: 455), undergoes covert phrasal movement into [Spec, POVP] at LF. We demonstrate that a set of otherwise unpredictable syntactic properties uniquely associated with EOPVs, such as backward binding, crossover, anti-local binding, and scope ambiguity, receive a unified explanation under the proposed analysis.

To the extent that the proposed analysis is tenable, it allows us to draw two implications. First, our analysis indicates that purely structural analyses of EOPVs solely based on their θ-theoretic properties, which have been dominant in the generative literature, is untenable. Second, otherwise peculiar syntactic properties of EOPVs like those noted above can be derived as a natural consequence of their unique cognitive-semantic status as subjective predicates and its syntactic manifestation in the form of covert phrasal movement of a Self into [Spec, POVP].

The present paper is organized as follows. In section 2, we outline our hyperprojection analysis for EOPVs. In sections 3 and 4, we show that the proposed analysis provides a unified explanation of several otherwise mysterious syntactic

properties associated with EOPVs. In so doing, we also compare the proposed analysis with other structural accounts solely based on θ-theoretic considerations of this verb class in the literature, as in Belletti and Rizzi (1988), Fujita (1993, 1996), and Pesetsky (1990, 1995). We show that their analyses have several empirical drawbacks that are successfully overcome by the present analysis. Section 5 is the conclusion.

2. Psychological Predicates, Subjectivity, and Pivot: A Hyperprojection Analysis

One lexical semantic characteristic that distinguishes psychological predicates such as *fear*, *amuse* and *happy* from non-psychological predicates is that the former constitute subjective predicates: they denote a subjective mental (change of) state on the part of a sentient human being capable of undergoing his/her internal experience that is beyond the reach of objective observation. This characteristic of psychological predicate is articulated in Brekke (1976: 114, 115) as follows:

"What happens or exists in the mind of a particular person is private, 'privileged-access' information, the exclusive possession of that person alone. When someone describes his own emotional experience or state by using terms like *disgusted*, *irritated*, *sad* or *angry*, we have to take his word for it-we cannot argue with him, deny the truth of or positively falsify his predication. This is what I mean when I refer to the psych-verbs as being subjective, in contradistinction to objective predicates referring to events or states of affairs of the external world, observable and verifiable by any appropriate sentient being."

In other words, a psychological predicate includes a statement of a private, mental description of an (otherwise potentially objective) event/state on the part of a sentient

human being capable of subjective evaluation and emotional experience whose exact nature goes beyond objective observation. In this sense, psychological predicates constitute a unique class of subjective predicates. This observation, in turn, suggests that a surface experiencer argument in any psychological predicate construction serves the role of Pivot in the sense of Sells (1987) (see also Zribi-Hertz 1989), or a person from whose viewpoint a certain internal (change of) state is reported.

Two remarks are in order here about the foregoing observation on psychological predicates. First, we maintain that the characterization of psychological predicates as subjective predicates along the lines of Brekke (1976) is due to their cognitive property that is idiosyncratically projected from the inherent semantics of this class of predicate. This property is qualitatively from the lexical-semantic property of psychological predicates that determines the syntax-argument structure mapping. Recent work in the lexical semantics-syntax interface has shown that the alignment of arguments in experiencer-object psych verbs in the syntax can be predicted solely by a certain arrangement of semantic primitive predicates (Levin and Rappaport-Hovav 1995) or morphosyntactic heads (Hale and Keyser 2002). Indeed, the above-mentioned cognitive-semantic property does not affect the transitive argument structure of the verbs and its syntactic manifestation. This does not mean, however, that the presence or absence of Pivot also has no bearing on the part of the syntactic derivation that does not relate to argument structure. Rather, this cognitive property plays a crucial role in elucidating the nature of peculiar syntactic characteristics of EOPVs. Second, we content that Brekke's characterization of psychological predicates applies not only to this narrow range of predicates but also to a great many variety of constructions including non-psychological predicates when certain cognitive-semantic conditions

related to subjectivity and topicality are met. Under this conception, EOPVs are but one archetypical case that facilitates subjective interpretation of an experiencer as Pivot.

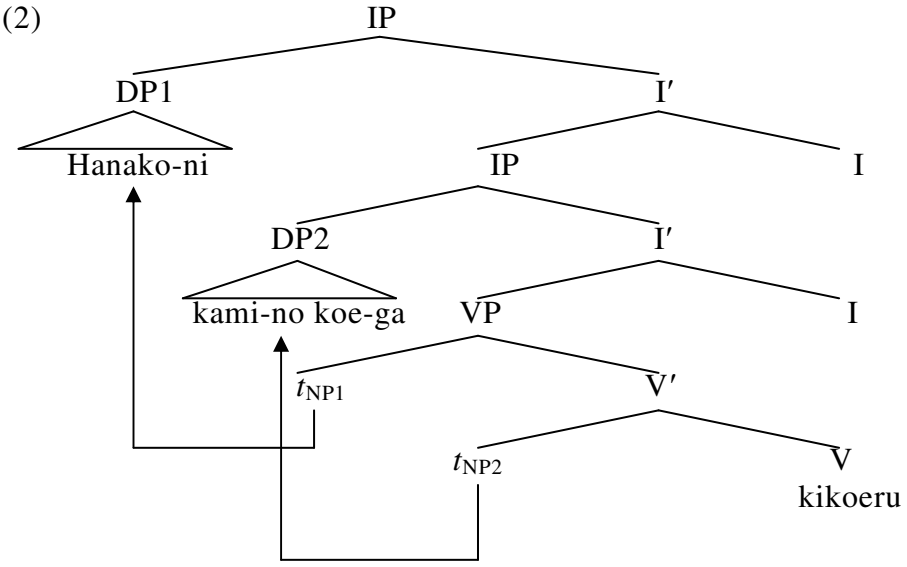
The next question, then, becomes how we can express the cognitive-semantic property of psychological predicates described thus far in this section in configurational terms. Campbell and Martin's (1989) analysis of psychological predicates is suggestive in this regard. To account for the well-known phenomenon of backward binding observed in EOPVs, as illustrated by the contrast between *Pictures of himself pleased Michael* and **Pictures of himself hit Michael* (see section 3 for extensive discussion on and analyses of this property), Campbell and Martin hypothesize that an DP receiving the experiencer θ-role optionally raises at LF to a second subject position in the higher specifier of IP in the double-decked IP structure. Evidence for this hypothesis comes from dative subject constructions in Japanese. As first discussed in Kuno (1973), there are certain semantically definable classes of predicate in this language, including verbs of competence (e.g., *wakaru* 'understand', *dekiru* 'can') and verbs of nonintentional perception (e.g., *kikoeru* 'hear', *mieru* 'see'). These verb classes allow a dative experiencer argument and a nominative theme argument that follows it. Some examples of this construction are given in (1a, b).

(1)a. Hanako-**ni** kami-no koe-**ga** kikoeru (wake)
Hanako-Dat God-Gen voice-Nom hear (reason)
'(The reason) Hanako can hear God's voice'

b. Taroo-**ni** eigo-**ga** wakaru (wake)
Taro-Dat English-Nom understand (reason)
'(The reason) Taro understands English.'

In (1a), *Hanako* is marked with dative *-ni* whereas *eigo* 'English' is marked with nominative *-ga*. Campbell and Martin claim that in (1a), *Hanako* is base-generated within the VP with *-ni* and moved to the specifier of the higher INFL while *eigo* 'English' is based-generated in the complement of the verb *kikoeru* 'hear' and moved into the specifier of the lower INFL. The relevant structure is given in (2).

(2)

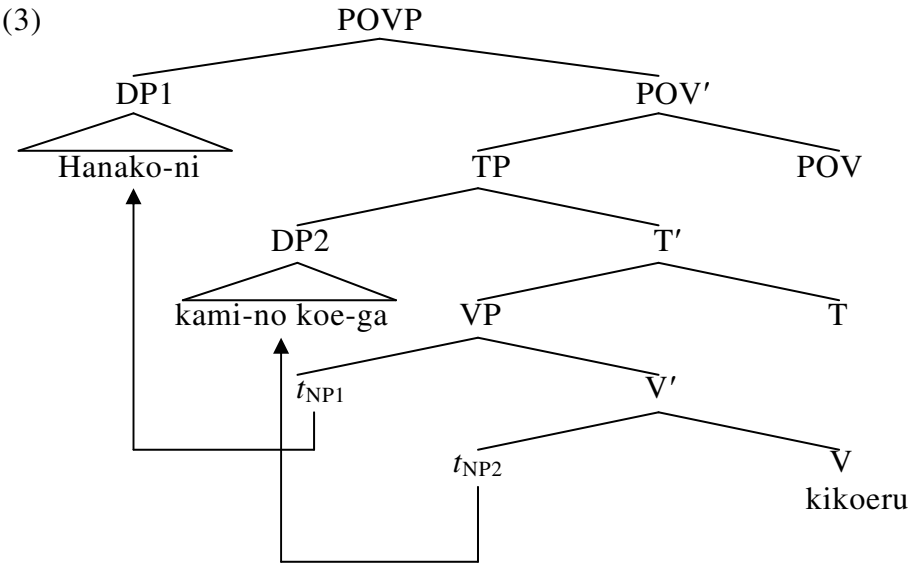


There are two problems with this analysis from the more recent perspective of the Minimalist Program (Chomsky 1995). The first problem is concerned with the optionality of LF experiencer raising and motivation for this operation. Within the framework of the Minimalist Program, every operation in syntactic derivation must be driven out of necessity. This deterministic view, then, casts doubt on Campbell and Martin's analysis because the motivation for experiencer raising is not made explicit. The second problem is that their analysis misses the important generalization that (the vast majority of) the verbs that participate in dative subject constructions constitute psychological predicates. Certain verbs of competence such as *wakaru* 'understand' as well as verbs of unintentional perception such as *kikoeru* 'hear', *mieru* 'see', and

omowareru 'think' refer to a subjective experience/evaluation of a sentient human being. Campbell and Martin's analysis has no way to connect this cognitive-semantic property of verbs that appear in dative subject constructions with LF raising; they would simply stipulate that only an experiencer DP can move for some reason.

To solve the problems with Campbell and Martin's analysis, we propose that there is a structural position above TP in the syntactic derivation of a psychological predicate construction that is specifically dedicated for a surface experiencer argument. More specifically, a surface experiencer argument undergoes phrasal movement from its base position to the specifier position of the head we dub *Point-of-View Projection* (POVP) so it may be interpreted as Pivot in the sense of Sells (1987), or a standpoint from which a certain mental (change of) state is described. This hyperprojection analysis assigns the syntactic structure in (3) to the sentence in (1a).

(3)



This analysis successfully overcomes the two difficulties with Campbell and Martin's analysis. First, the present analysis explains the type of predicates that can occur in the dative subject construction. This construction has two "subject" positions, one in [Spec,

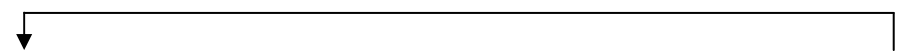
TP] for the grammatical subject and the other in [Spec, POVP] for the pivot. The latter position serves to restrict the set of predicates that appear in the relevant construction to subjective predicates since only this class of predicate typically has an experiencer argument projected in the syntactic derivation below TP. Likewise, the reason an experiencer moves into [Spec, POVP] is now clear; it moves to serve as Pivot.

It is important at this point to articulate the nature of POVP assumed in the present analysis as well as how and when this projection is introduced into the syntactic derivation. We assume, following the economy of representation proposed by Chomsky (1995), Bošković (1997), and others, that the POVP is projected on top of TP at LF only when material within the proposition/TP is interpreted as contributing to the subjective description of a particular event/state on the part of *Pivot*. In other words, examples that do not contain a psychological predicate can still project POVP on top of TP when they are interpreted such that they describe a private mental state of a sentient human experiencer. We see later in the next section that this situation obtains for many phrases such as "psych idioms/phrases" (Pollard and Sag 1992; Pesetsky 1990; Hatori 1997) that do not involve an experiencer-object psychological verb but whose VP constituent facilitates the Pivot interpretation of a surface argument. One way to formalize this assumption is to claim, adopting the most recent derivational theory of syntax as in Chomsky (2004), that when the TP is constructed, it is sent off to the meaning-related component for semantic interpretation. When the interpretation includes subjective description of an event/state on the part of a Pivot, then the syntactic derivation continues with the merger of POV and LF movement of the Pivot into [Spec, POVP].

The idea that experiencer arguments undergo movement is not a new idea. Like Campbell and Martin (1989), Stowell (1986) proposes within the Government-and-

Binding Theory that certain arguments, including experiencers, undergo raising at LF. This idea has been pursued in different directions within the more recent framework of the Minimalist Program. Tenny (2004, 2006) argues that experiencers, marked [+sentient], move to the specifier of the Sentience/Evidentiality Projection located near the top of the CP, giving them special binding properties. More recently, Endo (2007) (see also section 4.1) argues for LF experiencer raising on the basis of minimality effects observed in Japanese backward binding examples. To illustrate, consider (4a-d).

(4)a. [$_{SC}$ [***Zibun-no*** kodomo-ga] [***Yamada-san-no*** hokori]]-da.
self-Gen child-Nom **Mr. Yamada-Gen** **pride**-Cop
(subject) (predicate)
'Mr. Yamada is proud of his son.' (Endo 2007: 69)

b. 
DP-Top (= antecedent) … [FocP … [$_{SC}$ DP (= containing anaphor) [*t* Pred] …
(subject) (predicate)
(Endo 2007: 72)

c. *[$_{SC}$ [***Zibun-no*** kodomo-***wa***] [***Yamada-san-no*** hokori]]-da.
self-Gen child-Top **Mr. Yamada-Gen** pride-Cop
(subject) (predicate)
'Mr. Yamada is proud of his son.' (adopted from Endo 2007: 75)

d. (Mary-no kodomo-denaku) [$_{SC}$ [Zibun-no kodomo-WA [**Yamada-san-no**
Mary-Gen child-not self-Gen child-Contrast Mr. Yamada-Gen
hokori]]-da]
pride-Cop
'Mr. Yamada is proud of his son, not Mary's son.' (adopted from Endo 2007: 90)

Endo proposes that the experiencer argument *Yamada-san* 'Mr. Yamada' undergoes topic-driven possessor raising into [Spec, ToP] in the left periphery system of Rizzi (1997, 2004) and binds *jibun* 'self' from this position, as shown in (4b). Backward binding does not hold in (4c). This fact falls into place, Endo argues, since the topic-marked subject in (4c) is closer to the Top head than the surface experiencer, hence blocks the movement of the latter at LF. Interestingly, (4c) becomes grammatical when *-wa* is interpreted as contrastive focus, signaled as WA, as shown in (4d). This pattern is also naturally predicted by Endo's analysis since the focus-marked subject does not count as intervener for LF topicalization of the surface experiencer.

As an anonymous reviewer points out, our analysis predicts that LF movement of a surface experiencer into [Spec, POV] with the [+person] feature should be blocked by a closer potential element with the same feature. We show in section 3.2 that this prediction is indeed borne out when we review Pesetsky's (1990, 1995)/Fujita's (1993, 1996) generalization that backward binding becomes impossible in causatives with an agent subject. We argue that this effect arises because the agent DP with the [+person] feature blocks the movement of the experiencer DP with the same feature, hence blocks the movement of the latter into [Spec, POVP].

One might wonder whether it is possible to situate our hyperclause analysis within the broader context of the cartography project of syntactic structures, "the attempt to draw maps of syntactic configurations as precise as detailed possible." (Rizzi 2004: 223). It is worthwhile to consider the status of the POVP in this theoretical context since we are claiming that this projection is superimposed on top of TP, as shown in (3). The primary goal of the project has been to identify various functional projections within the CP system and clarify their relative structure position within this layer. This project attempts to uncover the domain of syntactic derivation that interacts with

pragmatics since understanding of the nature of syntactic projections such as Focus and Topic makes crucial reference to speaker-hearer interactions, their background knowledge and contexts of previous discourse, old vs. new information, definiteness vs. indefiniteness, topicality, focus, givenness, etc. By contrast, events/states described by psychological predicates hold in the mind of a sentient individual and do not need speaker-hearer interactions. Rather, they are but linguistic descriptions of what occurs in the mind of a speaker; whether they are transmitted to the hearer is irrelevant (see Jackendoff 1994 on this point). Thus, the POV head in our analysis expresses the inherent cognitive-semantic property of psychological predicates as subjective predicates. In this sense, our proposed analysis deviates from the Rizzi-style cartography project. It is also hard to tell in the present investigation whether our postulated POV corresponds to any one of the functional heads in the literature and what structural position the head in question is located within the CP system, or whether it is in fact above the CP system. We still maintain, however, that the POVP participates in the Syntax of Sentience (Speas and Tenny 2003; Tenny 2004, 2006) in the left periphery of the syntactic representation above ordinarily postulated array of grammatically motivated projections such as TP and *v*P. We provide evidence for this claim based on feature-based minimality effects in the following section.

3. Backward Binding

Since Postal (1970), experiencer-object psych verbs such as *amuse, please* and *annoy* have been widely known to exhibit *backward binding* (see also Giorgi 1984, Belletti and Rizzi 1988, Campbell and Martin 1989, Pesetsky 1987, 1990, 1995, Bouchard 1995, Iwata 1995, and Fujita 1993, 1996); anaphors embedded in subject position can have antecedents that do not appear to bind them in surface structure, in apparent

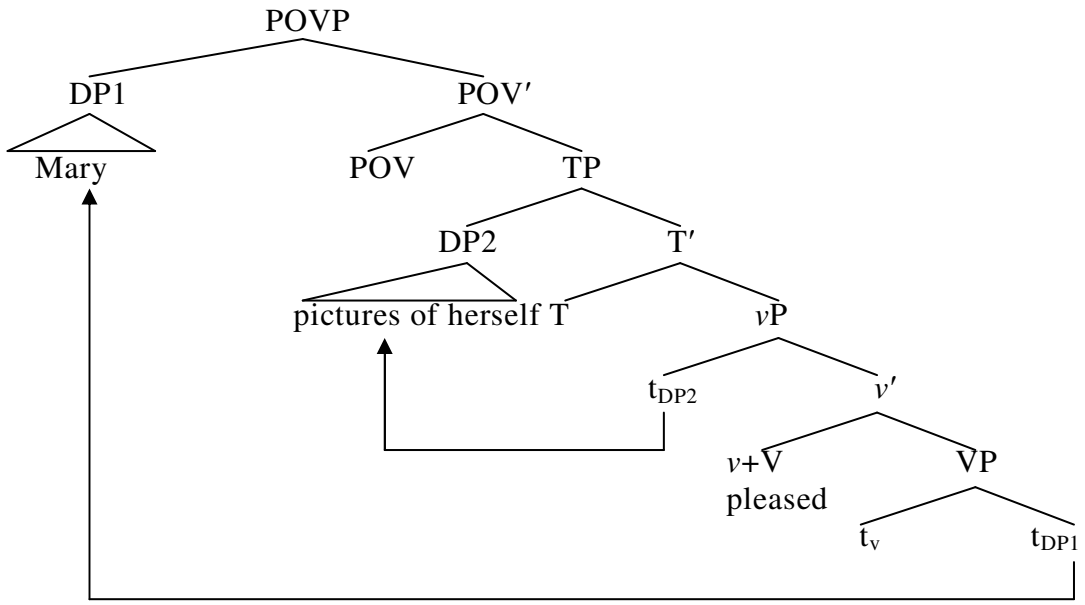
violation of the regular local binding requirement on anaphors. The peculiarity of this binding pattern is highlighted when we compare (5a), with the psych verb *pleased*, with (5b), with the non-psych verb *hit*.

(5)a. Pictures of herself pleased Mary.

b. *Pictures of herself hit Mary.

This contrast receives a simple account under our analysis. The existence of the experiencer argument in (5a), not in (5b), yields cognitive force of *Mary* as Pivot. This force is accommodated at LF by the merger of the POV with the TP, as in (6).

(6)



In this structure, *Mary* undergoes covert phrasal movement to serve as Pivot at LF. The POV head remains empty without being occupied by the main verb, which raises up to the *v* head. As the result of the experiencer raising, *Mary* is in a position to bind *herself*. Hence, backward binding obtains in (5a). On the other hand, (5b) does not

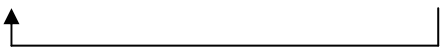
have the POVP since it does not involve a psychological predicate. This means that there is no antecedent available above TP that can bind the reflexive within the subject. Thus, backward binding is blocked in (5b).

In what follows, we compare the proposed analysis with previous generative approaches to backward binding and EOPVs, as in Belletti and Rizzi (1988), Pesetsky (1990, 1995), and Fujita (1993, 1996). This line of approach stands on the assumption that the syntactic structure of this class of verb is predictable solely based on its θ-theoretic properties (and vice versa). We demonstrate, however, that these analyses give false results in various (un-)grammatical cases of backward binding that can be successfully accommodated by our proposed analysis.

3.1. Belletti and Rizzi (1988)

Belletti and Rizzi (1988) propose an unaccusative analysis of EOPVs. The experiencer argument is base-generated in the specifier position of the VP that is higher than the base-generated position of the theme argument (i.e. the complement of the VP). The surface order is derived by movement of the theme argument into the specifier position of IP to receive structural Nominative Case. Thus, (5a) is represented as in (7).

(7) $[_{IP}$ Pictures of herself $[_{I'}$ I $[_{VP}$ $[_{V'}$ pleased *t*] Mary]]



Belletti and Rizzi argue that backward binding is accounted for if Condition A of the Binding Theory, defined in (8a), is an elsewhere condition that can be satisfied at any point of syntactic derivation.

(8) For a local domain D:

a. An anaphor is bound in D.

b. A pronominal is bound in D.

c. An R-expression is free.

Then, the binding requirement on *herself* in (5a) is met at the D-structure representation in (7) where *pictures of herself* is still in situ and *Mary* can c-command the reflexive contained within the theme argument.

Belletti and Rizzi's analysis is hard to sustain for many reasons, only two of which we mention here for reasons of space. First, Campbell and Martin (1989), Pesetsky (1990, 1995), and Fujita (1993, 1996) show that backward binding is observed in a far wider range of constructions than the narrow range of EOPV. This point is illustrated in (9b) and (10b) from Campbell and Martin (1989: 45).

(9)a. Stories about himself always worry John.

b. Stories about himself always make John worry.

(10)a. News items about herself generally amuse Mary.

b. News items about herself generally make Sue laugh.

What the two pairs of example here show is that an EOPV construction can often be paraphrased by a combination of the syntactic causative verb *make* and a predicate of emotion. The problem with Belletti and Rizzi's analysis posed by these examples is as follows. The experiencer argument in (9b) and (10b) is in an independent lower clause from the matrix clause headed by the causative verb. Furthermore, the causer subject in these examples are selected by the causative verb, not the embedded verb, given

that the embedded verbs are both one-place predicates. Given this observation, it is difficult to imagine an unaccusative structure where a matrix subject is generated as an argument of the embedded clause to be bound by the embedded subject. However, this structure is what Belletti and Rizzi's analysis would lead us to posit.

Second, as pointed out by Pesetsky (1995: 43-45), Belletti and Rizzi's analysis of backward binding runs into a Case-theoretic problem. Belletti and Rizzi propose that experiencer-object psych verbs are introduced in the syntax with the θ-grid in which an experiencer is associated with an inherent Case linked to the θ-role assignment (Chomsky 1986). This specification is intended to have the effect of moving a theme argument into [Spec, IP] for structural Nominative Case, thereby leaving an experiencer argument in situ (i.e. the specifier position of the VP), as shown in (7). Now, if we were to extend the unaccusative analysis to examples like (9b) we would be forced to the conclusion that *made* assigns inherent Case to *John*. This conclusion, however, is wrong because *John* is assigned the experiencer role from *worry* in the embedded clause. The falsity of this conclusion is also evidenced by examples as in (11), where *John and Mary* is θ-marked by *angry* in the embedded clause.

(11) [Each other$_i$'s remarks]$_j$ [made e_j [John and Mary]$_i$ seem t_i to be angry].

(Pesetsky 1995: 45)

The present analysis provides a simple account for the grammaticality of backward binding in (9b) and (10b). *John*/*Sue* are both interpreted as experiencer arguments, hence are qualified as Pivot. Though *laugh* in (10b) is not a psychological predicate by itself, it is cognitively linked to a certain psychological

state. Therefore, *John/Sue* moves into [Spec, POVP] at LF. Backward binding obtains because the arguments can bind the reflexive from this derived position.

3.2. Pesetsky (1990, 1995); Fujita (1993, 1996)

Pesetsky (1990, 1995) proposes a new generalization about backward binding shown in (12) (Pesetsky 1995: 49). This generalization is intended to account for the difference between (13a-d) and (14a-d) (Pesetsky 1995: 44).

(12) A Causer argument of a predicate π may behave as if c-commanded by an argumental DP governed by π.

(13)a. ? Each other's stupid remarks eventually killed John and Mary.

b. ? Each other's criticisms harmed John and Mary.

c. ? Those pictures of himself ultimately destroyed Bill.

d. ? Rumors about herself always plunge Mary into a deep depression.

(14)a.* Each other's stupid friends eventually killed John and Mary.

b. * Each other's parents harmed John and Mary.

c. * Each other's teachers insulted John and Mary.

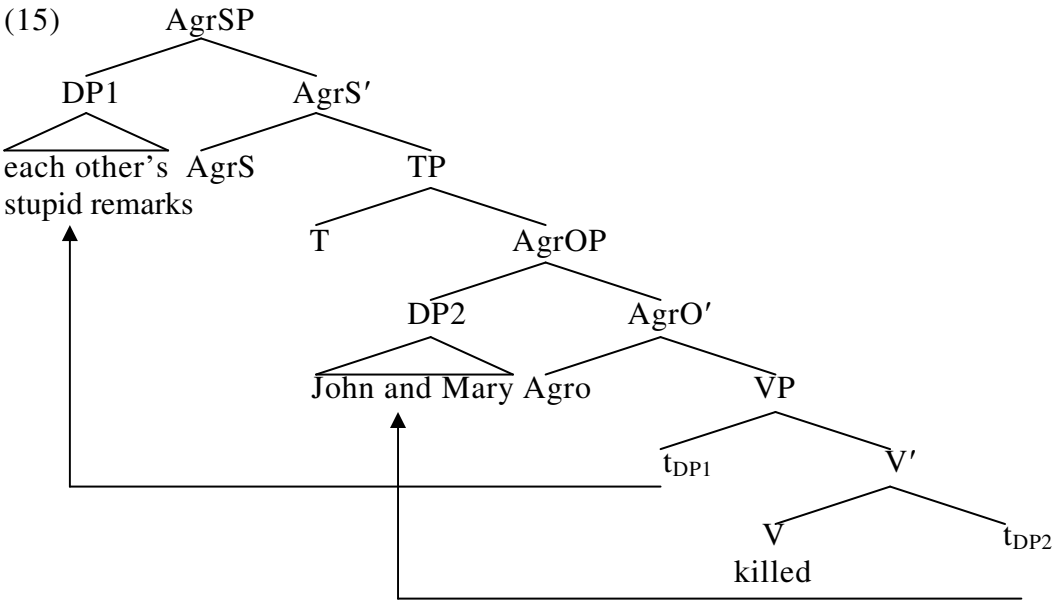
d. * Each other's swimming coaches plunged John and Mary into a deep depression.

The contrast between (13a-d) and (14a-d) shows that backward binding is sensitive to whether or not the subject in a causative construction is a volitional entity (Agent).

Pesetsky (1990, 1995) and Fujita (1993, 1996) each provide a syntactic explanation of the generalization given in (12). The two analyses make exactly the same predictions concerning backward binding. Thus, we take the liberty of restricting our discussion to Fujita's analysis, leaving Pesetsky's Cascade-Syntactic analysis

aside. Fujita (1993, 1996) provides an Agr-based Case-theoretic account of the generalization above, providing a minimalist updating of Pesetsky's analysis. The classical version of the Minimalist Program outlined in Chomsky (1993) proposes that in English subjects move to [Spec, AgrSP] in overt syntax whereas direct objects move to [Spec, AgrOP] in covert syntax for Case checking under the Spec-Head Agreement with an Agr head. Assuming the VP-Internal Subject Hypothesis (see Koopman and Sportiche 1988), this version of Case Theory creates a configuration in which the trace of a surface causer subject is bound by the raised experiencer in [Spec, AgrOP] at LF via chain binding. This configuration is illustrated in (15) for the example in (13a).

(15)



In this structure, the experiencer *John and Mary* is base-generated in the complement of *kill*. This argument then moves to [Spec, AgrOP] in covert syntax. The causer subject *each other's stupid remarks*, base-generated in [Spec, VP], moves into [Spec, AgrSP] in overt syntax. At LF, the trace of the causer subject in [Spec, VP] is (chain-) bound by the direct object in [Spec, AgrOP]. Hence, (13a-d) are correctly predicted as grammatical. (14a-d), on the other hand, involve a volitional agent and

disallow backward binding. Fujita (1993: 383) contends that an agent argument is base-generated in a specifier position of the higher VP headed by the abstract verb MAKE. He speculates that this head is structurally higher than [Spec, AgrOP] so that the trace left by the movement of the agent argument might never be bound by the shifted experiencer object in [Spec, AgrOP] at LF; see also Koizumi (1995). Thus, Fujita's approach provides a structural explanation for Pesetsky's generalization.

Fujita's minimalist analysis is quite appealing in that it successfully reduces what has been considered as an exclusive, idiosyncratic property of experiencer-object psych verbs to the property of non-volitional causatives in general. However, his analysis is too strong precisely for this reason. There are three cases of backward binding where his analysis gives false predictions. First, consider minimal pairs in (16a, b) and (17a, b); see Rizzi (1993) for additional examples.

(16)a. Pictures of herself made Ruth happy.

b. * Pictures of herself made Ruth famous. (Bando and Matsumura 2001: 95)

(17)a. That book about herself struck Mary as embarrassing.

b. *That book about herself struck Mary on the head. (Bouchard 1995: 295)

The contrast between (16a)/(17a) and (16b)/(17b) shows that backward binding is affected by the lexical semantics of the secondary predicates selected by the main verbs *make* and *strike*: psychological predicates (*happy, embarrassing*) vs. non-psychological predicates (*famous, on the head*). Fujita's analysis would not predict this contrast because his structural analysis would make it impossible for this semantic distinction to make any difference on syntactic derivation. One might save his analysis by arguing that different structures could be assigned to cases with

psych adjectives and those without. However, assuming the proposed causative structure as in (15) for (16a)/(17a) and another structure for (16b)/(17b) would make Fujita's analysis circular and undermine his original claim that backward binding is consequence of regular binding at LF.

By contrast, the contrast above is naturally derived by our analysis. The projection of the POV at LF depends on the existence of a surface experiencer argument within the TP. (16a) is grammatical because *happy* contributes to the experiencerhood of *Ruth*: as a result, this argument moves into [Spec, POVP] and binds the reflexive within the subject. This movement is impossible in (16b), however, which does not involve a surface experiencer argument in it. The same story holds for (17a) vs. (17b). The combination of *strike* and *embarrassing* in (17a) creates a complex psych predicate. This yields the interpretation under which *Mary* is an experiencer. By contrast, (17b) describes the event in which Mary's book fell on her, leaving no possibility that she is interpreted as an experiencer within the TP.

Second, Fujita's (1993, 1996) analysis gives incorrect predictions concerning the grammaticality of examples such as (18a-c) and (19a-e). See also Pollard and Sag (1992), Campbell and Martin (1989), Pesetsky (1990), Iwata (1995), and Hatori (1997) for additional examples that make the same point.

(18)a. Pictures of himself in *Newsweek* dominated John's thoughts.

b. The picture of himself in *Newsweek* made John's day.

c. The picture of himself in *Newsweek* shattered the peace of mind that John spent the last six months trying to restore.

(Pollard and Sag 1992: 278)

(19)a. The jokes about herself got Mary's goat.

b. Each other's nasty remarks really ruffled John and Mary's feathers.

c. Each other's teaching really got their dander up.

d. The photos of himself made John's face turn red.

e. The rumors about herself made Mary's hair stand up.

(Pesetsky 1990: 109)

There are two common denominators among these examples. One is that they all denote some mental (change of) state of a human experiencer in the sense that the combination of the expressions within the VP constitute a kind of "psych idioms" (Hatori 1997) or "psych phrases". Another is that the potential antecedents for the anaphors in these examples are contained within the direct object. Fujita's account cannot accommodate this second property since it arguably assumes the first-branching definition of c-command, hence it would falsely predict these examples to be ungrammatical on a par with (20a-d), which do not show backward binding due to the impossibility of a possessor argument binding outside its containing DP.

(20)a. *Stories about herself generally please Mary's father.

b. * Each other's health worried the students' doctor.

c. * Each other's books amazed the men's teacher.

d. * Pictures of each other annoy the millionaire who funded the politicians.

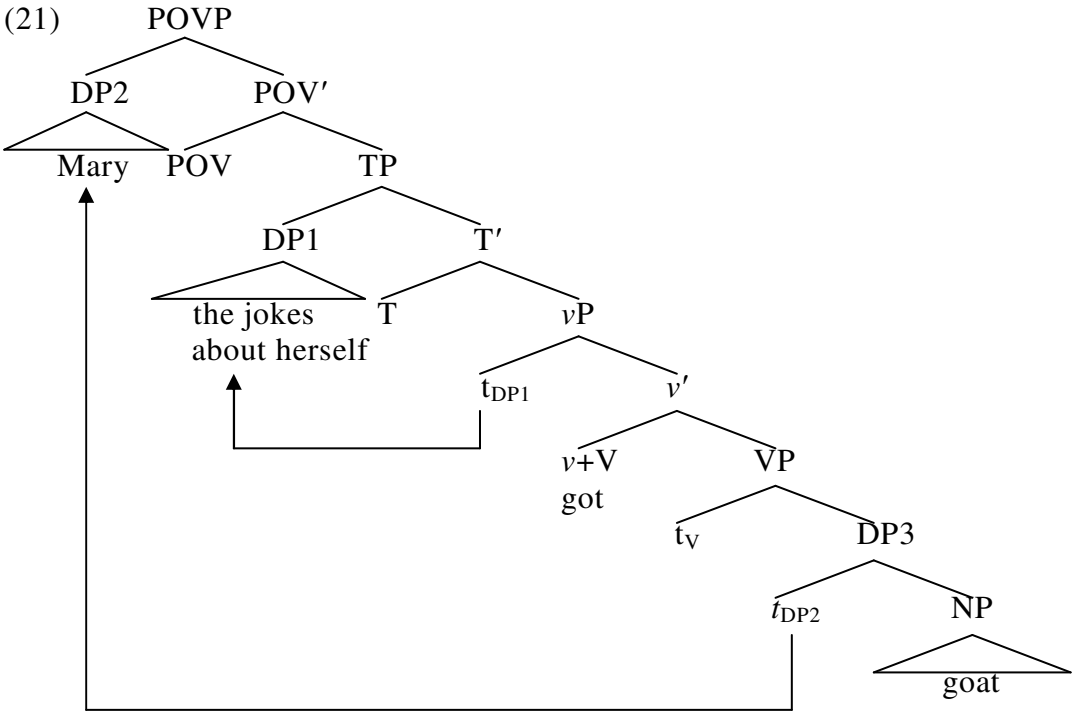
(Pesetsky 1987: 127)

As an anonymous reviewer pointed out, one might be tempted to maintain Fujita's analysis in the following way. It has been acknowledged (see Reinhart and Reuland

1993 and references cited therein) that English *self*-forms are divided into syntactic anaphors and logophoric/exempt anaphors based on their different syntactic behavior; the former are subject to standard binding conditions whereas the latter are not. Given this distinction, one might maintain that Fujita's analysis deals specifically with syntactic anaphors. We believe, however, that our analysis is superior to Fujita's. For the above argument to go through, Fujita's analysis must be backed up by independent criteria to differentiate syntactic and logophoricity anaphors in the sort of backward binding data he discussed. Unfortunately, we do not find such criteria in Fujita's paper. Our hyperclause analysis directly solves this problem since it allows for a unified treatment of the two types of anaphors via the covert movement to [Spec, POVP]. Furthermore, the two properties shared among the examples in (18a-c) and (19a-e) fall out from our analysis. In these examples, the combination of a predicate and its complement/modifier within the VP yields a psychological interpretation of the surface possessor. Thus, the POVP is projected at LF. The surface experiencer moves into [Spec, POVP]. Backward binding obtains because this raised argument binds the reflexive in [Spec, TP] from [Spec, POVP].

Let us be more precise about our explanation of backward binding in (18a-c) and (19a-e). We take (18a) for illustration. Consider its derivation in (21).

(21)



In this derivation, the possessor experiencer *Mary* undergoes movement into [Spec, POVP] and binds the reflexive within the subject. As pointed out by an anonymous reviewer, since this movement involves extraction out of a DP, two interrelated questions arise here. One is what blocks movement of the whole DP (i.e. *Mary's goat*) in (21). This question is resolved if the movement of the entire DP in the syntax is licit by itself but this movement causes semantic anomaly at LF due to the fact that *Mary's goat* cannot serve as a Pivot in [Spec, POVP]. Another is whether this extraction is licit, given that the Left Branch Condition is otherwise active in English. We assume that the force of this condition is parameterized so that it will not be operative at LF in English; see also Campbell and Martin's 1989 analysis based on Baker's (1988) Government Transparency Corollary. Similarly, according to our analysis, (18c) indicates that the Complex NP Constraint is also lifted. It is known that overt and covert movement obey different constraints. Huang (1982) and Lasnik and Saito (1984) show that island-sensitivity diagnoses only overt movement.

Following this line of research, we assume that LF movement of *John* in (18c) from the relative clause is immune to the Complex NP Constraint.

Finally, Fujita's analysis predicts that examples such as (22b) and (23b) should be grammatical, contrary to facts.

(22)a. Pictures of himself give Bill a headache.

b. * Pictures of himself send John a message. (Campbell and Martin 1989: 45)

(23)a. Pictures of herself amused Mary.

b. * Pictures of itself broke the vase.

Fujita's analysis correctly predicts (22a) as grammatical. *Bill* undergoes covert object shift into [Spec, AgrOP] for Case checking. As a result, *Bill* (chain-) binds the trace of the reflexive *himself*. However, the same analysis, as it stands, would predict that backward binding should also be possible in (22b). A similar argument can be made on the basis of the contrast between (23a) and (23b). The verb *break* in (23b) is a non-volitional causative verb, just as *amuse* in (23a) is. Then, Fujita's analysis would predict (23b) to be grammatical on a par with (23a) because at LF *the vase* in [Spec, AgrOP] should be able to bind *itself* within the causer subject.

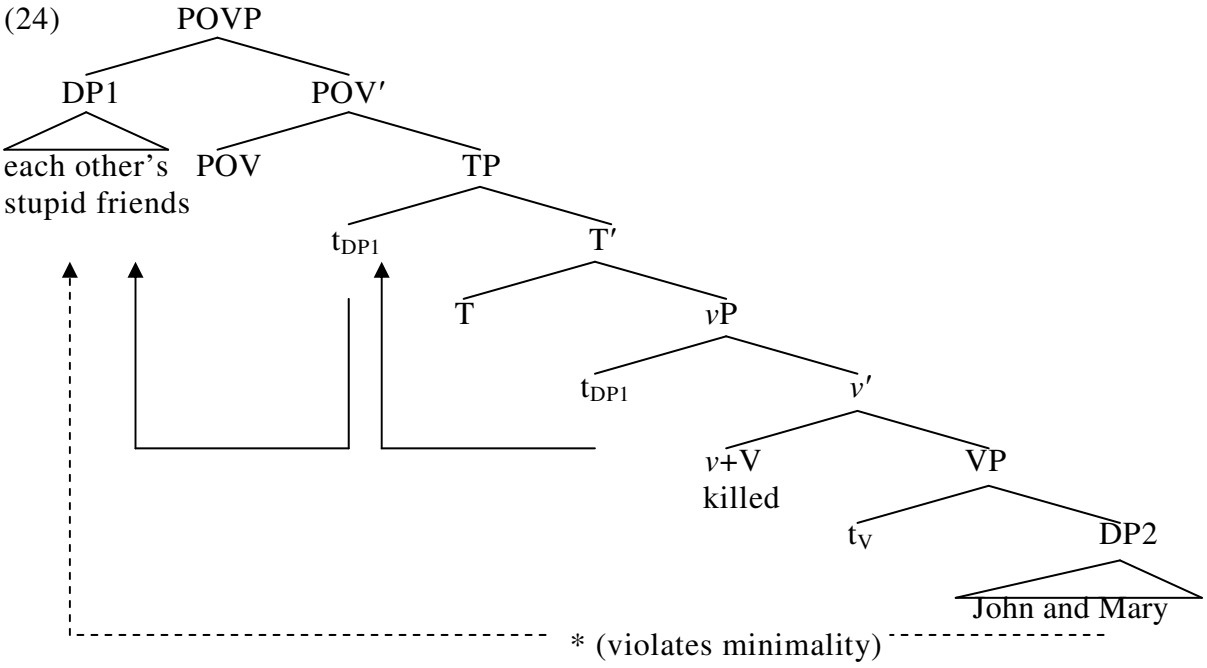
Our hyperclause analysis, on the other hand, gives right results with these examples. (22a) is grammatical due to the fact that the semi-idiomatic phrase *give x a headache* is a psych idiom that serves to facilitate the Pivot interpretation of *Bill*. This interpretation is accommodated by the projection of the POV on top of the TP, which provides a right configuration for binding to hold at LF. This option is not available in (22b), however, since this example does not involve any sentient experiencer; *John* is nothing but a goal expression. (23b) is bad since the only

possible antecedent, namely *the vase*, does not qualify as experiencer/Pivot, hence does not trigger the introduction of the POVP on top of TP.

Let us now consider how our analysis can account for the difference between (13a-d) and (14a-d), which formed an argument for Fujita Agr-based Case-theoretic analysis of backward binding. The verbs in (13a-d) are not lexically specified as psychological predicates; rather, the VP material in these examples plays a crucial role in facilitating a psychological interpretation. This point is evidenced by the following observation. The verb *kill* in (13a) does not mean "put to death" but instead "to depress or discourage one completely". Likewise, the verbs *harm* and *destroy* in (13b, c) are used not in their original sense but in their extended mental sense. Finally, the semi-idiomatic expression *plunge x into a deep depression* in (13d) amounts to denote the same mental state as the VP *depress x*. Thus, (13a-d) further confirms our analysis, which proposes to reflect the cognitive-semantic characteristic of the psychological denotation of the VP above TP in the form of hyperprojection.

How about (14a-d)? These examples show that the backward binding effect disappears in causative constructions with an agent. We maintain that movement of a surface object experiencer into [Spec, POVP] across an agent in [Spec, *v*P] is blocked by the feature-based minimality. More specifically, following the suggestion of an anonymous reviewer, we propose that both agents and experiencers have the feature [+person]. Thus, agent arguments are closer than experiencer arguments from the perspective of the [Spec, POVP] in terms of asymmetric c-command (see also Rizzi 2004 for further recent refinements). This attraction of an agent argument, in turn, results in canceling a backward binding effect that would otherwise obtain. The relevant configuration is illustrated in (24) for (14a).

(24)



In this representation, the POV head attracts the closest potential DP with the [+person] feature. The agent *each other's stupid friends* is structurally closer to [Spec, POVP] than the experiencer *John and Mary*. Thus, the POV head attracts the agent DP, with the result that the experiencer DP cannot undergo covert LF movement to binding the reflexive within the agent subject. Note that (14a-d) provide independent empirical support for our claim that the specifier of the POV head is in the left periphery of syntactic derivation, or otherwise, the blocking effects caused by a volitional subject won't be naturally accounted for.

The claim that the person feature counts as intervener in calculation of binding is has been made elsewhere in non-generative frameworks. For example, Asudeh (2004: 6) proposes the Intervention Constraint in (25) based on the contrast between (26a) and (26b) (Pollard and Sag 1994: 268).

(25) No potential binding may intervene between an anaphor and an antecedent.

A potential binding is an animate, referential nominal that is not a co-argument of the antecedent.

(26)a. Bill_i thought that ***nothing*** could make [a picture of himself_i in the *Times*] acceptable to Sandy.

b. * Bill_i thought that **no one** could make [a picture of himself_i in the *Times*] acceptable to Sandy.

The existence of constraints such as (25) is a natural consequence of our proposed analysis. Our analysis also correctly excludes (20a-d) because the movement of the potential antecedent with the [+person] feature (e.g. *Mary* in (20a)) is blocked by the DP endowed with the same feature (e.g. *Mary's father* in (20a)) that immediately dominates the antecedent.

An anonymous reviewer asks whether our minimality-based analysis of the lack of backward binding effects with a volitional agent does not incorrectly rule out examples such as (27) since the LF movement of *Bill* to [Spec, POV] across the DP subject with the [+person] feature would violate the minimality constraint on attraction.

(27) Susan frightens Bill.

There is reason to believe that the mere presence of DPs like *Susan* does not necessarily entail that they serve to block the LF movement of the surface experiencer. Grimshaw (1990: 160) argues that "with non-agentive psychological predicates the subject is actually not an *individual* but belongs rather to the type of properties of individuals." As evidence for this analysis, she notes that we can

replace an overt non-agentive DP subject in an EOPV construction with a property of the individual denoted by that DP, as in (28a-c). This alternation is not possible for non-experiencer-object psych verbs such as *murder* and *fear*, as in (29a-d).

(28)a. John/John's behavior concerns.

b. He/What he does bothers them.

c. We/Our personal characteristics irritate him. (Grimshaw 1990: 160)

(29)a. John murdered him.

b. * John's behavior murdered him.

c. He fears us.

d. *What he does fears us. (Grimshaw 1990: 160)

Given Grimshaw's argument, we can maintain that the presence of *Susan* in (27) does not block the movement of an experiencer into [Spec, POVP] at LF. The DP behaves as if it did not have the [+person] feature at LF under its non-agentive interpretation. The same line of argument also applies to the movement of an experiencer argument over a putative subject DP with the [+person] feature in dative subject constructions such as (30a), brought to our attention by the same reviewer. This movement is fine because (30a) is most naturally interpreted as if *Hanako* did not have the [+person] feature. In support of this analysis, this example is most felicitously paraphrased as in (30b) with the noun *koto* 'thing'.

(30)a. Boku$_i$-ni Hanako-ga t_i wakara-nai/ai-se-nai.

I-Dat Hanako-Nom understand-Neg/love-can-Neg

'I do not understand Hanako./I cannot love Hanako.'

b. Boku-ni Hanako-no-koto-ga wakara-nai/ai-se-nai.
I-Dat Hanako-Gen-thing-Nom understand-Neg/love-can-Neg
'I do not understand Hanako./I cannot love Hanako.'

3.3. Backward Binding: Syntactic or Non-Syntactic?

Before concluding our discussion, we wish to briefly address a fundamental question, namely, whether or nor the phenomenon of backward binding is truly an issue that should be dealt with in the syntax. An anonymous reviewer notes that this question bears emphasis on both empirical and theoretical grounds. On the empirical side, examples as in (31a, b) might be taken to indicate that the binding effect cannot be handled by an intra-sentential notion such as c-command, hence is not syntactic in nature. (31a) is from Buring (2005: 226); (31b) is from Pollard and Sag (1992: 274)

(31)a. *John* was furious. The picture of *himself* in the museum has been humiliated.
b. *John* was going to get even with Mary. That picture of himself in the paper would really annoy her, as would the other stunts he had planned.

We would like to note that this does not necessarily undermine our syntactic treatment of backward binding. Although we need to leave detailed examination of examples with this cross-sentential binding pattern for another occasion, one theoretical possibility in the Minimalist Program readily suggests itself. As argued extensively in Nunes (1995) and Hornstein (2000), the current minimalist theory of structure building as Copy + Merge allows cross-clausal movement as one of naturally available computational options. Under this theory, then, nothing blocks movement of *John* in (31a) from within the TP to another TP so it may bind the

reflexive as Pivot in [Spec, POVP]. To the extent that this direction is tenable, we believe that our hyperclause analysis brings with it a further advantage. It allows us to incorporate the insight from functional/discourse-related work (Zribi-Hertz 1989; Kuno and Takami 1993;Takami (1995)), namely, that backward binding is captured by "subject of consciousness" and "logophoricity", without necessarily relegating data as in (31a, b) to some other non-syntactic component of the human grammar.

On the theoretical side, the same reviewer notes that several non-syntactic approaches to peculiarities of psychological predicates have been advanced in Grimshaw (1990), Culicover and Jackendoff (2001) and Pustejovsky (1995). Thus, Grimshaw argues for a lexical analysis of backward binding in terms of her prominence theory of argument structure: the anaphor must be by the most thematically prominent argument. Backward binding holds in an experiencer-object psych verb because the experiencer is more prominent than the theme in her thematic hierarchy, given in (32).

(32) (Agent (Experiencer (Goal/Source/Location (Theme)))) (Grimshaw 1990: 24)

We do not adopt this type of lexical approach on three grounds. First, it is not clear to us whether these lexical approaches can deal with many other properties of experiencer-object psych verbs. As we will see in the next section, this class of verb shows not only backward binding but also other apparently peculiar quantificational characteristics concerning weak crossover, scope ambiguity, and others which have been convincingly shown in the generative literature to be sensitive to syntactic notions such as c-command, movement restrictions, A vs. A′-movement, topicality and definiteness. The approaches in question cannot be a serious competitor to our analysis unless they will have successfully shown that those quantificational properties can be dealt with in their

conceptual semantic/lexical structure with a better empirical coverage. Unfortunately, none of the three works mentioned above actually undertakes this task. Second, we have analyzed several cases in the previous subsections where the backward binding effect arises not simply by the virtue of an EOPV but rather by a particular combination of the material within the TP that facilitates the Pivot reading of an otherwise non-experiencer argument. It is not obvious whether those cases can be properly accounted for by Grimshaw's prominence theory of binding at the pre-syntactic level of argument structure because it is specifically tailored to accommodate backward binding effects observed in an EOPV verb. Finally, it is important to keep in mind as a methodological point that it does not suffice just to show that backward binding *can* be accounted for in a non-syntactic (e.g., lexical, pragmatic, discourse, or conceptual) way. The real issue here is whether this phenomenon *cannot* be treated in syntactic terms. Since we are not aware of any examples of backward binding that cannot be treated in the syntax using standard syntactic tools, our analysis is methodologically superior to a non-syntactic alternative, which needs additional machineries to accommodate backward binding.

3.4. Section Summary

We have shown that backward binding in EOPVs receives a straightforward structural account under the hyperprojection analysis. This analysis proposes that the POP is superimposed on top of the TP based on the Pivot interpretation of a surface experiencer argument at LF. The covert movement of this surface experiencer into [Spec, POV] provides the right structural configuration for it to bind into the anaphoric expression within the surface subject. We have also pointed out several cases where previous structural analyses make false predictions with respect to backward binding. We have shown that those problematic cases are naturally accounted for by our analysis.

4. Weak Crossover Cancellation, Anti-Local Binding and Scope Ambiguity

Since Postal (1970), experiencer-object psych verbs have been noted for their apparently unpredictable syntactic properties other than backward binding. The purpose of this section is to demonstrate that these properties also naturally fall into place under our hyperclause analysis.

4.1. Weak Crossover Cancellation

EOPVs allow inverse variable binding of the reflexive within the subject by the surface experiencer argument. This property is illustrated in (33a, b) (Fujita 1993: 384; Johnson 1992). Comparison of these examples with the standard cases of weak crossover (Postal 1971: Wasow 1979) as in (34a, b) with non- psych verbs shows that inverse variable binding is a unique property of EOPVs.

(33)a. His_i promotion pleases $everyone_i$.

b. His_i health worries $every\ patient_i$.

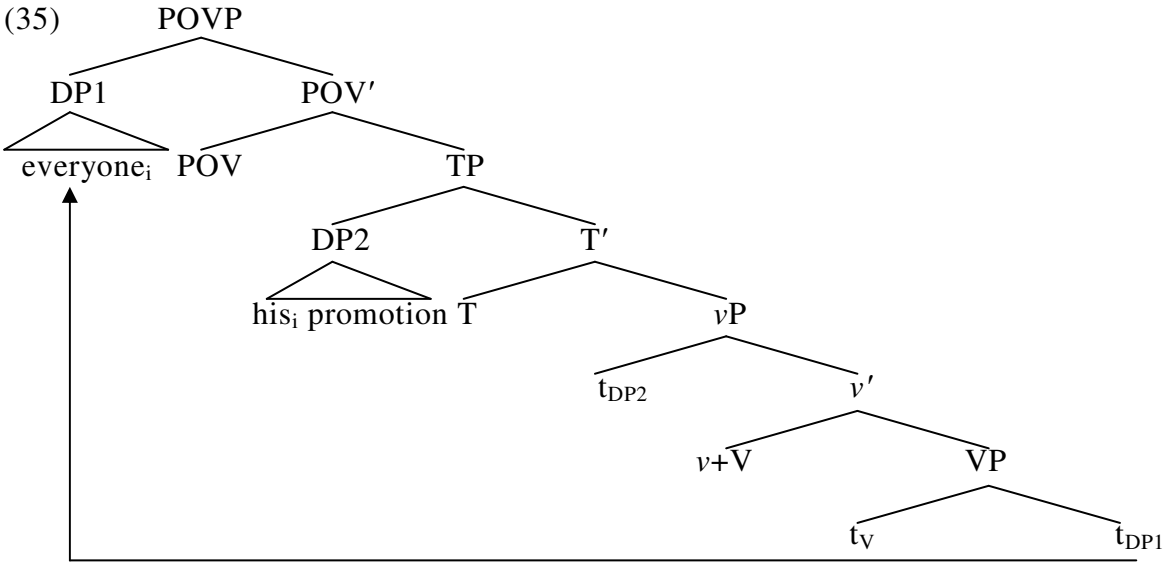
(34)a. *His_i father hit $everyone_i$.

b. *His_i father killed $everyone_i$.

Of course, the Quantifier Raising-based analysis (May 1977) could take care of (34a, b). This covert raising, an instance of A′-movement, creates a weak crossover configuration. However, this is incorrect. If this operation were responsible for the derivation of (33a, b) and (34a, b), it would not predict the contrast observed here. This means that something else is at work in canceling the crossover effect in (33a, b).

Our hyperclause analysis accommodates the weak crossover cancellation effect in (33a) from an independently motivated principle. (33a) has the structure in (35) at LF.

(35)



In this configuration, the pronoun *his* has *everyone* in [Spec, POVP] as its local binder. This correctly accounts for variable binding in (33a). This reading is not available in (34a), however, because its derivation does not have the POVP projection.

One might wonder, of course, whether our analysis does not need a hidden assumption, namely, that [Spec, POVP] is an A-position. It has been widely acknowledged since Mahajan (1990) that A-movement does not yield the weak crossover effect. This property is illustrated by the contrast between (36a) and (36b).

(36)a. *Who$_i$ did his$_i$ mother see t_i? (A′-movement)

b. Everyone$_i$ t_i seems to his mother t_i to be a genius. (A-movement)

If we adopt this traditional assumption, then [Spec, POVP] should show positional properties characteristic of A-position. However, we have not been successful at this point of our research in finding evidence for or against the A-status of [Spec, POVP]. Rather than pursuing this line, we maintain, following the suggestion of an anonymous reviwer, that the lack of the weak crossover effect in (33a, b) is related not to the A- vs.

A′-distinction but to the referentiality/topicality of the experiencer argument shifted to [Spec, POVP] at LF. Based on the absence of weak crossover effects in parasitic gap constructions, *tough*-constructions, and topicalization in English, Lasnik and Stowell (1991: 704) argue that "if the local A′-binder is either a referential NP (topicalization) or an operator bound by an external antecedent (appositive relatives, *tough*-movement constructions, and parasitic gap constructions), then there is no weak crossover effect."

Our analysis, combined with Lasnik and Stowell's (1991) proposal, predicts that the experiencer moving to [Spec, POVP] should be a referential DP. This prediction is indeed borne out. Takami (1995) and Endo (2007) both suggest the relevance of topicality of the antecedent in backward binding. Takami (1995: 307) show, based on the contrast between (37a) and (37b), that the possibility of back backward binding is affected by whether or not the experiencer is a referential DP.

(37)a. A picture of himself in the magazine shocked the movie star.

b.?/??A picture of himself in the magazine schooled a movie star.

(Takami 1995: 307)

Similarly, Endo (2007) provides further arguments for the topicality of the experiencer antecedent in the backward binding examples in Japanese based on the distinction between anti-topic quantifiers and topic-compatible quantifiers, contrastive focus particles, and the predicate restriction on topicalization. We repeat only one of his arguments here for reasons of space: see Endo (2007: ch.4) for additional arguments. The relevant argument is based on Tomioka's (2007) classification of quantifiers in Japanese into topic-compatible quantifiers such as *subeteno* 'every' and anti-topic quantifiers such as *daremo* 'everyone': only the former are compatible with the topic

marker *-wa*. Recall that Endo analyzes examples of backward biding as in (38a) as LF movement of the topic experiencer into [Spec, TopP] in the left periphery, as in (38b).

(38)a. [$_{SC}$ [***Zibun-no*** kodomo-ga] [***Yamada-san-no*** hokori]]-da. (= (4a))

self-Gen child-Nom **Mr. Yamada-Gen** **pride**-Cop

(subject) (predicate)

'Mr. Yamada is proud of his son.'

b. (= (4b))

DP-Top (= antecedent) …[$_{SC}$ DP (= containing anaphor)-Nom [*t* Pred] …

(subject) (predicate)

c. * [$_{SC}$ [***Zibun-no*** kodomo-***wa***] [***Yamada-san-no*** hokori]]-da. (= (4c))

self-Gen child-Top **Mr. Yamada-Gen** **pride**-Cop

(subject) (predicate)

'Mr. Yamada is proud of his son.'

(38a) is fine because the LF possessor extraction in (38b) allows *Yamada-san* 'Mr. Yamada' to bind the anaphor *zibun* 'self' within the nominative subject from [Spec, Top]. When we replace the nominative subject in (38a) with its topicalized counterpart, backward binding becomes impossible, as shown in (38c). Endo claims that this is due to the Relativized Minimality Constraint on movement (Rizzi 2004).

With this analysis in mind, consider now the contrast below.

(39)a. *Zibun-no kodomo-ga [***daremo***-no hokori]-da.

self-Gen child-Nom everyone-Gen pride-Cop

'Everyone is proud of his son.'

b. Zibun-no komodo-ga [***subete***-no oya-no hokori]-da.
self-Gen child-Nom everyone-Gen parent-Gen pride-Cop
'Every parent is proud of his son.' (Endo 2007: 89)

(39a) is ungrammatical because the anti-topic quantifier *daremo* 'everyone' cannot undergo covert movement into [Spec, TopP] in Endo's analysis. (39b) is grammatical because the topic-compatible quantifier *subeteno* 'every' can undergo such movement. We take the contrast between (39a) and (39b) to provide independent evidence that the experiencer in backward binding examples must be topical, hence definite.

4.2. Anti-Local Binding

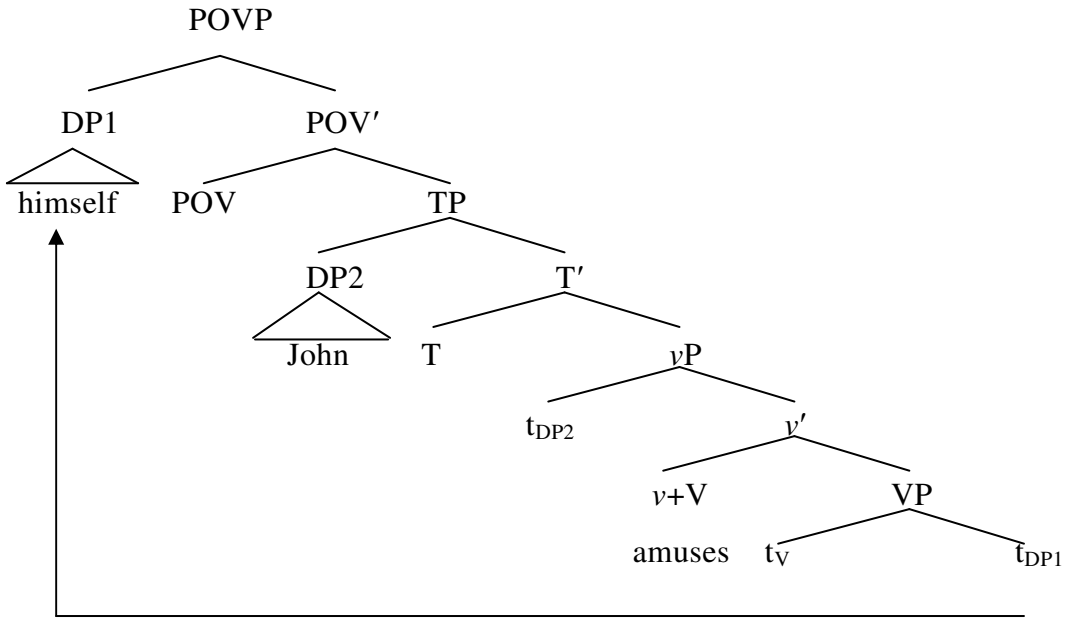
EOPVs are also known to be exceptional in that they do not allow local binding of an anaphor in direct object position by the causer subject, as shown in (40a) from Roberts (1991: 29) (see also Postal 1971: 71 and Grimshaw 1990: 158). The peculiarity of this property becomes clear when we compare this example with (40b), which involves a non-experiencer-object psych verb and allows local binding.

(40)a. ?? John amuses/disgusts/horrifies/irritates himself.
b. John killed/hurt himself to take his friends by surprise.

Roberts (1991: 29) notes that (40a) is judged as ungrammatical only under its non-volitional reading. Thus, *John amuses himself* is fine with the agentive reading of *amuse* as in *John amuses the kids with his stories*. Given Grimshaw's (1990) analysis of the DP subject in non-agentive EOPV constructions as properties of an individual, it must be *himself* who undergoes raising into [Spec, POVP] since *John* behaved as if

it did not bear the [+person] feature, as we argued earlier in section 3.2.The LF representation for *John amuses himself* under the non-volitional reading is in (41).

(41)



This representation is correctly ruled out by Condition C of the Binding Theory because *John* in [Spec, TP] is bound by *himself* in [Spec, POVP]. (40b) is correctly predicted as grammatical because the POVP projection is not superimposed above TP.

4.3. Scope Ambiguity

As first observed by Kim and Larson (1989), EOPVs also exhibit scope interaction between the causer subject and the experiencer object, as illustrated in (42a). Compare this example with (42b), which involves a non-experiencer-object psych verb and allows only the wide scope reading of the subject.

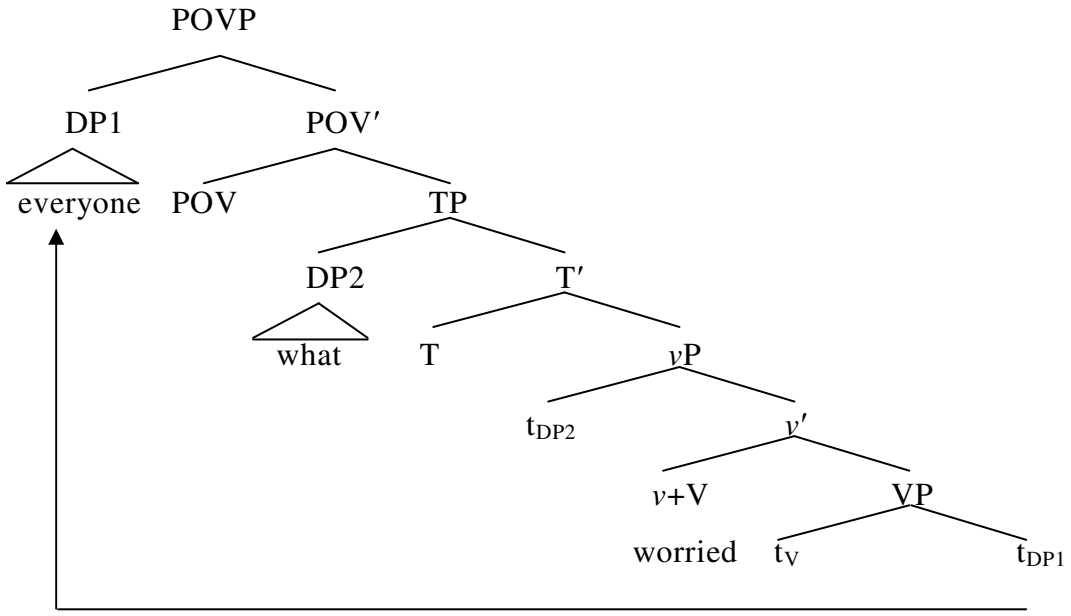
(42)a. What worried everyone? (what>every, every>what)

b. Who hit everything on purpose? (who>every, *every>who)

(Kim and Larson 1989: 681, 682 with a slight modification)

This special property also falls into place as a natural consequence of our analysis. The LF representation for the example in (42a) is shown in (43).

(43)



When the derivation has constructed the TP, *what* c-commands *everyone* in situ, deriving the wide scope reading of the *wh*-phrase. When the POVP is projected in covert syntax, *everyone*, which has now moved into the specifier position of POVP, c-commands the *wh*-phrase. This inverse c-command relation derives the narrow scope reading of the *wh*-phrase. The present analysis also correctly predicts that *everyone* cannot take scope over *who* in (42b) without the POVP. Again, the Quantifier Raising-based analysis would certainly provide the desired configuration for the inverse scope reading in (42a), but it would incorrectly predict (42b) to be scopally ambiguous.

4.4. Agentivity and Psych Effects

We have seen at the end of section 3 that the backward binding effect does not manifest itself when agentivity is forced on the surface subject in an EOPV construction. The relevant examples are repeated here as from (13a-d).

(44)a.* Each other's stupid friends eventually killed John and Mary.

b. * Each other's parents harmed John and Mary.

c. * Each other's teachers insulted John and Mary.

d. * Each other's swimming coaches plunged John and Mary into a deep depression.

We argued that backward binding effects are cancelled in this context due to the feature-based relativized minimality. If this account is correct, we predict that not only backward binding but also all the other "psych effects" examined in this section should disappear when EOPVs involve a volitional agent subject. This prediction is confirmed by (45a-f). ((45c) is from Roberts 1991: 30 with a slight modification.)

(45)a. * Friends of each other often pleased Tom and Sue on purpose.

b. * His_i friends amuses every $patient_i$ on purpose.

c. They often disturb each other on purpose while studying.

d. Who worried everyone on purpose? (who>everyone, *everyone>who)

5. Conclusions

This paper has proposed a hyperprojection analysis of EOPVs. According to this analysis, a surface experiencer moves into [Spec, POVP]. The POV head attracts the closest DP with the [+person] feature into its specifier so that the DP may serve the role of Pivot in the sense of Sells (1987). The present analysis provides a unified explanation of a wide range of otherwise mysterious configurational properties of EOPVs. To the extent that our analysis is tenable, two important consequences follow. First, within the generative framework, structural analyses of experiencer-object psych verbs that depend solely on their θ-theoretic properties/argument-structure, as

in Belletti and Rizzi (1988), Pesetsky (1990, 1995), Fujita (1993, 1996), have been dominant. This paper shows that this line of approach is hard to maintain. Rather, hybrid analyses that incorporate insights both from structural and discourse-related works that attempt to elucidate factors that contribute to the Pivothood of a surface DP (e.g., Zribi-Hertz 1989; Kuno and Takami 1993; Takami 1995) are necessary to accommodate a wide range of examples involving backward binding. Second, our analysis indicates that otherwise unpredictable syntactic behaviors of EOPVs can be solely reduced to their often-neglected cognitive-semantic characteristic as *subjective predicates* and its structural repercussion in the form of hyperprojection.

Endnotes

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［日本語要旨］

本論文では、従来構造的分析が有力とされてきた経験者目的語心理動詞に対し、新たに意味の面から光をあてることにより、その諸特性を導き出す。まず、Brekke (1976)の観察に基づき、この動詞クラスがその認知意味的性質上、主観的動詞群を形成することを確認する。次に、この観察を捉えるため、経験者解釈が合成的に認められる文の派生は従来仮定されている時制句上に視点投射を持ち、表層経験者がその指定部に論理形式で移動を受けると提案する。この分析によれば、逆行束縛効果、弱交差効果の消失、作用域の多義性などの一見特異な経験者目的語心理動詞の特性が統一的に導き出される。本分析が正しければ、二つの理論的帰結が得られる。第一に、これまで支配的であった構造のみに基づく心理述語分析には限界がある。第二に、心理動詞の特異性はすべてその内的主観性述語としての意味的性質及びその左方周辺部における統語的反映に還元される。[*Word Count* = 388 Words]