On Psych Verbs in English and Japanese**

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Introduction

Psychological verbs (henceforth psych verbs) like fear and frighten have presented a fundamental problem concerning the linking of thematic roles and syntactic positions. Before the birth of generative grammar, they were simply treated as transitive verbs with an object and a subject. However, as GB theory developed, psych verbs started attracting much attention as an interesting phenomenon exhibiting irregular mapping. A number of linguists have attempted to give a uniform account for this irregular mapping. This paper will discuss psych verbs in English and Japanese together with a review of the previous studies.

1. Psych verbs in English

A psych verb is a dyadic verb that possesses two different arguments, Experiencer and Theme. It is assumed that there are two classes of psych

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verb Subject-Experiencer (SE) verbs (ex. fear, enjoy, dislike, etc.) and Object-Experiencer (OE) verbs (ex. frighten, amuse, distress, etc.). Examples of each class are:

(1) (SE)  a. Tom fears ghosts.
          b. John enjoys comedy.

(2) (OE)  a. Ghosts frighten Tom.
          b. Comedy amuses John.

The linking problem is demonstrated by the fact that OE verbs have the Theme in the subject position and the Experiencer in the object position. Because it contradicts the thematic hierarchy, this violates the assumption that the relation between thematically specified arguments and syntactic position is uniform. The choice of a subject in GB is generally made in accordance with a thematic hierarchy, the highest argument on the hierarchy being chosen as subject. Recall the UTAH formulated by Baker, which claims that there is a systematic relation between thematic information and syntactic projections, as in (3):

(3) **Uniformity of Theta Assignment Hypothesis (UTAH)**

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

(Baker 1988:46)
The UTAH assumes that an argument that bears a particular thematic role is consistently mapped onto the same syntactic position at D-structure. For example, an Agent is always projected as subject. If this principle is valid for all the cases, things are straightforward. However, some groups of verbs exhibit irregular mapping, contradicting UTAH. Consider the following these examples:

(4) a. Ken fears ghosts.
    Experiencer Theme
b. Ghosts frighten Ken.
    Theme Experiencer

(4a) and (4b) share the same thematic roles (Experiencer, Theme), but differ in their syntactic representation. Thus, an alternative solution is necessary, one of which is the Thematic Hierarchy, which was originally presented by Jackendoff (1972) and has been restated by a number of scholars (Grimshaw 1990; Bresnan and Kanerva 1989; Pesetsky 1995). These new versions of the Thematic Hierarchy share a basic concept, but differ in some respects such as the labels of Themes and the types of Themes that are included. Grimshaw’s (1990) version of the Thematic Hierarchy is more similar to Jackendoff’s (1972) except that Jackendoff does not include the Experiencer, which is one of the main thematic roles in our discussion. Thus let us look at Grimshaw’s version here:

(5) (Agent (Experiencer (Goal / Source / Location (Theme))))

(Grimshaw 1990:8)
Unlike UTAH, the Thematic Hierarchy does not specify a one-to-one relation between a particular argument and a particular position, rather a relative mapping system along the Thematic Hierarchy—i.e., if the argument is placed higher in the thematic hierarchy, it will be realized higher in the syntactic position. However, in (2a) and (2b), the Theme is ranked higher than the Experiencer, contradicting the Thematic Hierarchy as shown in (5). Several solutions to this problem have been presented; we shall briefly look at the approaches of Belletti and Rizzi (1988), Grimshaw (1990), Jackendoff (1990), and Pesetsky (1995).

1.1 Belletti and Rizzi (1988)

In Belletti and Rizzi’s (1988) theory, psych-verbs are assumed to be unaccusative verbs, which lack an external argument and fail to assign case to D-structure objects. Belletti and Rizzi identify three classes of psych verbs in Italian:

(6) Class I: *temere* (fear)
    Gianni teme questo.
    "Gianni fears this"

(7) Class II: *preoccupare* (worry)
    Questo preoccupa Gianni.
    "This worries Gianni"

(8) Class III: *piacere* (like)
    A Gianni piace questo.
    "To Gianni pleases this"
According to Belletti and Rizzi's (1988) analysis, Class I psych verbs are equivalent to transitive structures in English, where the Experiencer is projected onto the D-structure subject position, and the Theme is projected onto the object position. They assumed Class II and Class III to be unaccusatives, though they appear to be different from their argument structures. In Class II, the Theme is the subject and the Experiencer is projected onto the object position; in Class III, the Theme is in the object position, but the Experiencer is assigned the case of an indirect object (dative).

As shown in (9), it is assumed that the Experiencer occupies a higher, c-commanding position than the Theme. The Experiencer is assigned case, and does not move, while the Theme moves to the subject position, which is empty. In sum, the Theme originates as an internal argument and moves to the subject position.

1.2 Grimshaw (1990)

Grimshaw's (1990) analysis has something in common with that of
Belletti and Rizzi (1988) in that some psych verbs are similar to unaccusative verbs, which will be taken up later. However, the main difference between Grimshaw (1990) and Belletti and Rizzi (1988) is Grimshaw's assumption that the Theme originates in the subject position, while Belletti and Rizzi (1988) claim that a Theme appears in the subject position only as a result of movement.

To summarise Grimshaw's analysis briefly here, she posits a version of the thematic hierarchy that is similar to Jackendoff's original assumption that an argument structure of a predicate is constructed based on the Thematic Hierarchy as shown in (5). Grimshaw suggests that the argument that bears a thematic role higher in the Thematic Hierarchy is also the most "prominent" argument aspectually. For example, for the verb "fear", the Experiencer is realized as subject, and the Theme as an object. This can be illustrated as follows:

(10) a. fear  (x  (y))
     Experiencer  Theme
   b. Tom fears snakes.

The mapping of "fear" complies with the principle. However, some verbs such as "frighten", "disturb" share the same thematic roles as "fear", but their syntactic representations are different, as follows:

(11) a. frighten  (x  (y))
     Experiencer  Theme
   b. Snakes frighten Tom.
(11a) contradicts the principle because the Experiencer, which is placed higher in the thematic hierarchy, is not realized as subject. Thus, Grimshaw proposes the aspectual analysis as a solution. She claims that the event can be broken down into subparts which are labeled 1 if it occurs in the first sub-event, and 2 if it occurs in the second sub-event. The argument labeled 1 is regarded as the most prominent. Grimshaw explains that a cause argument is always combined with the first sub-event, and is more prominent than other arguments which are associated with the second sub-event. She provides a representation for each type of verb, associating the thematic dimension and the aspectual dimension as follows:

(12) a. Transitive agentive
   (Agent (Theme))
   1  2

b. Ditransitive
   (Agent (Goal (Theme)))
   1 x x

c. Unergative
   (Agent)
   1

d. Psychological state
   (Exp (Theme))
   1  2

e. Psychological causative
   (Exp (Theme))
   2  1

(7)
As mentioned above, Grimshaw considers psych verbs to be quite similar to unaccusatives, because neither of them has the "maximally dominant" argument thematically, as shown in (12d) and (12g); this makes both types of verb lack an external argument, since an external argument requires the most dominant argument both in the thematic and the aspectual dimension. The main difference between Grimshaw (1990) and Belletti and Rizzi (1988) is that the former believes there is also a difference between psych verbs and unaccusative verbs—psych verbs have the most dominant argument in the aspectual dimension, while unaccusative verbs do not have the most dominant argument in either dimension.

1.3 Jackendoff (1990)

In contrast to Grimshaw (1990), Jackendoff (1990) claims that psych verbs have external arguments; this stems from the fact that he gives a different definition of external argument. We shall return to this point later.

First, to give a brief review of Jackendoff's approach to psych verbs, Jackendoff (1990) also supports the idea that the thematic hierarchy is
responsible for the choice of subject; however, the thematic hierarchy he posits consists of not only the θ-roles in the thematic tier such as Agent, Theme, Goal, etc., but also those in the action tier such as Actor or Patient. The θ-roles in the action tier are ranked higher on the thematic hierarchy than those in the thematic tier, which means that the choice of a subject is dependent on the θ-roles in the action tier.

Psych verb predicates have the θ-roles of Theme and Experiencer in the thematic tier, which correspond to Actor and Patient in the action tier. Therefore, the Theme/Actor argument, which is ranked highest, is selected as subject.

Now let us finally return to the issue raised at the beginning of this section: Jackendoff (1990) defines external arguments as those that bear the highest θ-role on the thematic hierarchy (Jackendoff 1990:269), and psych verbs predicates take an argument with the Actor θ-role, which is the highest on the thematic hierarchy. It is for the reason that he claims that psych verbs have external arguments.

1.4 Pesetsky (1995)

It has generally been assumed that there are two types of psychological verbs—one whose Experiencer appears in subject position as in (13a), namely "Subject Experiencer (SE) verbs", and another whose Experiencer appears in object position as in (13b), i.e., "Object Experiencer (OE) verbs"(see 1 for details):

(13) a. Ben fears ghosts.
    b. Ghosts frighten Ben.
Pesetsky (1995) reconsidered the $\theta$-role, Theme, with respect to SE and OE predicates, and claims that the $\theta$-role associated with the subject of the OE class and the one associated with the object of the SE class should not be treated as the same Theme $\theta$-role. He decomposes Theme into two entirely different roles, *Causer* in OE verbs, and *Target of Emotion* and *Subject Matter of Emotion* in SE verbs. The thematic hierarchy that Pesetsky postulates is as follows:

(14) Causer > Experiencer > Target / Subject Matter (T/SM)  

(Pesetsky 1995:59)

The $\theta$-grid for OE verbs is [Causer, Experiencer], and that for SE verbs is [Experiencer, Target/Subject Matter], which does not violate Baker’s Uniformity of Theta Assignment Hypothesis (UTAH) (see (3) above).

Pesetsky (1995) assumes that OE verbs in English are bimorphemic as in some other languages, such as Japanese,; however, the difference between English and Japanese is that OE verbs in English have a phonologically null causative morpheme, named CAUS by Pesetsky, while those in Japanese have an overt causative morpheme, as the following example shows:

that news-NOM Tanaka-ACC be sad-CAUSE-past  
"That news saddened Tanaka"


(Pesetsky 1995:7)
Pesetsky (1995) explains that OE verbs such as *annoy* are composed of a root √annoy which is actually an SE predicate, and a zero CAUS as shown in (16):

(16) OE: *annoy* [√annoy] φCAUSE]

The concept of zero CAUS is crucial for the T/SM restriction: the two distinct θ-roles, Causer and T/SM cannot occur together in the same predicate if it contains a zero CAUS, but they can occur together if it is a periphrastic causative *make* construction as shown in (17):

(17) a. The newspaper article annoyed me.
    b. *The newspaper article annoyed me at the government.
    c. The newspaper article made me annoyed at the government.

(White et al. 1997:696)

Thus, the imposition of T/SM restriction is totally dependent on whether there is a zero CAUS or not, which can be explained syntactically rather than semantically. First, Pesetsky gives two different tree diagrams to illustrate his accounts: one is the diagram of an OE predicate without T/SM, the other with T/SM.
(18) a. 

```
  VP  
  /\  
 /  \  
V'   PP  
   \  
  √annoyp P'  
     /\  
    DP   P'  
   /  \    
  Exper\   CAUS
  \    
   CAUS
```

b. 

```
  VP  
  /\  
 /  \  
V'   PP  
   \  
  √annoyp P'  
     /\  
    DP   P'  
   /  \    
  Exper\   PP  
   \  \  
    at [-affix]
     /\    
    DP   P'  
   /  \    
  Target\    CAUS
  \    
   CAUS
```

(Pesetsky 1995: 199)
As in (18), Pesetsky assumes that CAUS and Causer are situated lower in the PP than Experiencer. CAUS originates in the independent position of main verb, but it has a strong feature to be discharged, and must raise to V to adjoin to the head (e.g., √annoy). In (18a), there is no problem for CAUS to raise to √annoy, because there is nothing to intervene between them. By contrast, in (18b), the phrase head at intervenes between CAUS and √annoy so that CAUS cannot move to V without first adjoining first to at.

With respect to periphrastic constructions, Pesetsky argues that verbs such as make which are already semantically causative do not contain a CAUS affix. Therefore, no movement is intervened by T/SM. Thus, Causer and T/SM can occur together.

2. Psychological verbs in Japanese

Unlike English, which does not have an overt causative morpheme in either the SE and OE class, in Japanese the difference between the OE and SE class is encoded morphologically, and is thus directly observable. According to Katada (1994), some scholars assume that the equivalent OE verbs in Japanese are formed by adding the causative morpheme -(s)ase as follows (Fujita 1993; Grimshaw 1990; Kuroda 1965; and others):

(19) yorokobu

a. Taro-ga sono kekka -ni yorokon-da.

"Taro was pleased at that result"
b. Sono kekka- ga Taro- o yorokob - ase - ta
that result- NOM Taro-ACC be pleased-CAUSE-PAST
"That result pleased Taro"

However, Katada (1994) holds a slightly different view on this, namely that the V-(s)ase construction should not be regarded as the equivalent of OE verbs in English, rather as the equivalent of periphrastic make. If Katada's claim is supported here, a more accurate translation of (19b) in English would be "that result made Taro pleased" rather than "that result pleased Taro". This idea is parallel to Pesetsky’s (1995), claiming that "the examples in (131) [(20a)] are already more like the English periphrastic examples in (124) [(20b)] rather than the single verb examples in (120)-(122) [(20c)]" (Pesetsky 1995:46).

(20) a. [Zibuni-ga gan kamo sirena koto]- ga Hiroshii-o
refl- NOM cancer may have fact -NOM Hiroshi-ACC
nayam-ase-ta
worry-CAUSE-past
"The fact that himself may have cancer worried Hiroshi;"

b. Each other's remarks made John and Mary angry.
c. Each other's remarks annoyed John and Mary.

(extracted from Pesetsky 1995:43-45)

As evidence for her argument, Katada (1994) points out that the V-(s)ase construction can take the Target and Subject Matter without violating the T/SM restriction. Given that the T/SM restriction is valid, V-(s)ase is not
regarded as the equivalent to OE verbs in English, because it cannot take Target and Subject Matter, as shown below:

(21) a. The newspaper article annoyed me.
   b. * The newspaper article annoyed me at the government.
   c. The newspaper article made me annoyed at the government.

(White et al. 1997:696)

(22) a. sono sinbunkiji - ga watasi-o iratuk-(s)ase-ta
    the newspaper article NOM me-ACC annoy-CAUSE-PAST
   b. ********
   c. sono sinbunkiji-ga watasi-o seihu-ni iratuk-(s)ase-ta
    the article-NOM me-ACC government-DAT annoy-CAUSE-PAST

Following Katada's and Pesetsky's claim, OE verbs in Japanese are very rare; therefore an SE verb + (s)ase construction is used very often to make up for the lack of OE verbs in Japanese. There are also several SE verbs in Japanese, some of which are not found in English, which can be represented only in passive constructions. Table 1 gives the list of SE, OE verbs and periphrastic constructions in English and Japanese.
Table 1: The classification of psychological verbs in English and Japanese

<table>
<thead>
<tr>
<th>SE verbs</th>
<th>Japanese</th>
<th>OE verbs</th>
<th>Periphrastic make/(s)ase construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Japanese</td>
<td>English</td>
<td>Japanese</td>
</tr>
<tr>
<td>fear</td>
<td>obieru</td>
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<td>hate</td>
<td>kirau</td>
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<td>admire</td>
<td>sitau</td>
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<td>enjoy</td>
<td>tanosimiu</td>
<td></td>
<td></td>
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<tr>
<td>love</td>
<td>aisuru</td>
<td></td>
<td></td>
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<tr>
<td>(become annoyed)</td>
<td>nayamu</td>
<td>annoy</td>
<td>make-annoyed</td>
</tr>
<tr>
<td>(become disappointed)</td>
<td>otikomu</td>
<td>disappoint</td>
<td>make-disappointed</td>
</tr>
<tr>
<td>(become frightened)</td>
<td>obieru</td>
<td>frighten</td>
<td>make-frightened</td>
</tr>
<tr>
<td>(become pleased)</td>
<td>yorokobu</td>
<td>please</td>
<td>make-pleased</td>
</tr>
<tr>
<td>(become hurt)</td>
<td>kizutuku</td>
<td>hurt</td>
<td>make-hurt</td>
</tr>
<tr>
<td>(become amused)</td>
<td>tanosimu</td>
<td>amuse</td>
<td>make-amused</td>
</tr>
<tr>
<td>(become bored)</td>
<td>akiru</td>
<td>bore</td>
<td>make-bored</td>
</tr>
<tr>
<td>(become irritated)</td>
<td>iratuku</td>
<td>irritate</td>
<td>make-irritaed</td>
</tr>
<tr>
<td>(become disgusted)</td>
<td>mukatuku</td>
<td>disgust</td>
<td>make-disgusted</td>
</tr>
</tbody>
</table>

As Table 1 shows, only a subset of SE verbs in Japanese correspond to those in English, with the reminder OE verbs in English. We can predict that this difference may cause a learnability problem for Japanese learners of English.

3. Summary

This paper has examined psych verbs in English and Japanese. These verbs are all dyadic, but some groups of psych verbs exhibit an irregular
argument mapping which contradicts the UTAH hypothesis that a certain argument should consistently be projected in the same syntactic position. Several attempted explanations, including those of Belletti and Rizzi (1988), Grimshaw (1990), Jackendoff (1990) and Pesetsky (1995) are reviewed, followed by an analysis of psych verbs in Japanese. It is observed that most Japanese psych verbs are categorized as Subject-Experiencer psych verbs (SE verbs), in contrast to English which has more Object-Experiencer psych verbs (OE verbs) than SE verbs.

References