

## PSYCH VERBS

### ALTERNATIVE REALIZATIONS OF EXPERIENCERS: A PROBLEM FOR LINKING

Psych verbs show different syntactic realizations of the experiencer argument; this can either surface as subject or as object (data from Pesetsky 1995: 18):

- (1) a. **Bill** was very angry at the article in the *Times*  
b. The article in the *Times* angered/enraged **Bill**
- (2) a. **The paleontologist** liked/loved/adored the fossil  
b. The fossil pleased/ delighted/ overjoyed **the paleontologist**
- (3) a. Sue's remarks puzzled **us**  
b. **We** puzzled over Sue's remarks

On the assumption that psych verbs have a uniform  $\theta$ -grid consisting of an **experiencer** and a **theme** it looks as if linking (i.e. the mapping from lexicon to syntax) is arbitrary.

This poses a problem to any approach that takes linking to be governed by general principles and not by idiosyncratic properties of individual verbs.

For example, it challenges the *Uniformity of Theta Assignment Hypothesis (UTAH)*; Baker 1988) and the *Universal Alignment Hypothesis (UAH)*; Perlmutter and Postal 1984):

- (4) *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
- (5) *Universal Alignment Hypothesis*  
There exist principles of UG which predict the initial relation borne by each argument in a given clause from the meaning of the clause

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### SOLUTIONS TO THE PROBLEM

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#### I. AN UNACCUSATIVE SOLUTION: BELLETTI & RIZZI (1988)

They identify three classes of psych verbs in Italian:

(a) The *temere* class:

- (1) Gianni teme questo  
Gianni fears this

(b) The *preoccupare* class:

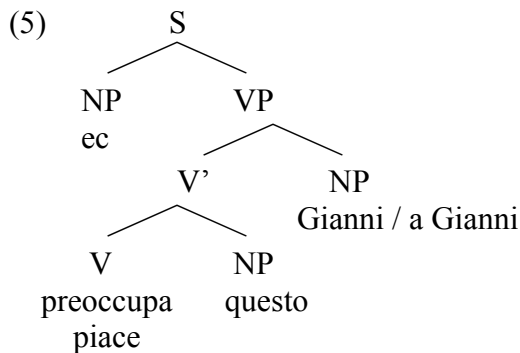
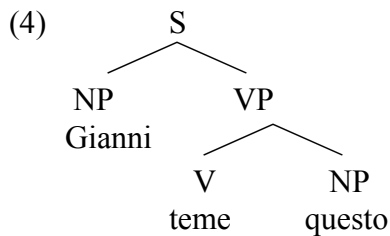
(2) Questo preoccupa Gianni  
 This worries Gianni

(c) The *piacere* class

(3) a. A Gianni piace questo  
 To Gianni pleases this  
 b. Questo piace a Gianni

They assume that psych verbs of the three classes have a uniform  $\theta$ -grid consisting of an **Experiencer** and a **Theme**. In class (a) the experiencer is the subject and the theme the object. In class (b) the theme is the subject and the experiencer the object. In class (c) the experiencer is dative and the theme is nominative, and both permutations are allowed.

They argue that the experiencer is a deep subject with verbs belonging to the *temere* class. Verbs of the *preoccupare* class and the *piacere* class are double object unaccusatives. The theme is generated as a sister to V and the experiencer is higher up. The proposed D-structures are as follows:



In (5) the verb directly  $\theta$ -marks the theme and V+theme compositionally  $\theta$ -marks the experiencer.

*Assumptions about the Mapping:*

Theta hierarchy (Belletti and Rizzi 1988: 344, fn. 36):

Agent > Experiencer >.....>Theme

Hypothesis:

*“syntactic configurations projected from a given  $\theta$ -grid should reflect the hierarchy, so that for every pair of  $\theta$ -roles in the  $\theta$ -grid, the higher role in the hierarchy is projected to a higher structural position”*

From the hierarchy and the hypothesis above the following statement follows:

- (6) Given a  $\theta$ -grid [Experiencer, Theme], the Experiencer is projected to a higher position than the Theme

Lexical Representations :

- |     |    |                     |                |                               |
|-----|----|---------------------|----------------|-------------------------------|
| (7) | a. | <b>temere:</b>      | $\theta$ -grid | [ <u>Experiencer</u> , Theme] |
|     |    |                     | Case grid      | [ _ _ ]                       |
|     | b. | <b>preoccupare:</b> | $\theta$ -grid | [Experiencer, Theme]          |
|     |    |                     |                |                               |
|     |    |                     | Case-grid      | [ ACC _ ]                     |
|     | c. | <b>piacere</b>      | $\theta$ -grid | [Experiencer, Theme]          |
|     |    |                     |                |                               |
|     |    |                     | Case-grid      | [ DAT _ ]                     |

The **theta-grid** is an unordered set of  $\theta$ -roles.  $\theta$ -grids have a minimal internal structure (Williams 1981, Stowell 1981): they single out (e.g. through underscoring) the external  $\theta$ -role, the  $\theta$ -role assigned to the subject position.

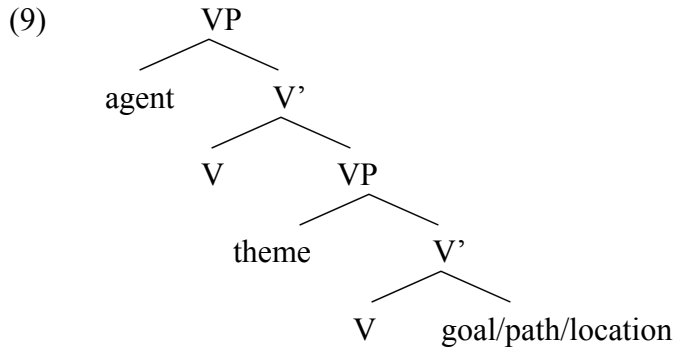
The **Case grid** is a specification of the inherent Cases idiosyncratically selected by the verb. Each inherent Case is  $\theta$ -related, i.e. it is linked to a specific slot in the  $\theta$ -grid.

The reason why the experiencer cannot be an external argument with class (b) and class (c) has to do with Case. Having inherent Case, the experiencer must be generated in a VP-internal position where it can be governed and assigned Case by the verb at D-structure.

As discussed in Levin and Rappaport Hovav (2005: 142-144), Belletti & Rizzi’s analysis of psych verbs belongs to the class of **prominence preservation hypotheses** according to which, the relations of semantic prominence as encoded in the thematic hierarchy should be maintained in syntax. Larson (1990: 601) calls such a statement a “Relativized Uniformity of Theta Assignment Hypothesis”.

The **prominence preservation (relative mapping)** approach is contrasted to the **equivalence class preservation (absolute mapping)** approach according to which there is a strict one-to-one mapping from semantic roles to syntactic positions. An example of the latter is Baker (1997:120-121) who argues that the rules in (8) map the semantic roles agent, theme and goal/path/location onto three configurationally defined positions:

- (8) a. An agent is the specifier of the higher VP of a Larsonian structure.  
 b. A theme is the specifier of the lower VP.  
 c. A goal, path or location is the complement of the lower VP.



Baker (1997) characterizes Belletti & Rizzi’s analysis of psych verbs as “..the most sophisticated, closely argued, and impressive use of the RUTAH”<sup>1</sup> (the experiencer is always higher than the theme, but it is the Subject with *fear* and (underlyingly) projected in the Indirect Object position with *frighten*). He suggests that absolute UTAH can be maintained if one adopts Dowty’s (1991) idea that basic thematic roles are prototype concepts rather than categorically defined ones. On this view, the subject of *fear* can be seen as a (proto-)agent, and thus projecting to the subject position. The special syntactic properties of experiencer objects of *frighten* can be derived if *frighten* has the following representation:

x cause [FEAR (of z) to go to y].

In this representation the stimulus is the causer and the experiencer is a type of goal, explaining why (i) frighten verbs have causative morphology in languages like Japanese, (ii) experiencer objects have dative case in many South Asian languages and (iii) psych predicates are nominal rather than verbal in e.g. Palauan, Warlpiri.

#### ARGUMENTS FOR AN UNACCUSATIVE ANALYSIS OF PREOCCUPARE VERBS

##### A) The subject is not a deep subject

-Anaphoric cliticization

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<sup>1</sup> RUTAH: Relativized UTAH.

Deep subjects can bind anaphoric *si*; derived ones cannot. This is a chain formation algorithm effect:

(10) \*NP<sub>i</sub>.....si<sub>i</sub>.....e<sub>i</sub>

*Temere*-verbs can bind *si*. *Preoccupare*-verbs cannot, providing evidence that they lack a deep subject:

- (11) a. Gianni *si* teme  
 Gianni REFL fears  
 'Gianni fears himself'  
 b. \*Gianni *si* preoccupa  
 Gianni REFL worries

*Focus effect*

With non-clitic anaphors such examples are better, especially under when the anaphor is stressed :

- (12) a. ?\*Gianni preoccupa se stesso  
 Gianni worries himself  
 b. Ultimamente, Gianni preoccupa perfino se stesso  
 Lately Gianni worries even himself

Analysis: the focused element receives a focal index at S-structure which is replaced at LF by a referential index. At the level where the chain formation algorithm applies there is no intervention effect:

- (13) SS: Gianni<sub>i</sub> preoccupa e<sub>i</sub> [NP<sub>F</sub> perfino se stesso]  
 LF: same with F=I

*Agentivity effect*

The examples become wellformed when the subject is an Agent:

- (14) Quei due *si* spaventano intenzionalmente ogni volta che ne hanno l' occasione  
 These two guys frighten each other intentionally every time that they have the opportunity

Belletti and Rizzi propose that since the subject is an Agent, it is a Deep Subject, i.e. agentive *preoccupare* verbs are transitive.

*-Arbitrary pro*

In Italian, arbitrary *pro* is possible only in deep subject position, not in derived subject position:

- (15) a. *pro* hanno telefonato a casa mia  
 Somebody telephoned to home my  
 ‘Somebody called my place’  
 b. \**pro* sono arrivati a casa mia  
 Somebody arrived at my place

B&R assume that *pro*-arb is licensed through theta-marking, hence it can only be licensed when the subject position is thematic.

*temere*-verbs allow *pro*-arb interpretations, *preoccupare* verbs don’t, supporting the proposal that only the former have a deep subject:

- (16) a. Evidentemente, in questo paese per anni *pro* hanno temuto  
 il terremoto  
 ‘Evidently, in this country people feared the earthquake for years’  
 b. \*Evidentemente, in questo paese per anni *pro* hanno preoccupato  
 il governo  
 ‘Evidently in this country people worried the government for years’

*-Causatives*

In Italian, structures containing a derived subject cannot be embedded under causatives (Burzio 1986):

- (17) a. Gianni ha fatto telefonare (a) Mario  
 Gianni made call Mario  
 ‘Gianni made Mario call’  
 b. \*Gianni ha fatto essere licenziato (a) Mario  
 Gianni made be fired Mario  
 ‘Gianni made Mario be fired’

*Temere* verbs can be embedded under causatives. *Preoccupare* verbs not:<sup>2</sup>

- (18) a. Questo lo ha fatto apprezzare/temere/ammirare ancora di più a Mario  
 ‘This made Mario estimate/fear/admire him even more’  
 b. \*Questo lo ha fatto preoccupare/commuovere/attrarre ancora di più a Mario  
 ‘This made Mario worry/ move/ attract him even more’

*-Passives.*

Structures with non-thematic subjects cannot undergo passivization. For example, German allows impersonal passives with unergatives but not with unaccusatives:

- (19) a. Es wurde getanzt  
 It was danced

<sup>2</sup> See Belletti & Rizzi (1988: 306-308) for a complication with *fare* + *Infinitival PPs*.

- b. \*Es wurde gekommen  
It was come

Some verbs of the *preoccupare* class allow passives:

- (20) a. Gianni è disgustato dalla corruzione di questo paese  
Gianni is disgusted by the corruption of this country  
b. Gianni è affascinato da questa prospettiva  
Gianni is fascinated by this perspective

Belletti & Rizzi argue that these are not true passives but rather they are adjectival passives. Their arguments are the following:

*Cliticization in reduced relatives*

Only verbal passives can bear a clitic in reduced relatives:

- (21) a. La notizia comunicata a Gianni  
the news communicated to Gianni  
b. La notizia comunicatagli  
The news communicated to him  
(22) a. La notizia ignota a Gianni  
The news unknown to Gianni  
b. \*La notizia ignotagli  
The news unknown to him

In preoccupare-constructions of the type illustrated in (20), the da-phrase can be pronominalized with *ne*, and the structure can occur as a reduced relative but *ne*-cliticization on the participle is impossible:

- (23) a. La sola persona che ne è affascinata  
the only person that by it is fascinated  
b. La sola persona affascinata da questa prospettiva  
the only person fascinated by this perspective  
c. \*La sola persona affascinatane  
The only person fascinated by it

*Auxiliaries*

‘Essere’ and ‘venire’ are compatible with verbal passives while only ‘essere’ is compatible with adjectival passives:

- (24) a. La porta è chiusa alla cinque  
The door is closed at five  
*The door is in the state of being closed at five/  
Somebody closes the door at five*  
b. La porta viene chiusa alla cinque  
The door come closed at five

*\*The door is in the state of being closed at five/  
Somebody closes the door at five*

*Temere*-verbs are compatible with ‘venire’, *preoccupare*-verbs not:

- (25) a. Gianni viene temuto da tutti  
Gianni comes feared by everyone  
b. \*Gianni viene preoccupato da tutti  
Gianni comes worried by everyone

*Morphological irregularity*

Some verbs of the ‘preoccupare’ class do not allow the regular participial form and appear instead in the irregular adjectival form:

- (26) a. \*Sono stufato/stancato/entusiasmato dalle sue idee  
I am tired/ excited/ by his ideas  
b. Sono stufo/stanco/entusiasta dalle sue idée

Assuming Kiparsky’s (1973) Blocking Principle, the existence of an irregular adjectival form blocks the regular participial form. But this explanation presupposes that the participles are adjectival. If they were verbal blocking would not be able to apply.

*-Binding*

The Experiencer in object position can bind an anaphor in the subject position:

- (27) a. Questi pettegolezzi su di sé preoccupano **Gianni** piú di ogni altra cosa  
These gossips about himself worry Gianni more than anything else  
b. Questi pettegolezzi su di sé descrivono **Gianni** meglio di ogni  
biografia ufficiale  
These gossips about himself describe Gianni better than any official  
biography

Belletti and Rizzi argue that these examples involve D-structure binding. They furthermore propose that Principle A is an ‘anywhere principle’. It can be satisfied at D-structure (as above), or at S-Structure (or LF) in cases like (28):

- (28) **They** seem to **each other** [t to be intelligent]

Principles B and C must apply at S-Structure (unlike A which is an anywhere principle) in order to account for the ungrammaticality of (29):

- (29) \*Himself<sub>i</sub> worries John<sub>i</sub>/him<sub>i</sub>



Examples like (30) are ruled out because of the circularity in the assignment of a referent to the anaphors (Higginbotham 1983):

(30) \*Each other<sub>i</sub> worry themselves<sub>i</sub>

B) The object is not a canonical object

*-Islandhood*

Objects of *temere*-verbs are transparent to wh-extraction. Objects of *preoccupare*-verbs are not:

- |      |    |     |           |          |          |           |               |
|------|----|-----|-----------|----------|----------|-----------|---------------|
| (31) | a. | La  | compagnia | di cui   | tutti    | ammirano  | il presidente |
|      |    | The | company   | of which | everyone | admires   | the president |
|      | b. | *La | compagnia | di cui   | questo   | spaventa  | il presidente |
|      |    | The | company   | of which | this     | frightens | the president |

A similar violation occurs with **ne**-cliticization, though the violation is weaker than with wh-phrases:

- |      |    |                |         |           |       |            |
|------|----|----------------|---------|-----------|-------|------------|
| (32) | a. | ?*Questo fatto | ne      | preoccupa | il    | presidente |
|      |    | This fact      | of it   | worries   | the   | president  |
|      | b. | ??Questo fatto | ne      | preoccupa | molti |            |
|      |    | This fact      | of them | worries   | many  |            |

C) Object properties of Experiencer objects

Accusative Case overtly manifested under cliticization (33) is a canonical object property.

- |      |        |           |           |
|------|--------|-----------|-----------|
| (33) | Questo | <b>lo</b> | preoccupa |
|      | This   | him       | worries   |

B&R suggest that this is not a structural Accusative. If it were, Burzio's Generalization, which they take to be a generalization about Structural Case and they formulate as in (34), would be violated:

- (34) V is a structural Case assigner iff it has an external argument

They propose that Experiencer objects of 'preoccupare'-verbs have inherent accusative.

They furthermore suggest that auxiliary selection is not an unaccusativity diagnostic but rather 'avere' is chosen if the verb has the capacity to assign accusative case (structural or inherent) and 'essere' otherwise.

## PROPERTIES OF PIACERE VERBS

The main properties of ‘piacere’ verbs:

- (a) The experiencer bears dative Case
- (b) The auxiliary selected is ‘essere’
- (c) The orders EXP-V-THEME and THEME-V-EXP are both equally possible

Property (b) classifies these verbs as unaccusatives

Property (a) follows from the unaccusativity of these verbs. Being unaccusative, they can’t assign structural Case. They assign inherent dative (unlike ‘preoccupare’ verbs that assign inherent accusative). Since they assign dative, they select ‘essere’ (unlike preoccupare verbs which select ‘avere’ because they assign accusative).

They link property (c) to the fact that the experiencer bears dative Case which is realized through the preposition/Case marker ‘a’. The idea is that dative or accusative realization at S-structure must be in the government domain of an appropriate Case marker, which is either the verb or an inserted preposition. At S-structure dative realization of the NP is insured by the governing preposition, and the **a** + **NP** dative experiencer is allowed to move around freely. On the other hand, inherent accusative does not involve a preposition, and the accusative experiencer is immobile as it has to remain in the government domain of the verb.

-In the order EXP-V-THEME the EXP occupies a Subject rather than a Topic position.  
Evidence:

a) In contexts where topicalization is deviant the order EXP-V-THEME is wellformed:

- (35) a. ??Tutti sono preoccupati perché a Gianni ho raccontato questa storia  
Everybody is worried because to Gianni I told this story  
b. Tutti sono preoccupati perché a Gianni piace la linguistica  
Everybody is worried because to Gianni pleases linguistics

b) While wh-extraction across a topicalized dative is weakly deviant, wh-extraction across a preverbal EXP is fully natural, just as across subjects:

- (36) a. ??I libri che a Gianni ho dato sono questi  
the books that to Gianni I gave are these  
b. I libri che a Gianni sono piaciuti sono questi  
The books that to Gianni are pleased are these  
c. I libri che Gianni mi ha dato sono questi  
the books that Gianni gave me are these

c) Left dislocation of bare quantifiers is ill formed while an experiencer quantifier in preverbal position followed by a dative clitic is well-formed:

- (37) a. \*A nessuno gli hanno detto di andare al diavolo  
 To nobody to him they said to go to hell  
 b. ?A nessuno gli piace esser mandato al diavolo  
 To nobody to him pleases to be sent to hell

The contrast is comparable to the one between French topicalized subjects and Fiorentino clitic doubled subjects:

- (38) a. \*Personne, il n'a rien dit  
 Nobody, he said nothing  
 b. Nessuno l'ha detto nulla  
 Nobody he said nothing

The fronted Experiencers, however, are not quirky subjects in the sense of Icelandic (Belletti and Rizzi 1988: 339 fn. 32).

See Grimshaw (1990), Pesetsky (1995) to be discussed below for arguments against Belletti and Rizzi.

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## 2. AN ARGUMENT STRUCTURE SOLUTION: GRIMSHAW 1990

Grimshaw develops a theory according to which argument structure does not consist of a set of arguments but is a structured representation over which prominence relations are defined. A-structures are organized according to the thematic hierarchy which is located at the interface between lexical conceptual structure and argument structure. The version of the thematic hierarchy she assumes is the following (Grimshaw 1990: 8):

- (39) (Agent (Experiencer (Goal/Source/Location (Theme))))

For experiencer verbs she assumes a uniform theta-grid consisting of an Experiencer and a Theme. *Fear* and *frighten* have an identical representation as far as thematic relations are concerned (p. 16):

- |      |    |                 |     |       |
|------|----|-----------------|-----|-------|
| (40) | a. | <i>fear</i>     | (x  | (y))  |
|      |    |                 | Exp | Theme |
|      | b. | <i>frighten</i> | (x  | (y))  |
|      |    |                 | Exp | Theme |

This explains, among others, why the experiencer object of *frighten*-predicates cannot be realized inside synthetic compounds, unlike the theme object of *fear*-predicates (p.15):

- (41) a. a god-fearing man / a fun-loving teenager  
 b. \*a parent-appealing exploit / \*a man-frightening god

She assumes that synthetic compounds have an argument-taking head, the non-head is theta-marked by the head, and elements inside the compound are theta-marked prior to elements outside the compound. Theta-marking respects the organization of a-structure, and the least prominent argument is theta-marked first, followed by the next higher up argument. In (41b) the experiencer cannot occur inside the compound because it is more prominent than the theme. Since the argument satisfied within the compound is lower in the a-structure than the argument satisfied externally, (41b) is illformed.

Grimshaw furthermore criticizes Belletti & Rizzi's (1988) analysis of the *fear* vs. *frighten* difference which treat it as a result of an arbitrary lexical stipulation. Recall that the experiencer is prevented from being realized as a subject in Belletti & Rizzi's theory because it is specified as [+acc] in the lexicon and hence must be realized in the government domain of the verb. But this fails to capture the generality of this pattern and the fact that it correlates with an aspectual difference. *Fear* verbs are states while *frighten* verbs are not.

She points out that the critical difference between *fear* and *frighten* is aspectual in nature. *Frighten* has a causative meaning, *fear* not. She proposes that the causal structure of a predicate also defines a hierarchy in which the Cause argument is most prominent (p.24):

- (41) a. (Agent (Experiencer (Goal/Source/Location (Theme))))  
 b. (Cause (other (.....)))

In cases of conflict, the most prominent argument on the aspectual/causal hierarchy determines syntactic subject realization. The difference between *The girl broke the window* and *The building frightened the tourists* is described as follows:

- (42) a. The girl broke the window  
 b. break (x (y))  
     Agent Patient  
     Cause...

The argument in subject position of *break* is more prominent than the object along both dimensions, since it is a cause and a thematic Agent.

- (43) a. The building frightened the tourists  
 b. frighten (x (y))  
     Exp Theme  
     Cause.....

The non-agentive *frighten* class is special because there is a conflict between the two hierarchies: the subject is most prominent in the causal hierarchy but not in the thematic hierarchy.

She suggests that this explains why the theme cannot occur inside synthetic compounds with the experiencer occurring outside in examples like (44b):

- (44) a. \*A child-frightening storm  
b. \*A storm-frightening child

She says: '[44a] is impossible because it requires the Theme to be theta-marked in a wider domain than the Experiencer, and [44b] is impossible because it requires the non-Cause to be theta-marked in a wider domain than the Cause. Since there is no way to theta-mark without violating one or the other of the two sets of prominence relations, there is no well-formed compound corresponding to non-agentive frighten' (Grimshaw 1990: 25).

**Why is she not encoding cause in the theta-hierarchy assuming something along the following lines?**

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

This is what Pesetsky (1995) proposes, as we shall see.

She argues explicitly against Pesetsky's (1987) proposal according to which the subject of *frighten* has the role 'cause of emotion' and the object of *fear* has the role 'target of emotion' by pointing out that under this proposal one would expect *frighten* verbs to behave like ordinary transitive verbs but they don't (with respect to nominalizations, passivization, anaphora). Moreover, if the subject of *frighten* is a cause of emotion and the object of *fear* is the target of emotion we would expect the two to co-occur. But they don't:

- (45) a. Mary was frightened *of the ghost* (Target of emotion)  
b. \*The movie frightened Mary of the ghost

[see Pesetsky and below for extensive discussion of the issues she raises]

**Question:** How would she deal with pure cause subjects of *break*?

- (46) a. The storm broke the window  
b. The wind opened the door

She can't call the subjects 'agents' or else she loses the distinction between causative verbs and agentive verbs like 'destroy' with respect to, among others, the causative-inchoative alternation and nominalizations.

A related issue is that while agentive *frighten* differs from non agentive-*frighten* in a number of ways, agentive *break* does not differ from non-agentive *break* in comparable ways. Grimshaw predicts the differences between agentive and non-agentive *frighten*, but is unclear what she would do with *break*.

### **External arguments**

For Grimshaw external argument is an argument with maximal prominence, i.e. prominence both in the thematic and in the aspectual dimension. External argument is an a-structure notion, i.e. it is not identical to D-structure subject. *Frighten* verbs have a D-structure subject, the theme/causer, but they lack an external argument since no argument has maximal prominence.

#### Evidence:

These verbs do not participate in the causative inchoative alternation:

- |      |                             |                  |
|------|-----------------------------|------------------|
| (47) | a. Someone broke the glass. | The glass broke  |
|      | b. Someone frightened John  | *John frightened |

**Quirky argument** realization occurs when the thematically most prominent argument is not the most prominent argument in the aspectual dimension. The realization of this argument is skipped in the aspectual analysis and is lexically specified/quirky.

Passivization and nominalizations are defined as lexical processes suppressing the external argument of a base verb, and hence *frighten* verbs cannot form passives and nominalizations since they lack an external argument.

### **Passives**

Grimshaw (1990: 113-118) argues that passives formed by *frighten*-verbs in English are adjectival passives, similarly to what Belletti & Rizzi (1988) claim for Italian.

- (48) Mary was frightened by the situation

For Grimshaw this is an adjectival passive.

#### Arguments

1) By-phrases do not necessarily indicate verbal passives since they co-occur with unambiguously adjectival passives:

- (49) Fred remains completely unperturbed by his student's behavior

2) The progressive, which is incompatible with states, is incompatible with the passive of *frighten*-verbs providing evidence that these are adjectival/stative:

- (50) a. The situation was depressing Mary  
b. \*Mary was being depressed by the situation  
c. \*Mary was being depressed about the situation

When a psych verb is agentive, the progressive is acceptable:

- (51) a. The government is terrifying people  
b. People are being terrified by the government

### Nominals

Non-agentive *frighten*-verbs do not form process nominalizations:

- (52) a. \*The event's embarrassment/humiliation of Mary  
b. \*The movie's entertainment/amusement of the children  
c. \*The drug's depression of the patients

vs.

- (53) a. John's (public) embarrassment/humiliation of Mary  
b. The clown's entertainment/amusement of the children  
c. No agentive counterpart of 'depression' because *depress* can't be agentive

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### 3. A FINER-GRAINED SEMANTICS SOLUTION: PESETSKY 1995

Pestsky argues against the unaccusative solution to *preoccupare* verbs by refuting some of Belletti & Rizzi's arguments for unaccusativity, namely passivization, arbitrary pro, binding.

#### Passivization.

-Recall that B&R claim that *preoccupare* verbs form adjectival passives. He argues that it is incorrect to claim that unaccusatives form adjectival passives. While some unaccusatives form adjectival passives in English, others don't:

- (54) a. elapsed time, departed travelers, newly arrived packages, newly appeared book, capsized boat, fallen leaf, collapsed lung, blistered paint, a failed writer, a deceased celebrity, a stalled machine, well-rested children, a risen Christ, a stuck window, drifted snow, a lapsed Catholic  
b. \*an already occurred event, \*recently left travelers, \*newly come packages, \*recently grown interest, \*a recently surfaced problem, \*a

recently descended balloon, \*recently peeled skin, \*often stunk paint  
 \*a recently died celebrity, \*a frequently paused machine

Later on (chapter 4, 113-119) he argues that the unaccusative verbs that form adjectival passives involve an external argument that in languages like French is realized as a reflexive clitic carrying the theta-role of *Ambient Causer (A-Causer)*: “...something intrinsic to the time causes it to elapse; some force intrinsic to the travelers provokes their departure, and some property of the boat causes it to capsize” [i.e. what Levin & Rappaport Hovav 1995 call ‘internal causation’]. Since English lacks reflexive clitics, verbs that could be construed with an A-Causer argument cannot surface as they would be unusable. But adjectival passives of such verbs are usable: “the A-Causer argument is reassigned to a by-phrase by the passivization, and eliminated by the adjectivization...” (p. 118).<sup>3</sup>

He then argues that the two arguments B&R provide to support the adjectival passive analysis of preoccupare verbs are incorrect:

*Reduced Relatives*

The argument from the ungrammaticality of *ne*-cliticization in examples like (23), repeated here, is irrelevant because *ne*-cliticization on participles in reduced relatives is always ungrammatical:

- (23) a. La sola persona che ne è affascinata  
           the only person that by it is fascinated  
       b. La sola persona affascinata da questa prospettiva  
           the only person fascinated by this perspective  
       c. \*La sola persona affascinatane  
           The only person fascinated by it

compare to:

- (55) a. La sola persona che ne è stata uccisa  
           The only person that by it was killed  
       b. \*La sola persona uccisane

(see Pesteky 1995 : 26 for more examples).

*Venire*

Recall Belletti & Rizzi’s paradigm:

- (25) a. Gianni viene temuto da tutti  
           Gianni comes feared by everyone

<sup>3</sup> While he assumes that adjectivization of passives do not always suppress the external argument, adjectivization of passives of verbs carrying an A-causer must suppress the external argument due to a filter \*[by reflexive] (Pesetsky’s filter 301) (Pesetsky 1995:119).



- b. \*Gianni viene preoccupato da tutti  
Gianni comes worried by everyone

Pesetsky argues that *venire* does not diagnose adjectival passives but stativity. The more eventive the *preoccupare* predicate becomes the more acceptable is *venire*:

- (56) a. (?) Il pubblico venne affascinato dalla conclusione di quell concerto  
The public came fascinated by the conclusion of that concert  
b. Gianni venne spaventato da questa prospettiva alle cinque  
Gianni came frightened by this perspective at five

*English: Grimshaw's progressive argument*

Recall that Grimshaw argues for the adjectival status of passives of *frighten* verbs on the basis of their incompatibility with the progressive in the passive. Pesetsky argues that many *frighten*-class verbs are stative and therefore incompatible with the progressive in both the active and the passive:

- (57) a. ??Odd noises were continually depressing Sue  
b. ??Sue was continually being depressed by odd noises

Predicates like *scare* that are non exclusively stative have an acceptable active and passive:

- (58) a. Odd noises were continually scaring Sue  
b. Sue was continually being scared by odd noises

As for Grimshaw's pair (50), repeated here, Pesetsky points out that the contrast is related to the fact that certain Exp-Subj statives permit the progressive, unlike their passives:

- (50) a. The situation was depressing Mary  
b. \*Mary was being depressed by the situation
- (59) a. Karen is finally understanding the proof  
b. Donald is finding your accusations ludicrous  
c. I think Bill is really liking this performance
- (60) a. ??The proof is finally being understood by Karen  
b. \*Your accusations are being found ludicrous by Donald  
c. \*I think that this performance is really being liked by Bill

The data in (59) and (60) show that progressive forms of stative participles require an interpretation (the existence of a judgment of some sort) that is incompatible with the passive. The data in (50) show the same. Hence, there is no argument for unaccusativity here.

See Pesetsky 1995: 33-37 for more evidence from V-raising in Dutch against the unaccusative analysis of *preoccupare* verbs.

### Arbitrary pro

Recall that Belletti and Rizzi claim that the lack of pro-*arb* interpretation of *preoccupare* verbs diagnoses unaccusativity. Pesetsky says that this is incorrect. Failure of pro-*arb* interpretations diagnoses (i) lack of agentivity with one category of pro-*arb* readings or (ii) lack of the theta role Cause with another category of pro-*arb* readings.

a) What Belletti and Rizzi (fn 6) call *existential reading* and Pesetsky (1995) calls *corporate reading* is an interpretation according to which *pro* in Italian or *they* in English refers to some socially designated group of people, e.g. governments, criminals, shopkeepers. This reading is possible only when the subject is agentive. It is impossible with non-agentive transitives:

- (61) a. \*They received a punch in the nose at the supermarket  
b. \*They received a phone call yesterday *same in Italian*

It is possible with agentive unaccusatives:

- (62) a. Sono venuti a riparare il lavandino  
‘Somebody came to fix the sink’  
[One repairman came from the shop]  
b. Sono andati a cercarlo a casa di sua madre  
‘Somebody went looking for him at his mother’s house’  
[One person went]

Hence, pro-*corporate* diagnoses agentivity and not unaccusativity.

b) What B& R call *generic reading* is illustrated in (63):

- (63) a. In Japan, they drive on the left  
b. In America, they are required to fill out income tax forms every year

The grammaticality of (63b) illustrates that deep objects can be 3<sup>rd</sup> person plural generics.

Pesetsky suggests that third plural generics are licensed as Agents, Patients, Experiencers but not as Causers:

- (64) a. \*In France, they worry you  
b. In France, they make you worry

### Binding

Backward binding is possible also in periphrastic causatives that clearly involve a thematic subject (see also Campbell and Martin 1989):

- (65) a. Each other's remarks made John and Mary angry  
 b. Pictures of each other make us happy  
 c. These stories about herself make Mary nervous  
 d. These rumors about himself made John behave more carefully  
 e. Pictures of each other caused John and Mary to start crying  
 f. Each other's criticisms forced John and Mary to confront their problems

Similarly with causative-give:

- (66) a. pictures of himself give Bill a headache  
 b. stories about herself give Mary the chills

Belletti and Rizzi's analysis cannot be extended to these cases.

See Reinhart & Reuland (1993) who suggest that these are logophoric uses of anaphors. This cannot be extended to the following, though (no WCO violation with *worry* similarly to *appeal to*, see Reinhart & Reuland 1993, Reinhart 2001):

- (67) a. His health worries every patient  
 b. His solution appealed to every student

Pesetsky finally argues that auxiliary selection classifies *piacere* verbs as unaccusative and *preoccupare* verbs as transitive.

Similar results yields ne-cliticization (G. Cinque personal communication to Pesetsky):

- (68) a. ?Ne sono piaciuti a Maria [solo due \_\_\_\_]  
 of them pleased Mary only two  
 b. \*Ne hanno preoccupato Gianni [solo due \_\_\_\_]  
 Of them worried Gianni only two

### A causative analysis

Pesetsky reanalyses Belletti & Rizzi's *Theme* role:

- The subject of Exp-Object *preoccupare* verbs bears the role *Causar*.
- The object of Exp-Subject verbs bears one of two roles: *Target of Emotion*, *Subject Matter of Emotion*.

Hence, no problem for UTAH.

*Causar vs. Target*

- (69) a. Bill was very angry at the article in the *Times* [Target]  
 b. The article in the *Times* angered Bill [Causar]

- (69a): Bill evaluated the article and formed a bad opinion of it.  
 (69b): The article caused Bill to be angry, but not necessarily at the article itself, he may be angry at the government.

*Causer vs. Subject Matter*

- (70) a. John worried about the television set [Subject Matter]  
 b. The television set worried John [Causer]

- (70a): The television set is the subject matter of John's worry.  
 (70b): The television set caused John to worry about something

Pesetsky's hierarchy (p.59):

- (71) Causer > Experiencer > Target/Subject Matter

Linking:

- (72) a. [VP [V' V Experiencer ] Causer]  
 b. [VP [V' V Target] Experiencer]  
 c. [VP [V' V Subject Matter] Experiencer]

Case theory derives promotion of Exp to subject position with Exp-Subj predicates and of Target/Subject Matter promotion with *appeal to /piacere* predicates. If V Case-marks the Target/Subject Matter, the Exp raises to subject position [Spec,IP]. If V Case-marks the Experiencer, then the Target/Subject Matter raises to [Spec,IP].

**Problem: The Target/Subject Matter restriction**

Causer and Target/Subject Matter cannot co-occur:

- (73) a. \*The article in the Times angered Bill at the government  
 b. \*The Chinese dinner satisfied Bill with his trip to Beijing  
 c. \*The problem of lexical entries bores John with his life as a linguist

The ungrammaticality is not a matter of semantic incoherence. In periphrastic causatives they can cooccur:

- (74) a. The article in the Times made Bill angry at the government  
 b. The Chinese dinner made Bill satisfied with his trip to Beijing  
 c. The problem of lexical entries made John bored with his life as a linguist

Pesetsky argues that the problem arises with predicates that are morphologically complex, i.e. they consist of a bound root and a zero morpheme and that it is caused by the Head Movement Constraint.

## Analysis

**1) Zero affixes and the Target/Subject Matter Restriction.** The Target/Subject Matter restriction obtains whenever the construction contains a zero affix: *SUG* or *CAUS*.

The Target/Subject Matter restriction is reminiscent of a constraint discussed in Higgins (1973):

- (75) a. John was proud (of his son)  
b. John's manner was proud (\*of his son)  
c. Bill was nervous (about the exam)  
d. Bill's behavior was nervous (\*about the exam)  
e. Bill was sad (about John)  
f. Bill's words were sad (\*about John)

The facts above show that the constraint does not arise only when the Cause role is implicated. The data below show that the constraint also arises with agentive adjectives:

- (76) a. John was careful (with the electrodes)  
b. John's manner was careful (\*with the electrodes)  
c. Sue was attentive (to every detail)  
d. Sue's behavior was attentive (\*to every detail)

Observation: there is a meaning component in the *b* examples lacking from the *a* examples: 'John's manner is proud' means 'John's manner *suggests* that he is proud'. This meaning is contributed by a null affix *SUG* ('*suggest*').

Proposal: Obj Experiencer verbs are derived from Subj Experiencer verbs with the addition of a causative morpheme *CAUS*.

## 2) Evidence for bound roots: Nominalizations

Nominalizations related to causative ObjExp verbs have non-causative force:

- (73) a. Bill's continuant agitation about the exam was silly  
b. Mary's constant annoyance about/at/with us got on our nerves

The meaning is 'be annoyed', 'be agitated' etc. This would follow if  $\sqrt{\text{amuse}}$ ,  $\sqrt{\text{annoy}}$  etc. are non-causative roots which are placed in two environments: *causative*, *nominalization*.

## 3) Evidence for zero morphemes: Nominalizations

The following patterns are observed:

- (74) a.  $[[\sqrt{\text{SubjExp-predicate}}_v] \text{ nominalizer}]$

- b. \*[[[√SubjExp-predicate v] 0<sub>CAUS</sub>]nominalizer]
- (75) a. \*The exam's continual agitation of Bill was silly  
 b. \*Our constant annoyance of Mary got on our nerves
- (76) a. [[√SubjExp-predicate v] nominalizer]  
 b. \*[[[√SubjExp-predicate v] 0<sub>SUG</sub>]nominalizer]
- (77) a. your anger  
 b. Your remarks were angry  
 c. Your remarks' anger
- (78) a. her optimism  
 b. Her expression was optimistic  
 c. \*her expression's optimism

Pesetsky proposes that these cases fall under **Myers's Generalization**:

- (79) *Myers's Generalization*  
 Zero-derived words do not permit affixation of further derivational affixes

Causatives (i.e. verbs entering the causative alternation) fall under this constraint as well:

- (80) a. \*Bill's growth of tomatoes  
 b. \*The mechanism's drop of the curtain  
 c. \*the thief's return of the money  
 d. \*inflation's shrinkage of his salary

Nominalizations, then, provide evidence for a zero *CAUS* or *SUG* morpheme.

#### 4) Analysis of ExpObj predicates

-Two types of SubjExp verbs in English:

- (a) Verbs like *like, hate, love, admire*: these denote evaluation of the target of emotion and are *states*.  
 (b) A few verbs like *worry, grieve, delight, puzzle* that can be affixed with *CAUS* and verbs like *fret, mourn, rage, enjoy* that cannot. These are *activities*.

#### Observation

-English: no freely occurring non-activity verbs denoting active emotions like anger, annoyance, satisfaction. Instead we find adjectives (be/become angry, sad, pleased, amused).

In other languages (French, Italian, Russian) these are reflexive:

- (81) a. Marie s'étonne du bruit qu'on fait sur cette histoire  
 Marie refl-amazes at the fuss that one makes about this story  
 'Marie is amazed at the fuss made about this story'
- b. Il presidente si entusiasma per la partenza dei Marines  
 The president refl excites at the departure of the Marines  
 'The president gets excited at the departure of the Marines'
- c. Ivan udivljaet-sja eë povedeniju  
 Ivan surprise-refl at her action

The reflexive disappears in nominalizations and ExpObj constructions, i.e. when further derivational morphemes are attached to the root.

### Analysis

-SubjExp verbs that express *active emotions* are inherent reflexive. They are realized as such in French, Italian, Russian. They can't be realized in English which lacks a reflexive clitic, unless they undergo further derivational processes like causativization, nominalization (where the feature [+reflexive] is not expressed).

-Reflexive clitics are external arguments which must be controlled by the internal argument, the experiencer in the cases under discussion, which raises to the Subject position.

-The reflexive clitic has the theta-role of *Ambient Causer (A-Causer)* which expresses the immediate internal source of emotion (this seems to correspond to the notion of *internal causation* of Levin and Rappaport 1995) while the subject of causatives (i.e. ExpObj) expresses elements that may stand at *any point* in the causal chain that leads to the emotion ((this seems to correspond to the notion of *external causation* of Levin and Rappaport 1995).

-There is a filter \*[by reflexive] which prevents realization of the A-Causer role in the passive. This explains the ungrammaticality of the following:

- (82) a. \*Bill was  $\sqrt{\text{annoyed}}$  by himself  
 b. \*Marie a été étonné par soi-même

Adjectival passives may (not must) suppress the external argument, and therefore adjectival passives are ok :

- (83) a. Bill was annoyed at John  
 b. Sue was quite appalled at the sight  
 c. Bill was very concerned about the price of beans

That these are adjectives is evidenced by the fact that they are blocked by corresponding adjectival forms:

- (84) a. \*Bill was angered at Sue  
 b. Bill was angry at Sue
- (85) a. \*Bill was embittered about Sue  
 b. Bill was bitter about Sue

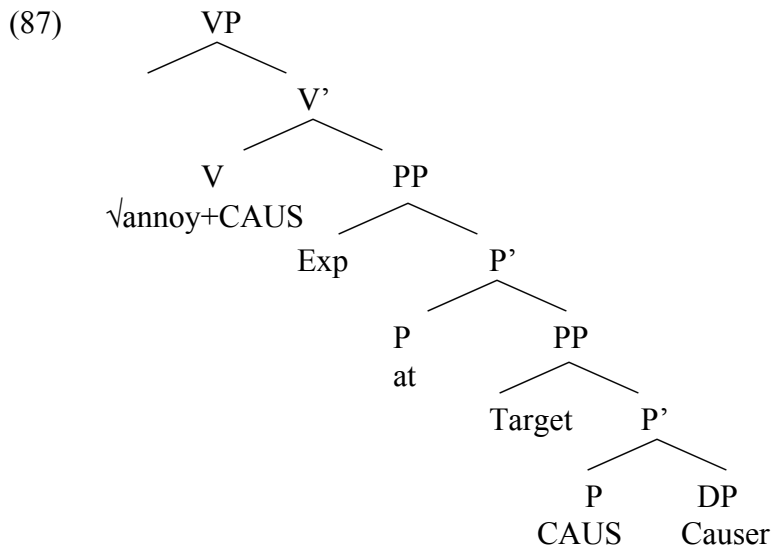
True unaccusative psych verbs lack an external argument, and adjectival passives cannot be formed:

- (86) a. \*Mary wasn't appealed to by the play  
 b. \*John was mattered to by this  
 c. \*Mary was occurred to by the same idea

Finally, ExpObj predicates are the result of affixation of CAUS to  $\sqrt{\text{annoy}}$ ,  $s'amuser$  etc. Affixation of CAUS results in suppression of the A-Causer argument because this cannot be controlled by the Experiencer since the causative morpheme adds the Causer argument.

### Final analysis

Pesetsky (1995: 198-210). Cascade syntax:



He, ultimately, assumes that affixal CAUS, CAUS<sub>aff</sub>, is affixed to V in the lexicon and theta-selects Causer. Prepositional CAUS, CAUS<sub>P</sub>, also theta-selects Causer. CAUS<sub>aff</sub> externally selects its Causer argument. CAUS<sub>P</sub> internally selects it. CAUS<sub>P</sub> moves to V and the intervening non-affixal preposition *at* is an intervener (the HMC) explaining the Target/Subject matter restriction. Movement of Causer from object to CAUS<sub>P</sub> to subject of V+CAUS<sub>aff</sub> is movement from a theta-position to a theta-position which is possible when the two theta-positions are semantically identical.





Lexicon marking: worry<sub>acc</sub> [+c]<sub>1</sub> [-c,+m] ([-m]<sub>2</sub>)

by

### Lexicon marking

Given an n-place verb-entry,  $n > 1$ ,

- a. Mark a [-] cluster with index 2.
- b. Mark a [+] cluster with index 1.
- c. If the entry includes both a [+] cluster a fully specified cluster  $[/\alpha,/-c]$ , mark the verb with the ACC feature.

### 3) The subject matter restriction

The cause role and the subject matter role cannot be realized simultaneously (the target/subject matter restriction) because they are 'indistinct'. The basic intuition here is that the two theta-roles are not sufficiently distinct, because the target-subject matter is a necessary (enabling) condition for the worry and could be construed as a sufficient-condition (direct cause) for the worry.

The same phenomenon is found in Hebrew with verbs of providing nutrition (or living):

- (94)
- a. ha-ikar pirnes et mishpax-to.  
The-farmer supported (acc) his-family
  - b. ha-mishpaxa hitparnesa me-ha-sade.  
The-family supported [itself] from-the-field (made its living of the field).
  - c. \*ha-ikar pirnes et mishpax-to me-ha-sade.  
\*The-farmer supported (acc) his-family from/of-the-field

### Cluster distinctness:

- a) Two indistinct  $\theta$ -clusters cannot be both realized on the same predicate.
- b) Distinctness: Two feature-clusters  $\alpha$ ,  $\beta$ , are distinct iff a. they share at least one feature, and b. there is at least one feature or value which they do not share.

[+c], [-m] are indistinct because they do not share at least one feature.

### 4) Derivations

#### CS merging instructions.

- a. When nothing rules this out, merge externally.
- b. An argument realizing a cluster marked 2 merges internally; An argument with a cluster marked 1 merges externally

-In *the world worried Lucie*, the [+c] cluster is realized externally and the unmarked experiencer must then be realized internally. This enables it to check the ACC feature.

-When *reduction* takes place, the external theta role and the ACC feature is suppressed. The experiencer must merge externally (since nothing rules it out) and if the subject matter is realized, it must be merged internally. This gives *Lucie worries (about the world)*.

If the [-m] cluster is realized (then the [+c] cluster cannot be realized). The [-m] cluster must merge internally (it has index 2). The experiencer [-c, +m] cannot merge externally because it must check the ACC feature of the verb (only the experiencer can do so because only fully specified arguments can do so). The [-m] cluster must move to satisfy the EPP. This is the unaccusative analysis of *the world worried Lucie* proposed by Belletti & Rizzi 1988.

### **Two pieces of evidence for the unaccusative analysis:**

a) Backward binding is licensed when the subject can be easily construed as a subject matter but not when the subject can be more easily construed as a causer:

- (95) a. His<sub>k</sub> health worried every patient<sub>k</sub>  
b. ??His<sub>k</sub> doctor's letter worried every patient<sub>k</sub>

b) Expletive 'it' shows up with 'worry' verbs:

- (96) It angered/surprised/scared/excited him [that he failed]

Note, however, that this 'it' could also be the 'extraposition it' which occurs with verbs like *prove* (thematic subject verbs):

*It proves nothing that John didn't come today*

What is French telling us about this fact?

[Numbering starts again from 1]

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**Core proposal**

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- Belletti & Rizzi's classification plus a split of Class II verbs:

Class I: Nominative experiencer, accusative theme.

*John loves Mary.*

Class II: Nominative theme, accusative experiencer.

*The show amused Bill.*

Class III: Nominative theme, dative experiencer.

*The idea appealed to Julie.*

Class III verbs are stative/non-agentive:

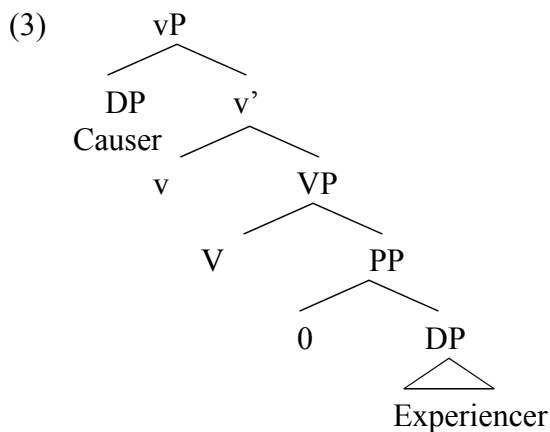
- (1) a. \*The solution is occurring to Mary right now.  
b. Bob (\*deliberately) mattered to his boss.

Class II verbs are ambiguous between an eventive and a stative reading:

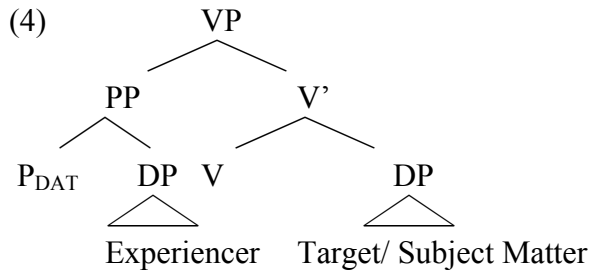
- (2) a. The noise is scaring Mary right now.  
b. John embarrassed Maggie (on purpose/unintentionally).

Mapping

Class II non-stative verbs. Transitive:



Class III verbs. Unaccusative:



He adopts from Pesetsky the view that Class II verbs are causative (when they are non-stative) and from Belletti & Rizzi 1988 and everybody following them that class III verbs are unaccusative. He takes the role “theme” to be Cause (with Class II verbs) and Target/Subject matter (with Class III verbs) (similarly to Pesetsky, Reinhart etc.).

Main claim:

(5) Experiencers are mental locations, i.e., locatives

(see representation of experiencers in trees above).

Two consequences:

- (6) a. All object experiencers are oblique (or dative).
- b. Experiencers undergo "locative inversion".

Exceptional properties of object experiencers follow from either (6a) or (6b).

(6a): No bare DP experiencer, apparent accusative object experiencers are introduced by a zero preposition. This will account for e.g. passives, islandhood, resumptive pronouns, clitic doubling. It builds on the idea of Belletti & Rizzi, that accusative experiencers have inherent Case.

(6b): Experiencers undergo movement of the locative inversion type either overtly (quirky experiencers) or covertly (at LF). This will account for e.g. binding and control. It builds on ideas by Stowell (1986), Campbell & Martin (1989) that experiencers act as subjects at some point in the derivation.

## Details

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The plot:

**First part of monograph: object experiencers are always prepositional/ bear inherent case**

### 1. Experiencers are realized overtly as locatives

First he motivates the claim that experiencers are locatives by looking at cases where experiencers are clearly realized as obliques.

*Subject experiencer constructions:*

English:

- (7) There is in me a great admiration for painters.  
(Arad 1998: 228, ex. 83)

Hebrew:

- (8) a. yeš be-Gil eyva gdola klapey soxney bituax.  
there-is in-Gil rancor great toward agents-of insurance  
'Gil has a great rancor toward insurance agents'  
b. yeš be-tox Rina tšuka amitit le-omanut.  
there-is inside Rina passion real to-art  
'Inside Rina there is a real passion for art'

Similarly, in French and Navajo.

Speas (1990): subject experiencers introduce a path, either as a goal or a source, unlike nonexperiencer subjects:

- (9) a. I got angry but it went away.  
b. ?? I laughed but it went away.  
(10) a. I tried to remember his name, but it wouldn't come to me.  
b. ?? I tried to write his name, but it wouldn't come to me.  
(Speas 1990, ex. 3,7)

*Object Experiencer Constructions:*

In languages where experiencers have oblique case, we find the following crosslinguistic picture.

- (11) a. In *many* languages, object experiencers *can* be oblique.  
b. In *some* languages, object experiencers *must* be oblique.

### *Hebrew*

- (12) a. ha-seret hipil paxad al Gil.  
the-movie dropped fear on Gil  
'The movie frightened Gil'  
b. ha-mar'e orer be-Gil hitragšut raba.  
the-sight evoked in-Gil excitement a-lot  
'The sight excited Gil very much'

### *French*

- (13) a. Jean donne du soucis à Marie.  
Jean gives some worry to Marie  
'Jean worries Marie'  
b. Il y a en Pierre un profond mépris de l'argent.  
there is in Pierre a deep contempt of money  
'There is in Pierre a deep contempt of money'  
(Bouchard 1995: 266, ex. 13c,d)

Similarly, Navajo (Jelinek & Willie 1996), Spanish (Franco 1990), Irish (McCloskey, p.c. to Landau), Scottish Gaelic (Ramchand p.c. to Landau). Interestingly, in some dialects of Spanish and in Irish, the experiencer *must* be oblique when the subject is a non-agentive causer.

### **2. Claim:**

(14) Universally, non-nominative experiencers bear inherent case.

### **3. Inherent case is oblique (prepositional Case)**

He assumes that oblique Case and inherent Case are the same thing. Inherent Case is theta-related Case subject to the following:

(15) Universally, inherent case is assigned by P.

Prediction: experiencers will not enter case-alternations (in e.g. passives) unless the language permits P-reanalysis.

### **4. Crosslinguistic arguments that apparent accusative Experiencers are oblique (introduced by a zero P)**

### **Core psych properties**

1) Experiencers are islands to extraction in Italian (when the verb is non-agentive), similarly to other obliques, unlike direct objects:

- (16) a. Il candidato di cui questa ragazza apprezza i sostenitori.  
 the candidate of whom this girl likes the supporters  
 b. \* Il candidato di cui questa prospettiva impaurisce  
 the candidate of whom this perspective frightens  
 i sostenitori.  
 the supporters (B&R 1988, ex. 86)

similarly for ne-cliticization

not when the subject is an agent:

- (17) La ragazza di cui Gianni spaventa i genitori perch   
 the girl of which Gianni frightens the parents for  
 gliela facessero sposare.  
 him.DAT-her.ACC make.2pl marry  
 'The girl whose parents Gianni frightens so that they will allow  
 him to marry her'  
 (Arad 2000, ex. 12b)

Similarly for English:

- (18) a. \*Which film was Dirk amusing to the director of  
 b. Which film did Sam entrust Marilyn to the director of?  
 (Roberts 1991, ex. 43)  
 c. ??Who did your behavior bother the sister of  
 d. Who did you tease the sister of?  
 (Johnson 1992, ex. 24)

2) Experiencers do not undergo the rule of Genitive of Negation in Russian (unlike direct objects and similarly to obiques):

- (19) a. \* Ètot šum ne pobespokoil ni odnoj devočki.  
 that noise.NOM not bothered not one girl.GEN  
 'That noise did not bother a single girl'  
 b. \* Ego neudacca ne ogorčila materi.  
 his failure.NOM not upset mother.GEN  
 'His failure did not upset mother'  
 (Legendre & Akimova 1993, ex. 40)

3) Experiencers in Greek (non-agentive contexts) undergo obligatory clitic doubling which does not force an anaphoric reading on the doubled DP, unlike direct objects which undergo obligatory doubling with a prominence effect (Anagnostopoulou 1999):



- (20) a. O Janis (tin) gnorise tin Maria s' ena party  
The Janis (cl-ACC) met the Mary-ACC in a party  
'Janis met Mary in a party'
- b. O Janis ?\*(tin) endiaferi tin Maria pano apo ola  
The Janis Cl-ACC interests the Mary-ACC above from all  
'Janis interests Mary more than anything'
- (21) a. Prin apo ligo kero eghrapsa mia vivliokrisia jia *ena kenourjo vivlio*  
*pano sto clitic doubling<sub>i</sub>*.  
'Some time ago, I reviewed a *new book* on clitic doubling'
- b. #Arghotera ton sinandisa ton sigrafea<sub>k</sub> se ena taksidhi mu  
#Later on cl-ACC met-I the author-ACC in a trip my  
'Later on, I met him-the author during a trip of mine'
- c. I kritikimu ton enohlise ton sigrafea<sub>k</sub>  
The criticism my cl-acc bothered the-author-acc  
toso oste na paraponethi ston ekdhoti  
such that subj complain to-the editor  
'My criticism bothered the author so much that he complained about it to the editor'

In both respects, they differ from regular accusative objects.

4) In Hebrew and Greek (Anagnostopoulou 1999), experiencer relativization (in non-agentive contexts) triggers an obligatory resumptive pronoun, unlike direct objects (which disfavor resumption) and similarly to oblique indirect objects.

- (22) a. ha-muamadim še-ha-toca'ot hiftiu \*(otam) lo  
the-candidates that-the-results surprised \*(them) not  
amru mila.  
said word  
'The candidates that the results surprised did not utter a word'
- b. ha-muamadim še-ha-itonay hiftia (otam) lo  
the-candidates that-the-journalist surprised (them) not  
amru mila.  
said word  
'The candidates that the journalist surprised did not utter a word'
- (23) a. Simpatho ton anthropo pu (?\* ton) sinantise o Petros  
Like-I the man that (cl-ACC) met-3sg the Peter-NOM  
'I like the man that Peter met'
- b. Simpatho ton anthropo pu \*(tu) estile o Petros to vivlio  
Like-I the man that Cl-GEN sent the Peter-NOM the book-ACC  
'I like the man that Peter gave the book'
- c. Simpatho ton anthoropo pu \*(ton) endiaferi i Maria  
Like-I the man that Cl-ACC interests the Mary-NOM  
'I like the man that Mary interests'

5) In English, experiencers behave like adjuncts rather than arguments w.r.t. extraction out of wh-islands (Johnson 1992):

- (24) a. ??Who did you wonder whether Sam knew  
b. ?\*Who did you wonder whether the book bothered?

6) In English, object experiencers cannot occur within synthetic-compounds, unlike theme objects of subject experiencer verbs (Grimshaw 1990):

- (25) a. a god-fearing man, a fun-loving teenager  
b. \*a man-frightening god, \*a parent-apalling exploit

7) They resist heavy-NP shift, similarly to goals in the double object construction:

- (26) a. \*These things bothered yesterday the man who visited Sally  
b. We told these things yesterday the man who visisted Sally

8) Italian: ungrammaticality of si-cliticization of non-agentive EO-predicates:

- (27) \*Gianni si preoccupa  
Gianni si worries  
'Gianni worries himself'

Belletti & Rizzi incorrectly link it to unaccusativity and the Chain formation algorithm. *Piace*-verbs permit si-cliticization:

- (28) Gianni si piace  
Gianni si appeal  
'Gianni likes himself'

Landou links the contrast between (27) and (28) to the following statement :

- (29) Reflexive *si/se* may absorb accusative or dative but not oblique Case

9) See the details of the analysis of Romance causatives (76-93).

## 10) Passives

Two types of languages:

- (30) *Psych Passives*

Type A Languages: Only eventive (non-stative) Class II verbs have verbal passive (English, Dutch, Finnish).

Type B Languages: Class II verbs have no verbal passive.  
(Italian, French, Hebrew)

-The unavailability of passives with stative Class II verbs leads him to propose that they are unaccusative.

-The availability of passives with Type A languages is linked to the availability of pseudopassives,

(31) This bed was slept in

or oblique passives (Finnish):

- (32) a. Pidän sinu-sta.  
like.1sg you.ELA  
'I like you'  
b. Sinu-sta pidetään.  
you.ELA like.PASS  
'You are liked'

Two strategies involved:

a. P-stranding: The preposition that governs the object is stranded and reanalysed with the verb.

*Pseudopassive*: [<sub>TP</sub> [<sub>DP</sub> Exp]<sub>i</sub> [<sub>T'</sub> Aux [<sub>VP</sub> [<sub>v</sub> V<sub>PASS</sub> + Ψ<sub>-</sub>] [<sub>DP</sub> t<sub>i</sub> ] ]]]

b. Pied-Piping: The preposition that governs the object is carried along to the subject position.

*Quirky passive*: [<sub>TP</sub> [<sub>PP</sub> Ψ<sub>-</sub> [<sub>DP</sub> Exp]]<sub>i</sub> [<sub>T'</sub> Aux [<sub>VP</sub> V<sub>PASS</sub> [<sub>PP</sub> t<sub>i</sub> ] ]]]

Otherwise, no passivization possible (Type B languages).

**Specifically:**

***Type A Languages: Eventive but no stative passives***

*-English*

Basing himself on the Grimshaw vs. Pesetsky debate discussed above, he points out that eventive class II verbs have a passive while stative class II verbs do not have a passive:

*eventive psych passives*:

(33) Sue was continually being scared by odd noises

similarly with *terrify, shock, surprise*.

*\*stative psych passives:*

- (34) a. \*We were escaped by Smith's name  
b. Panini was eluded by the correct generalization

In this respect, stative Class II verbs behave like Class III verbs that never form pseudopassives:

- (35) a. \*Mary wasn't appealed to by the play  
b. \*John wasn't mattered to by this  
c. \*Mary was occurred to by the same idea

Following Pesetsky, Landau proposes that stative Class II verbs are unaccusative and for this reason they are not passivizable. Evidence for unaccusativity:

Stative class II verbs don't form middles or *er*-nominals:

- (36) a. \*Great ideas elude/escape/concern/interest easily  
b. \*an eluder, \*an escaper, \*a concernner, \*an interester

Evidence for stativity: they do not form pseudoclefts, unlike eventive class II verbs:

- (37) a. \*What that solution did was escape/elude/concern Mary  
b. What that noise did was scare/surprise/ startle Mary

See the monograph for more evidence provided by the Pittsburghese dialect of English (Tenny 1998).

*-Dutch*

In Dutch, V-raising (a process optionally inverting the order of participle and auxiliary) applies to verbs but not to adjectives distinguishing verbal from adjectival participles:

- (38) a. dat hij gelachen heeft  
that he laughed has  
'that he has laughed'  
b. dat hij heeft gelachen
- (39) a. dat Jan de hele dag druk bezig is  
that Jan the whole day very busy is  
'that John is very busy the whole day'  
b. \*dat Jan de hele dag druk is bezig

Class II verbs can form psych passives that may undergo V-raising confirming their verbal status:

- (40) a. dat ik door het college geboeid werd  
that I by the classes fascinated became  
'that I got fascinated by the classes'  
b. dat ik door het college werd geboeid

Nevertheless, some class II verbs can't form participles that undergo V-raising, which means that they behave like adjectival passives and not verbal ones.

- (41) a. dat musicals Jan intrigeren  
that musicals John intrigued  
'that musicals intrigued John'  
b. dat Jan door musicals geintrigeert was/ \*was geintregeert  
that John by musicals intrigued was / \*was intrigued  
'that John was intrigued by musicals'

The verbs that resist verbal passive formation are stative, providing evidence that stative verbs class II verbs are unaccusative (and for this reason, they can't form verbal passives).

### *Finnish*

He draws on Pylkkänen (2000) who provides evidence for the fact that in Finnish eventive Class II verbs form passives and stative Class II verbs do not.

### ***Questions of mapping***

*Question.* Why is it that eventive class II verbs are transitive while stative Class II verbs are unaccusative?

*Answer.* Eventive Class II verbs have a Causer and an Experiencer argument, stative Class II verbs have a Causer and a Target/Subject Matter argument.

Thematic Hierarchy:

- (42) Causer>>Experiencer>> T/SM

Mapping determined by Relativized UTAH.

Stative verbs realize Exp and T/SM. T/SM must be lower than Exp. If Exp an internal argument, then T/SM also an internal argument. Hence the unaccusativity.

*Question.* Why can't the experiencer of Class II/III verbs project externally, like the experiencer of Class I verbs?

*Answer.*

(43) Inherent case is only assigned to internal arguments

(even though we don't know why this seems descriptively true).

(44) Universally, non-nominative experiencers bear inherent case.

*Question.* How are distinguished Class I verbs with an experiencer as an external argument and Class II/III verbs with an internal argument experiencer with inherent case?

*Answer.* It is not clear that one should draw a principled distinction. Verbs denoting nearly identical concepts map differently across languages (e.g. English *like* vs. Italian *piacere*).

***Type B languages: No passives***

*-Italian*

Recall Belletti & Rizzi's adjectival passive analysis of Italian psych passives on the basis of the following arguments: 1) Like adjectives and unlike verbal passives adjectival psych passives cannot host a clitic in reduced relatives. 2) Unlike verbal passives, psych passives are incompatible with *venire*. 3) Some class II verbs don't have regular participial forms but have irregular adjectival forms.

Pesetsky argued against 1) and 2). For 1) he said that their choice of clitics (*ne*-clitics) is irrelevant. For 2) he said that choice of *venire* diagnoses stativity and not adjectivehood.

Landau points out that argument 3 is strong though. Recall argument 3):

- (26) a. \*Sono stufato/stancato/entusiasmato dalle sue idee  
I am tired/ excited/ by his ideas  
b. Sono stufo/stanco/entusiasta dale sue idée

Assuming Kiparsky's (1973) Blocking Principle, the existence of an irregular adjectival form blocks the regular participial form. But this explanation presupposes that the participles are adjectival. If they were verbal blocking would not be able to apply.

Moreover, Belletti and Rizzi point out in a footnote that some psych verbs resist the regular 'by-phrase'/'da-phrase':

- (45) a. Gianni è interessato a/\*da Maria  
Gianni is interested to/\*by Mary  
b. Gianni è appassionato di/\*dalla poesia  
Gianni is fond of/\*by poetry

The occurrence of such prepositions strongly argues for the adjectival passive analysis. In English, such prepositions are excluded when the passive is clearly verbal as under the progressive:

- (46) a. Bill was enraged by/at totally innocent remarks  
 b. Bill was often being enraged by/\*at totally innocent remarks

In addition to these arguments Landau adds a further one. He points out that the prefix *ri-* 're' which only attaches to verbs, not to adjectives and adjectival participles, never attaches to Class II passive participles:

- (47) a. *ri-* attaches to class I passive participles  
*riamato* 'reloved', *riconsiderato* 'reconsidered', *ridetestato* 'redetested'  
*rivenerato* 'reworshiped', *ridimenticato* 'reforgotten'
- b. *ri-* does not attach to adjectives  
 \**rifelice* 're-happy', \**rifurioso* 're-furious', \**ristanco*, 're-tired',  
 \**rebello* 're-beautiful', *remalato* 're-sick'.
- c. *ri-* does not attach to class II passive participles  
 \**risconcertato* 'restartled', \**resorpreso* 'resurprised', \**riscioccato*  
 'reschocked', \**ridivertito* 'reamused', *ripreoccupato* 'reworried',  
*rieccitato* 'reexcited'.

#### *-French*

He follows Legendre 1993 (and critically reviews her arguments) that passives of class II verbs are adjectival. Plus, he adds *re-*prefixation which works like *ri-*prefixation as a diagnostic.

#### *-Hebrew*

Hebrew is like Greek, i.e. passives are synthetic and the verbal vs. adjectival issue does not arise. Hebrew Class II verbs fall under three classes:

- 1) Verbs that have no morphological passive: 'excite', 'impress', 'annoy', 'sadden' 'puzzle', 'amaze', 'calm down', 'shock', 'delight', 'despair' (see the monograph for the Hebrew forms).
- 2) Verbs that form morphological passive only in the agentive use: 'enchant', 'torment', 'stimulate', 'scare', 'insult', 'convince', 'incite' (see the monograph for the Hebrew verbs)
- 3) Verbs that form morphological non-agentive passive with *me* 'of, from': 'surprise', 'bother', 'embarrass', 'shock', 'charm', 'drive someone mad', 'dazzle' (see the monograph for the Hebrew).

Class 1 (many verbs) is as expected for the non-agentive reading. Not clear why they don't have the passive on the agentive reading. This relates to the broader question of the non fully productive Hebrew passive (like Greek....)

Class 2 (a few verbs) resists passivization when the external argument is a non-agent, whether this is introduced by *al-yedey* (the by-phrase) or *me* (from/ of):

- (48) a. Gil hu'alav                    al-yedey ha-bosit  
           Gil was-insulted        by        the-boss  
       b. \*Gil hu'alav                al-yedey/me ha-bdixa  
           Gil was insulted        by/of the joke

This is as expected. Many data from many languages discussed so far have shown that agentive psych verbs lose their psych properties and behave like ordinary transitives.

Class 3 (very few verbs) permits passivization with the ordinary by-phrase or 'from/of' on the agentive reading and passivization with 'from/of' on the non-agentive reading:

- (49) a. Gil hufta                    me/al-yedey    ha-orxim  
           Gil was surprised        of/by            the guests  
       b. Gil hufta                    me/\*al-yedey    ha-xadašot  
           Gil was surprised        at/\*by the news

The grammaticality of (49b) with 'me' is puzzling.

Landau argues that (49b) is a 'fake passive' i.e. these are really unergative anticausatives (like *John is annoyed at/surprised etc.*), i.e. they are formed in the lexicon with reduction of the external causer and promotion of the experiencer to the external argument position, along the lines of Reinhart. Normally this operation is marked with reflexive or inchoative morphology. In this case it is marked with the passive morpheme, in Landau's terms with '*abnormal passive morphology*'. Arguments:

- 1) They occur with *me-* which typically occurs with unergative psych-verbs in Hebrew .
- 2) The verbs that form these passives do not have morphologically normal unergative variant, which is explained if the passive in (49b) is the unergative variant.
- 3) Their subject behaves like a deep subject (and not like a deep object) with respect to unaccusativity tests.
- 4) They occur as control predicates similarly to their adjectival passive counterparts in English (*John was surprised to discover that the earth is round*).



## Peripheral Psych Properties

### 1) *The Target /Subject Matter restriction*

Three reasons why it is not a *core psych property*:

(a) It also characterizes agentive verbs:

- (50) a. \* We all tried to satisfy Bill with his trip to Beijing.  
b. \* Bill maliciously worried Mary about her future.  
c. \* The weather man deliberately frightens people of another tornado.

He writes:

*“This is significant because all of the core psych properties do not persist in agentive contexts; indeed, the agentive/non-agentive contrast was a recurring diagnostic for these properties in the preceding sections. Evidently, the T/SM restriction is not of a piece with these properties. Notice that this is unexpected under Pesetsky’s analysis, which does not assume a CAUS morpheme in agentive constructions”.*

(b) It is violable:

- (51) a. The rain discouraged us from our tasks  
b. Sue’s remarks inspired them to action  
c. These results inclined us toward the more difficult course  
d. Mary shamed us into going to the movies

Similar facts for Spanish, Greek.

(c) It is also found in some periphrastic causatives (in Dutch, English, Chinese, Japanese).

- (52) a. drie flessen wijn maakten me vrolijk (\*over het voorval)  
three bottles of wine made me merry (\*over the event)  
b. The publication of his prior conviction in the Boston Herald yesterday gave John a hard time (\*about his past)

(d) It is not specific to psych verbs. Recall the restriction noted by Higgins:

- (53) a. John was proud (of his son)  
b. John’s manner was proud (\*of his son)  
c. Bill was nervous (about the exam)

- d. Bill's behavior was nervous (\*about the exam)
- e. Bill was sad (about John)
- f. Bill's words were sad (\*about John)

*Possible explanation?* He cites McGinnis (2001) who argues that the T/SM restriction arises with lexically specified causative morphemes (which need to be adjacent to the root) and not with default causative morphemes.

## 2) *Lack of causative nominalizations*

Recall lack of causative force in nominalizations:

- (54) a. \*The exam's continual agitation of Bill was Silly
- b. \*Our constant annoyance of Mary got on our nerves

Landau argues (contra Grimshaw 1990, Pesetsky 1995<sup>4</sup>) that this should not be seen as a core property because agentive class II nominalizations are (most of the time) ill-formed too:

- (55) \*John's deliberate scare/fright/bother/terror of Mary

Not clear what unifies these cases with other illegitimate nominalizations (e.g. SUG contexts \**your remark's anger*, zero-derived causatives like \**John's growth of tomatoes*, double object nominalizations \**John's assignment of a sonata of Mary*).

## 3) *Backward anaphora:*

Recall the basic facts:

- (56) a. Each other's supporters worried Freud and Jung
- b. Each other's remarks annoyed John and Mary
- (57) a. \*Each other's parents harmed John and Mary
- b. \*Each other's teachers insulted John and Mary

Not clear that these cases fall under structural anaphora given examples with periphrastic causatives and even cases where there is no c-command at any stage of the derivation:

---

<sup>4</sup> Grimshaw assumes that the unaccusativity of class II verbs is responsible for their inability to nominalize. She assumes that agentive class II nominalizations are ok on the basis of examples like:

- (i) a. John's embarrassment/humiliation of Mary
- b. The clown's amusement/entertainment of the children

But other agentive nominalizations are out (see below).

Pesetsky treats the lack of nominalizations as a Myers's Generalization effect. But this is wrong because such nominalizations are universally out regardless of morphology (e.g. they are out in Hebrew where morphology is overt).

- (58) a. Each other's remarks made John and Mary angry  
 b. Pictures of each other caused John and Mary to start crying
- (59) a. The picture of himself in *Newsweek* shattered the peace of mind that John had spent the last six months trying to restore. (Pollard & Sag 1992, ex. 62c)  
 b. These nasty stories about himself broke John's resistance. (Bouchard 1992, ex. 38c)  
 c. These rumors about himself caught John's attention. (Iwata 1995, ex. 72c, due to D. Pesetsky)

Alternative: Logophoricity (Zribi-Hertz 1989, Sells 1987, Reinhart & Reuland 1993).

### **Landau's final picture of psych properties:**

#### *A Classification of Psych Properties*

#### **1) Core Properties**

##### a) All Class II Verbs (Non-Agentive)

1. Overt obliqueness of experiencer (Navajo, Irish, Scottish Gaelic).
2. Accusative\_ Dative alternations (Italian, Spanish).
3. Islandhood of experiencer (Italian, English).
4. PP-behavior in *wh*-islands (English, Hebrew).
5. No synthetic compounds (English).
6. No Heavy NP Shift (English).
7. No Genitive of Negation (Russian).
8. Obligatory clitic-doubling (Greek).
9. Obligatory resumption in relative clauses (Greek, Hebrew).
10. No *si/se*-reflexivization (Italian, French).
11. No periphrastic causatives (Italian, French).
12. No verbal passive in type B languages (Italian, French, Hebrew).

##### b) Class III and Stative Class II (Unaccusatives)

1. No verbal passive (English, Dutch, Finnish).
2. No periphrastic causatives (French, Italian dialects).
3. No forward binding .

## II) Peripheral Properties

1. The T/SM restriction.
2. No causative nominalizations.
3. Backward binding.

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### Second part of monograph: Experiencers are subjects

#### 1. Quirky Subjects at PF

A scale of quirky subjecthood depending on case:

(60) *Possible case of Quirky Subjects*

- a. All cases: Icelandic, Faroese, Greek.
- b. Dative only: Italian, Spanish, Dutch.
- c. No case: English, French, Hebrew.

On one extreme Greek (Anagnostopoulou 1999), Icelandic (Zaenen, Maling and Thráinsson 1985; Sigurðsson 1989, 1992, 2000; Barðdal 1999, 2001; Platzack 1999) and Faroese (Barnes 1986) have both dative experiencers (Class III verbs) and accusative experiencers (Class II verbs) as quirky subjects. These languages freely allow Exp>V>Theme orders (along with Theme>V>Exp orders), and fronted experiencers qualify as subjects with respect to a number of tests.

In the middle of the scale are Italian, Spanish and Dutch. These permit Exp>Theme permutations when experiencers are dative (Class III verbs) but not when they are accusative (Class II verbs).

Finally there are languages like French, English, Hebrew which never allow quirky subjects.

Landau proposes to express the above distinctions in terms of a quirky subject parameter stated as follows:

*Analysis of quirky subjecthood:*

(61) *A Feature Analysis of Morphological Case*

- a. Nominative = [+n,-a]
- b. Dative = [+n,+a]
- c. Accusative = [-n,+a]
- d. Genitive = [-n,-a]

(62) *Quirky Subject Parameter (QSP)*

At PF, [Spec,TP] must be marked:

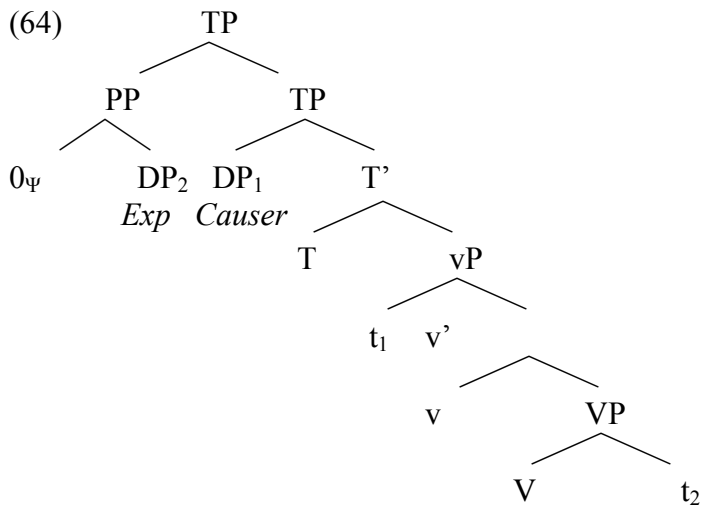
- a. [+n,-a] (English, French, Hebrew)
- b. [+n] (Italian, Spanish, Dutch)
- c. Anything (Icelandic, Faroese, Greek)

**2. Quirky Subjects at LF**

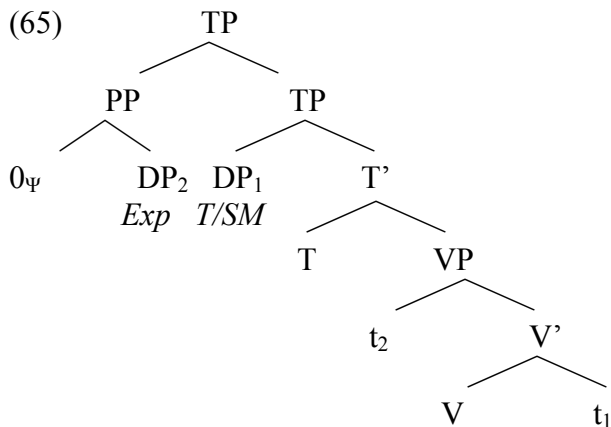
He proposes that even in languages lacking experiencer subjects experiencers become LF subjects, i.e. they raise to Spec,TP at LF:

(63) All experiencers are LF-subjects.

a. Eventive psych verbs: LF



b. Stative Psych Verbs : LF



### 3. Trigger for raising

The locative nature of experiencers. T serves as the spatio-temporal anchor of the clause. All temporal and locative descriptions must form a semantic and syntactic relation with T. If the semantic relation is predication or functional application, then the syntactic relation must be sisterhood (Heim & Kratzer 1998). Hence locative experiencers raise to T. This movement is semantically triggered.

### 4. Arguments for LF Quirkiness

#### 1. Control in secondary predicates:

*Generalization* (discovered by the Relational Grammar literature)

- (66) Given a structure [...X....[<sub>S</sub> PRO ....]], where X is a matrix argument and S is a non-finite adjunct:
- X may control PRO if X is a surface subject (deep or derived)
  - X may control PRO if X is a dative/accusative Experiencer
  - X may *not* control PRO if X is anything else (e.g. accusative Patient, dative Goal)

Note that experiencers do not need to occupy a quirky subject position in order to control. Thus, we have a disjunction:

- Either grammatically specified arguments control (subjects)
- Or thematically specified arguments do (experiencers)

Examples illustrating the generalization are provided from **Italian** (ex. (171) from Perlmutter 1984, p. 87 in the single spaced ms.). Also example (172) p. (88):

- (67) Prima di partire per l'estero, Giorgio mi sembrava un po' nervoso  
'Before PRO<sub>1/2</sub> leaving for abroad, Giorgio<sub>1</sub> seemed a bit nervous to me<sub>2</sub>'

**NB.** The same in Greek:

- (68) [PRO<sub>1/2</sub> Fevgontas gia to eksoteriko] o Gianis<sub>1</sub> mu<sub>2</sub> fanike ligo nevrikos  
"While leaving for abroad, Gianis seemed a bit nervous to me"

**Japanese** (examples (173) discussed on page 88, again due to Perlmutter 1984).

**French** (examples (174) page 88-89, due to Legendre 1989). Legendre (1993) discusses examples showing that the same pattern emerges with class II predicates:

- (69) Les soirées mondaines agacent Pierre<sub>1</sub> [avant PRO<sub>1</sub> même d'y avoir mis les pieds].  
'Society affairs irritate Peter even before attending them'  
(Legendre 1993, ex. 3c)

**Russian** (examples (176) p. 90 due to Legendre & Akimova 1993).

**Greek** (examples (177) p. 90 due to Anagnostopoulou 1999):

- (70) a. [Akugontas PRO<sub>1/\*2</sub> tin istoria] o Petros<sub>1</sub> arxise na tin antipathi ti Maria<sub>2</sub>  
“Hearing the story, Peter started disliking Mary”  
b. [Akugontas PRO<sub>2</sub> tin istoria ] o Petros arxise na tin goitevi tin Maria<sub>2</sub>

### Analysis

(p. 94-97)

#### *Assumptions*

1. Adjuncts attach at the TP level (sisters of T' or TP)
2. Adjunct control is a case of secondary predication (Williams 1992)
3. Predication requires mutual c-command

*Analysis:* the class of possible controllers of a TP-adjunct will be the DPs that mutually c-command it at the relevant level, taken to be LF within Minimalism (which dispenses with other levels). The single A-position that mutually c-commands a TP-adjunct is the Spec,TP position. Experiencers undergo LF-raising to spec,TP hence qualifying as controllers.

#### *Remarks*

- This is a structural analysis of adjunct control
- The controller must always be a subject

#### *Consequence*

In Italian quirky experiencers may control always, from subject or object position. Nominative themes, however, only from the subject position (p. 95-96; when they are in object position they check Case via Agree and never raise to subject position):

- (71) a. A Maria cominciò a piace la psicoterapia  
to Mary began to please the psychotherapy  
dopo aver parlato di se stessa così candidamente  
after having talked about herself so candidly  
'Psychotherapy began to please Mary after having talked about herself  
so candidly'
- b. ?La psicoterapia cominciò a piace a Maria  
The psychotherapy began to please to Mary  
dopo aver parlato di se stessa così candidamente  
after having talked about herself so candidly

- (72) a. ?La psicoterapia cominciò a piacere a Maria  
The psychotherapy began to please to Mary  
dopo essersi esaurita come trattamento  
after being-self exhausted as treatment  
'Psychotherapy began to please Mary after having exhausted itself  
as treatment'
- b. \*A Maria cominciò a piacere la psicoterapia  
To Mary began to please the psychotherapy  
dopo essersi esaurita come trattamento  
after being-self exhausted as treatment

Similarly in Kannada (ex. (186)).

## 2. Control in Super-Equi:

The Super-Equi construction involves control into subject clauses, intraposed (preposed) or extraposed. Super-Equi is not subject to the same restrictions as complement control. Control is sensitive to the position of the subject clause (intraposition or extraposition) and the thematic nature of the matrix predicate (psych or non psych).

The pattern:

- (73) a. Mary thought that it pleased John [PRO to speak his / \*her mind].  
b. Mary thought that it helped John [PRO to speak his / her mind].  
c. Mary thought that [PRO to speak his / her mind] would please John.  
d. Mary thought that [PRO to speak his / her mind] would help

When two potential controllers are present (*Mary, John*) and the first is contained in the clause immediately dominating the infinitive (*John*) while the other is higher up (*Mary*)

*Mary* cannot control PRO in the extraposition structure when the predicate selecting the infinitive is a psych verb (73a) while it can when the predicate is not a psych verb (73b) (*please* vs. *help*). The contrast is neutralized when the infinitive is in subject position (73c,d).

- (74) a. In a structure [...X...[it Aux Pred Y [<sub>S</sub> PRO to VP]]], where Y and S are arguments of Pred  
i) If Pred is psychological, Y must control PRO  
ii) If Pred is non-psychological, either X or Y may control PRO  
b. In a structure [...X...[<sub>S</sub> [<sub>S</sub> PRO to VP] Pred...Y]], either X or Y may control PRO.

(74 a-i): *Obligatory Control (OC)*



(74 a-ii): *Non-Obligatory Control (NOC)*  
(74b): *NOC*

Analysis from Landau (2001) that he basically adopts (and revises in one crucial respect, see below):

- (75) a. *The OC Generalization*  
In a configuration [...DP<sub>1</sub>....Pred...[<sub>S</sub> PRO<sub>1</sub>...]...], where DP controls PRO:  
If, at LF, S occupies a complement/specifier position in the VP-shell of Pred, then DP (or its trace) also occupies a complement/specifier position in that VP-shell
- b. *Extraposition*  
VP-internal clauses must be (right) peripheral at PF
- c. *Chain Interpretation*  
Any link in a chain must be an LF-visible link
- d. *Argument Projection*  
i. Experiencer is generated above Causer  
ii. Causer is generated above Goal/Patient/Theme

**NB:** He revises (75d-i): Experiencers are generated above Causers only with Class III and stative Class II verbs. With eventive Class II verbs, the experiencer raises at some point at LF, leading in a situation where it controls.....

Analysis of the pattern in (73)

-In (73a) the relevant configuration for OC is met. The infinitive is the causer generated below the experiencer. Since it is already in the right periphery, no need for extraposition is present. Both the DP and S are in the same VP-shell and OC takes place.

-In (73b) the infinitive is higher than its coargument DP by (75d-ii). Extraposition takes place to comply with (75b) leading to a chain with two links. If the VP-internal link is interpreted, we get OC. If the extraposed link is interpreted we get NOC.

-Intraped infinitives in (73c,d) are outside the VP. Hence, NOC is allowed regardless of the psych/non-psych nature of the predicate.

*Crucial evidence for extraposition: islandhood correlating with NOC:*

- (76) a. It would kill the workers<sub>1</sub> [PRO<sub>1</sub> to build this dam]  
b. What<sub>2</sub> would it kill the workers<sub>1</sub> [PRO<sub>1</sub> to build<sub>2</sub> t ?]  
c. It would kill the forest [PRO<sub>arb</sub> to build this dam]  
d. \*What<sub>2</sub> would it kill the forest [PRO<sub>arb</sub> to build t<sub>2</sub> ?]

Revision of Landau (2001) along the lines of the present analysis.

Crucially, the same control facts obtain with eventive predicates where the causer is generated higher than the experiencer:

- (77) a. It helped John<sub>1</sub> [PRO<sub>arb</sub> to praise him<sub>1</sub>]  
b. \*It annoyed John<sub>1</sub> [PRO to praise him<sub>1</sub>]

*Landau's proposal:* since the experiencer raises at LF it still c-commands the extraposed infinitive. Even though this is a NOC configuration of logophoric dependence, it follows the laws of picture anaphora where a clausemate subject is an obligatory antecedent, while there is no particular choice beyond the immediate clause:

- (78) a. John<sub>2</sub> thought [that Bill<sub>1</sub> disliked many pictures of himself<sub>1/\*2</sub>]  
b. John<sub>2</sub> thought [that Bill<sub>1</sub> said [that many pictures of himself<sub>1/2</sub> were found in the attic]]]

3. The fact that the judgments in (74) are reversed in (75):

- (79) a. What did everyone bring?  
b. Who brought everything?  
c. John brought the wine, Bill brought the flowers, Mary brought some cheese, ...  
d. John did.
- (80) a. What worries everyone  
b. Who does everything worry?

4. Lack of forward binding in:

- (81) \*John and Mary concern each other

Experiencers become subjects by a process of locative inversion (which explains why they become subjects even when an external argument is present).

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### Final Question: The Agentivity Puzzle

- (82) a. Agentive class II verbs are change-of-state verbs (i.e., accomplishments).  
b. Non-agentive class II verbs are states or achievements.

Evidence:

- (83) a. \* In less than 5 minutes, these jokes embarrassed Mary.  
b. In less than 5 minutes, John embarrassed Mary.
- (84) a. John almost frightened Mary (but at the last moment, he decided not to).

b. The movie almost frightened Mary (#but at the last moment, they cancelled it).

Accomplishments do not allow locative inversion:

- (85) a. \*On the top floor of the skyscraper broke many windows  
b. \*On the streets of Chicago melted a lot of snow

Hence, agentive verbs must project a (fully) transitive structure with a DP experiencer.

