

The Theta Phase: Successive Internal V-Merger
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1. Our major claims:

- (1) The external θ -role must be part of the verbal grid in the lexicon.
- (2) There is actually no valid argument requiring that the lower phase be ν P.
- (3) θ -assignment to arguments is implemented via successive re-merger of the lexical head V, until all its θ -roles are assigned.

2. Against severing the external role from the lexical verb

There are no thematic reasons to assume ν P

- I. Contra Kratzer (1996) and Marantz (1984), (a) the alleged restriction on the appearance of external arguments in non-clausal idioms is only a statistical tendency (*Lady Luck smiled on X*; Hebrew: *ha-goral he'ir le-X panim* (lit.) the fate lit up to X face 'X had good luck'; *ha-ru'ax nasa et X* (lit.) the wind carried X 'X disappeared') and (b) it can be accounted for based on two independently motivated cognitive principles that govern the formation of metaphors and idioms, without reference to external argument status (Nunberg, Sag and Wasow 1994; Horvath and Siloni 2002).

First, abstract situations (e.g. exerting influence) are described in terms of concrete ones (e.g. pulling strings) and not vice versa. Thus, we would not expect a language to have an idiom of the form 'divulge the information' meaning 'spill the soup'. Second, animate noun phrases tend to preserve their animacy in metaphoric and idiomatic meanings. Given that, as animates refer to concrete entities, they can hardly be used to describe abstract situations. Since external arguments are predominantly human (most often Agents), their occurrence in idioms is less frequent (similarly to predominantly human internal arguments, such as the Goal-Recipient).

Evidence for Nunberg, Sag & Wasow's (1994) claim

Parallel discrepancy with regard to the animacy of objects:

- (4) *hit*: nonidioms: out of 100 examples 47% animate objects
vs. idioms: out of 20 idioms 100% inanimate objects

- (5) Idioms based on *hit*+NP: hit the ceiling (get very angry), hit rock bottom (reach the lowest point/worst situation), hit the bottle (drink excessively), hit the bull's-eye (get something exactly right), hit the deck (take cover), hit the hay (go to sleep), hit the headlines (become public in media), hit the jackpot (win), hit the mark (get something right), hit the nail on the head (guess right, express the precise truth), hit the spot (something, such as food or drink, being enjoyable) hit the road (get going).

(6) Idioms based on kiss+NP: kiss the canvas (in boxing: fall down), kiss the dust (fall down due to being shot/hit, be slain), kiss NP's ass (flatter somebody), (Imp. form: curse), kiss the cup (drink), kiss the ground (admire, be grateful), kiss the rod (accept chastisement submissively), kiss something goodbye ((will) loose it).

II. The interpretive asymmetry between the object-V vs. subject-V relation follows from the semantic composition applying to syntactic structure. (Horvath and Siloni 2002)

Although it is indeed true that from the purely technical semantic point of view, there is no reason to expect any order imposed on the composition of different arguments, semantic theory does assume strict compositionality. Since external arguments are higher in syntactic structure than internal arguments even without little-*v*, strict compositionality would derive the asymmetry of composition in any case.

Little *v* fails to offer a definition of externality.

I. Unaccusatives vs. Theme-unergatives:

It doesn't define the external θ -role in terms of type of role: the Theme role, which is usually mapped internally (transitives, unaccusatives), is mapped externally by certain one place predicates, which we label Theme-unergative verbs (as the Hebrew *bahak* 'shined', *nacac* 'glimmered', or *hidhed* 'echoed').

Unlike the subject of unaccusatives (7), the subject of Theme-unergatives fails both tests detecting internally mapped arguments (8).

- (7) a. *naflu štey tmunot.*
fell two pictures
b. *ha-kise hitnadned le-dina.*
the-chair swung to-Dina
c. *le-mi hitkamta ha-simla?*
to-who wrinkled the dress

- (8) a. **bahaku štey mexoniyot.*
shined two car
b. **ha-ramkol hidhed le-dina.*
the-loud-speaker echoed to-Dina
c. **le-mi naceca ha-mexonit?*
to-whom glimmered the-car

- First, what could capture the different mapping of the Theme role under the little-*v* hypothesis?
- Second, Theme-unergatives do not have a corresponding transitive alternate while unaccusatives do (if a certain unaccusative does not have a transitive alternate in one language, it would have it in another language). The set of unaccusatives and that of Theme-unergatives can be distinguished neither by aspect nor by the type of causation the

eventuality involves (Reinhart 2000). If the only difference between the two sets is the existence of a transitive alternate, how can the little-*v* hypothesis account for the fact that in the case of unaccusatives the addition of the external argument via little-*v* is possible but not in the case of Theme-unergatives?

II. The Experiencer role

There are alternations involving the internal versus external mapping of the Experiencer role in *worry* type verbs (the Experiencer *Dina* is internal in (9a) and external in (9b) – the latter failing tests detecting internally mapped arguments (10)).

- (9) a. ha-ma'amar hirgiz et dina. (Hebrew)
 the-article irritated ACC Dina
 b. dina hitragza.
 Dina got+irritated
- (10) a. *hitragez mišehu. (simple inversion)
 got+irritated someone
 b. *ha-kelev hitragez le-dina. (possessive dative)
 the-dog got+irritated to-dina

Under the little-*v* approach, the Experiencer role is part of the lexical information of the concept in one instance (9a), and inserted by *v*P in the other (9b). It is hard to see what could capture that in a natural fashion.

The external argument participates in lexical operations

There is robust evidence that the external role (specifically Agent) participates in lexical reflexivization, reciprocalization, middle formation (Reinhart and Siloni 2005).

Interim Conclusion: The External role is assigned by the lexical verb, not by little *v*.

3. What about the advantages of the extra structure introduced by little *v*?

- (i) *v*P appears to avoid the problem of having to generate a contentless head V (in the Larsonian VP-shell) in order to provide a specifier for the external argument and a landing site for raising the lexical verb, necessary to derive word order in case of ditransitive verbs.

- (11)
$$[_{vP} [SPEC \theta_1] V+v [_{VP} [SPEC \theta_2] t [COMPL \theta_3]]]$$

$$\uparrow \text{—————} |$$

But: Why does V move? And what about the extension condition (Chomsky 1995)?

- (ii) *v*P allows to structurally distinguish between the subject of unaccusatives and unergatives.

Could (i) be accounted for by making use of multiple specifiers?

A multiple specifier approach (12) to the accommodation of three arguments would require a PF-linearization of V (to place V to the left of both internal arguments in ditransitives in English-type languages).

(12) [VP [SPEC θ_1] [SPEC θ_2] V [COMPL θ_3]]

But: There doesn't seem to be a non-ad-hoc linearization approach to the placement of V; moreover, V-movement is arguably syntactic: see VP coordination (13) and right node raising phenomena (14):

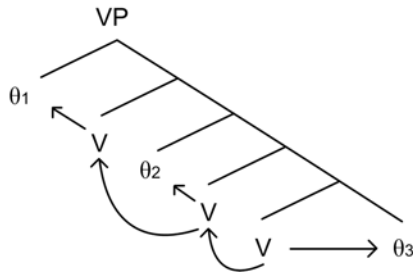
(13) Bill will give [a book to John] and [a scarf to Mary].

(14) Smith loaned, and his wife later donated, a valuable collection of manuscripts to the library.

4. Proposal: successive internal V-merger

θ -assignment by successive internal merger of the lexical verb (15)

(15)

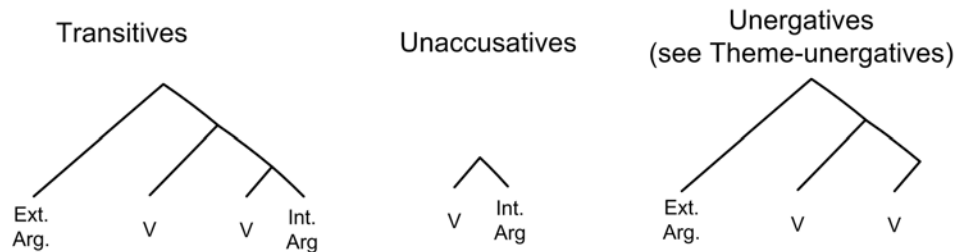


Each successive merger of V implements a θ -assignment relation with an argument that is merged with it by *External Merge* (i.e., an argument that is inserted into structure, not moved).

- Biunique relation between θ -assigner and assignee.
- Duality of semantics being reflected in the syntax, as before: argument structure – realized structurally by external Merge in the local domain of the θ -assigning head (θ -assignment in the "base" position); scope and discourse-related properties – involve displacement, the internal merge of phrases.
- Successive V-merger creates the lower phase that we label the theta phase.

5. Mapping the internal vs. external argument

(16)



- A θ -role of a two (or more) place predicate is either marked in the lexicon as internal or external, or is unmarked based on its feature composition (Reinhart's 2002).
- An Internal argument is merged with V that merges by external merge (i.e., from the numeration).
- An External argument is merged at the edge of the theta-phase.
- Unergatives always map their argument externally (on economy grounds).
- Unaccusatives are derived from their transitive alternates by decausativization, which reduces a Cause role; the remaining argument keeps the lexical marking assigned to the transitive input, and hence is merged internally (Reinhart 2002).
- Experiencers are unmarked for mapping and are therefore mapped externally if possible (if no other argument is marked as external) (Reinhart 2002).

REFERENCES

- Chomsky, N. (1995) *The Minimalist Program*, MIT Press, Cambridge, Mass.
- Horvath, J. and T. Sioni (2002) "Against the Little-*v* Hypothesis", *Rivista di Grammatica Generativa* 27: 107-122.
- Kratzer, A. (1996) "Severing the External Argument from its Verb", in J. Rooryck and L. Zaring (eds.) *Phrase Structure and the Lexicon*, Dordrecht: Kluwer, 109-137.
- Marantz (1984) *On the Nature of Grammatical Relations*, MIT Press, Cambridge, Mass.
- Nunberg, J., I. Sag and T. Wasow (1994) "Idioms", *Language* 70:3.
- Reinhart, T. (2000) "The Theta System: Syntactic Realization of Verbal Concepts", *OTS Working Papers in Linguistics*, University of Utrecht.
- Reinhart, T. (2002) "The Theta System: An Overview", *Theoretical Linguistics* 28: 229-290.
- Reinhart, T. and T. Sioni (2005) "The Lexicon-Syntax Parameter: Reflexivization and other Arity Operations", *Linguistic Inquiry* 36: 3, 389-436.