

Semantic Prominence and Argument Realization II

The Thematic Hierarchy: A Window into Semantic Prominence

The thematic hierarchy (TH) is often used to account for context dependence.

WHY? By its very nature it encodes prominence relations among a set of semantic notions; hence, an investigation into the nature of the TH has much to offer to the understanding of semantic prominence and argument realization, but will also consider it for its own sake.

THEMATIC HIERARCHY: A language-independent ranking of possible semantic roles, which establishes prominence relations among them and is formulated because it figures in the statement of linguistic generalizations.

The TH is a theoretical construct intended to overcome the limitations of traditional individual semantic roles, particularly with respect to the statement of linguistic generalizations, mainly related to argument realization—i.e., subject and object choice.

EXAMPLE: (inspired by Fillmore 1968) The thematic hierarchy in (3) together with the subject selection rule in (4) accounts for the grammaticality patterns in (2).

- (1) If there is an A [=Agent], it becomes the subject; otherwise, if there is an I [=Instrument], it becomes the subject; otherwise, the subject is the O [=Objective, i.e., Theme/Patient]. (Fillmore 1968:33)
- (2)
 - a. The door opened.
 - b. Dana opened the door.
 - c. The chisel opened the door.
 - d. Dana opened the door with a chisel.
 - e. *The door opened by Dana.
 - f. *The chisel opened the door by Dana.
- (3) Agent > Instrument > Theme/Patient
- (4) The argument of a verb bearing the highest-ranked semantic role is its subject.

WHY THE TH IS ATTRACTIVE: It allows for reference to arguments in terms of their relative ranking, e.g., the argument bearing the “highest”, “second highest”, or “lowest” ranked semantic role, obviating the need to refer directly to arguments by semantic role.

THE UBIQUITY OF THS:

- The TH figures in accounts of many phenomena (e.g., argument realization, morpho-syntactic processes) and in the statement of typological implicational generalizations.
- The TH receives support from many languages.
- The TH is adopted in various theoretical frameworks.

USUAL WORKING HYPOTHESIS:

One and the same TH is valid for all languages and relevant phenomena.

THE PROBLEM: A lack of agreement about the RIGHT TH:
proposed THs differ as to (i) the roles ranked and (ii) the ranking of these roles.

USUAL STRATEGY PROPOSED TO MAINTAIN THIS HYPOTHESIS:
Closer scrutiny of empirical evidence will provide arguments in favor of a particular TH:
e.g., the exchange between Bresnan & Kanerva (1989, 1992) and Schachter (1992).

HOWEVER: “There is reason for strong doubt that there exists a Thematic Hierarchy provided by UG. That seems to be the best explanation for the fact that after over three decades of investigation, nobody has proposed a hierarchy of theta-roles that comes close to working.” (Newmeyer 2002:65)

STARTING POINT: Much can be learned from notion “TH”; it shouldn’t just be dismissed.

RESEARCH STRATEGY: Restrict attention to one domain:
Uses of the TH involving argument realization broadly construed (cf. Dowty 1991);
leave open possibility that other appeals to the TH are relevant or related.

GOALS:

- Identify the roots of the controversies concerning the ranking of semantic roles through a careful comparative examination of existing THs.
- Understand what the rankings defining proposed THs are meant to represent and their connection to the generalizations they figure in.
- Improve understanding of semantic prominence as it figures in argument realization.

CONCLUSIONS:

- No single TH can cover all the generalizations that THs have figured in.
- THs may capture valid linguistic generalizations, but are derivative constructs.
- THs are appealed to in accounts of varied facets of argument realization, which are sensitive to different semantic dimensions; as these semantic dimensions might impose different rankings on arguments, different rankings are relevant to different facets of argument expression.
- Some apparent TH effects don’t truly involve semantic roles, but rather implicate other properties that largely correlate with semantic roles.
- Semantic prominence is partially attributable to structure of semantic representation.

1 The major motivation for use of a TH

Accounting for pervasive CONTEXT DEPENDENCE in lexical semantics-syntax mapping:
Particular semantic roles need not consistently be associated with a specific syntactic realization, with the exact realization depending on cooccurring roles.
TH is used to capture attested/preclude unattested role-grammatical relation mappings.

CONTEXT DEPENDENCE AMONG COARGUMENTS OF A VERB:

Priorities among a verb’s coarguments with respect to their potential realization.

- (5) An instrument can’t be realized as subject in the presence of an agent; see (2).
- (6) Agent > Experiencer > Theme (Grimshaw 1990)
 - a. The toddler (*deliberately) feared the lion.
 - b. The lion (deliberately) frightened the toddler.

- (7) Agent > Recipient > Theme (Speas 1990)
- a. Alex received a package.
 - b. Sam sent Alex a package.
- (8) Whether an “oblique” role can be the object of an applicative verb depends on cooccurring oblique roles.
 Recipient > Benefactive > Possessor > Causee > Instrument > Comitative
 (Polinsky & Kozinsky 1992: 440, (40))

CONTEXT DEPENDENCE ACROSS LANGUAGES:

Typological generalizations, applicable across languages, defining a set of possible languages with respect to the options for the realization of various semantic roles as subject and object.

Whether a given semantic role can be a subject (or object) in a particular language depends on what other roles can be subjects (or objects) (Dik 1978, 1997; Givón 1984, 1990, 2001).

- (9) ... For any language, if Subj or Obj function can be assigned to some semantic function S_j , then Subj or Obj can be assigned to any semantic function S_i , such that S_i precedes S_j in SFH [=Semantic Function Hierarchy, i.e., the thematic hierarchy] (for Obj assignment, $S_i \neq \text{Ag}$). (Dik 1978: 76)

NOTE: The ranking of semantic roles relevant for one form of context dependence may not be relevant for the other.

2 The many statements of the TH

Despite frequent appeals in various theoretical frameworks, there is little agreement about the “right” thematic hierarchy. Major points of divergence among attested THs include:

- THE SET OF SEMANTIC ROLES TO BE INCLUDED IN A TH:
 - Some THs include only “arguments”; others also include “adjuncts”.
 - Some THs appeal to finer-grained roles than others; e.g., some distinguish between spatial goals and abstract goals (i.e., benefactives, recipients), while others lump goals in with locations.
- THE CORRECT RANKING OF THESE ROLES:
 - The ranking of themes/patients in general.
 - The relative ranking of goals and locations with respect to themes.
 - The use of a total or partial ordering on semantic roles.

NOTES: In the THs below, “L” is location, “S” is source, “G” is goal; some oblique roles are omitted from bottom of Dik’s, Fillmore’s 1971, Givón’s, and Speas’ THs. Roles ranked together are separated by a slash. Dik’s “goal” and Fillmore’s “objective” are relabelled “patient” to facilitate comparison.

No mention of goal and location:

Belletti & Rizzi 1988: Agt > Exp > Th
 Fillmore 1968: Agt > Inst > Pat

Goal and location ranked above theme/patient:

Grimshaw 1990: Agt > Exp > G/S/L > Th
 Jackendoff 1972: Agt > G/S/L > Th
 Van Valin 1990: Agt > Eff > Exp > L > Th > Pat

Goal and location ranked below theme/patient:

Baker 1989: Agt > Inst > Th/Pat > G/L
 Baker 1997: Agt > Th/Pat > G/P/L
 Carrier-Duncan 1985: Agt > Th > G/S/L
 Dik 1978: Agt > Pat > Rec > Ben > Inst
 Fillmore 1971: Agt > Exp > Inst > Pat > G/S/L
 Jackendoff 1990: Act > Pat/Ben > Th > G/S/L
 Larson 1988: Agt > Th > G > Obl
 Speas 1990: Agt > Exp > Th > G/S/L

Goal above theme/patient; location ranked below theme/patient:

Bresnan &
 Kanerva 1989: Agt > Ben > Rec/Exp > Inst > Th/Pat > L
 Kiparsky 1985: Agt > S > G > Inst > Th/Pat > L
 Givón 1984: Agt > Dat/Ben > Pat > L > Inst

3 Preliminaries: Factoring out complicating issues

• SPURIOUS APPEALS TO THE TH

EXAMPLE 1: Nishigauchi (1984) uses the TH to account for control in subjectless infinitives; Ladusaw & Dowty argue control patterns are “ultimately determined by entailments of verbs together with principles of human action that exist quite apart from language” (1988:73).

EXAMPLE 2: An applicative morpheme only introduces an argument whose semantic role is lower on the TH than that of one of the verb’s own arguments (Alsina 1999; Bresnan & Kanerva 1992).

Motivating observation: Verbs whose only argument is a patient (e.g., *fall*) may take location but not benefactive applied objects.

(10) Agt > Ben > Rec/Exp > Inst > Th/Pat > Loc

Problematic data: Chicheŵa counterpart of ‘Jesus died for all people’ has a benefactive applied object (Alsina & Mchombo 1993: 36).

One solution: The applicative morpheme simply accompanies the addition of an argument (Alsina & Mchombo 1993).

A better solution: Benefactives can only be introduced if they have a coargument with control over the event.

Typically, benefactives need an agent coargument to meet this condition, but *die* is special: its theme assumes control over the event in the context of religious martyrdom (Van Valin & Wilkins 1996).

The *die* example violates the TH-based generalization, but not the deeper generalization.

The Lesson: A phenomenon may be governed by a semantic property which does not define a semantic role, although it may distribute across roles systematically.

- EXTENSIONS OF SEMANTIC ROLE LABELS

Rankings of roles can be compared only if role labels have the same extension.

EXAMPLE: The notion “goal”. Some researchers reserve this term for purely spatial goals; others use it for what might be called “abstract” goals, including recipients, benefactives, and experiencers; for still others it covers all these notions. Yet others dispense with an independent goal role, subsuming all types of goals under a broadly defined location role.

- INTERDEPENDENCE OF ROLE RANKING AND MAPPING ALGORITHM

Failure to recognize that a mapping algorithm and the ranking of roles in the accompanying TH are interdependent. Some conflicting rankings can be traced to different statements of the associated object selection algorithms. Once the difference in algorithms is recognized, the difference in ranking largely turns out to lack empirical consequences.

EXAMPLE: A hierarchy of the form ‘Agt > ... > Pat’ may be empirically equivalent to ‘Agt > Pat > ...’ with respect to object selection, if the former is paired with a bottom-up object selection algorithm and the latter with a top-down algorithm.

(11) Marlo put the snake in the garden.

- Bottom-up algorithm plus ‘Agent > Location > Theme’
- Top-down algorithm plus ‘Agent > Theme > Location’

- INTERDEPENDENCE OF ROLE RANKING AND SYNTACTIC THEORY

Assumptions about syntactic representation which accompany the THs may affect argument ranking (e.g., mono- vs. multi-stratal theories of syntax) since they may affect the semantic role/grammatical relation associations that need to be accounted for. Although there may be repercussions for ranking, they largely do not have empirical consequences.

EXAMPLE: A theme/patient can be expressed as subject of an intransitive verb or as object of a transitive. A monostratal theory requires the theme/patient to have subject and object realizations, while a multistratal theory, incorporating the Unaccusativity Hypothesis, simply requires an object realization. Since subject selection always works down the TH, a monostratal theory must ensure the theme/patient is ranked high enough to take precedence over other relevant roles; this concern doesn’t arise in multistratal theories.

4 A case study in semantic prominence: Ranking benefactives/recipients

Hierarchies differ as to:

- whether or not benefactives and recipients are ranked together.
- relative ranking of theme/patient with respect to these roles.

- Factors entering into joint ranking:

- When recipients and benefactives are expressed via a “core” grammatical relation (e.g., first object (English) or dative NP (German)), they cannot cooccur (**I mailed Mom Pat the letter*); thus, no need to distinguish these roles when ranked relative to, say, theme/patient.
- Other generalizations do distinguish between recipients and benefactives.
 - Polinsky & Kozinsky’s generalization about which role has precedence in access to direct object expression in applicatives
 - Dik’s generalization re likelihood NPs with particular roles are subjects or objects.

WHY? Perhaps, recipients are ranked above benefactives because recipients, but not benefactives, are arguments of their verb and, hence, more likely to become objects.

- Factors entering into ranking ‘theme/patient > rec/ben’ (Dik 1997)

- To capture the generalization that all languages allow patient direct objects, but only some allow recipient or benefactive direct objects (at least, in surface coding).
- In a monostratal framework, to capture the generalization that patients can be subjects in all languages, patient needs to be high on the hierarchy.

WHY? The ranking ‘theme/patient > rec/ben’ may arise as recipients and benefactives are usually expressed with dedicated “semantic cases”, unlike theme/patients. Hence, theme/patients are more likely to be basic objects across languages, and only languages with a way of “advancing” recipients and benefactives to object will have them as objects.

- Factors entering into ranking ‘rec/ben > theme/patient’ (Givón 1984)

This ranking expresses the observation that recipients and benefactives often usurp certain “coding” properties of objects when they cooccur with patients.

WHY? Recipients and benefactives are typically filled by animate NPs, unlike theme/patients. Animates are more likely to be topics than inanimates, and topical NPs tend to show these coding properties.

Ultimately, the observations underlying this ranking follow from animacy considerations; semantic roles—and, hence, the TH—are only indirectly implicated (cf. Evans 1997).

5 The TH in argument realization

The TH is used to define constraints on argument realization, allowing attested and precluding unattested pairings of semantic roles with grammatical relations.

INGREDIENTS OF A TH: A set of semantic roles and a prominence relation define over them.

Semantic roles, as labels for classes of arguments, are now generally considered derived notions; thus, a TH, as it is composed of semantic roles, should be derived, too.

There are two approaches to defining semantic roles in terms of more basic elements of lexical semantic representation:

- via event structures (roughly, predicate decompositions): a relatively structured form of lexical semantic representation.
- via lexical entailments: a relatively unstructured form, often associated with a prototype approach to semantic roles.

The two approaches to semantic roles dovetail with two understandings of “prominence” in a TH (Bresnan & Kanerva 1989:23-24):

- An encoding of relations of “semantic” structural prominence among a verb’s arguments.
- A “salience” hierarchy, sometimes taken to reflect relative topicality of arguments.

5.1 The TH as a Reflection of Event Structure Prominence

ONE UNDERSTANDING OF THE DERIVATIVE STATUS OF SEMANTIC ROLES:

Semantic roles are labels for argument positions in an “event structure”

- a structured representation of an event, usually a predicate decomposition.

Prominence relations among arguments, defined over positions in the event structure, induce a ranking of the corresponding semantic roles, giving rise to a TH.

- (12) [[x ACT] CAUSE [BECOME [y <STATE>]]]

The TH represents the relative depth of embedding of semantic roles in the event structure (e.g., Baker 1996, 1997; Jackendoff 1990).

- (13) Order the A-marked arguments in the action tier from left to right, followed by the A-marked arguments in the main conceptual clause of the thematic tier, from least embedded to most deeply embedded. (Jackendoff 1990:258, (29))

THE RESULTING CONCEPTION OF THE TH:

The TH reflects the internal “structure” of verb meaning.

This conception of the TH has also been given a second grounding:

It reflects order of semantic composition of arguments with their verb (Larson 1988).

- (14) ... the hierarchy of Th-roles defines the order in which arguments are semantically combined with their predicates. Namely, a verb is first combined with the argument linked to its innermost Th-role, the resulting predicate is combined with the argument linked to its next lowest Th-role, and so on. (Kiparsky 1985:30)

Certain linguistic phenomena, such as compound formation and noun incorporation, can be viewed as direct reflections of order of composition. Asymmetries in these phenomena are then explained by appeal to the TH.

- (15) a. story-telling to children (theme left member of compound)
b. *children-telling of stories (recipient left member of compound)

- (16) Recipient > Theme

BUT: To be meaningful, order of composition must reduce to depth of embedding.
WHY? Alternative orders of composition of the arguments of a single predicate
have no detectable semantic effect (Kratzer 1996).
(In fact, this idea is instantiated in many syntacticized semantic representations,
where each argument of a verb is associated with its own verbal head.)

Not surprisingly, some researchers suggest the TH reflects both depth of embedding and
order of argument composition (Kiparsky 1997; see also Wunderlich 1997a, 1997b).

CONSEQUENCES OF THIS CONCEPTION FOR ARGUMENT REALIZATION

- THE STATUS OF THE TH: The TH is not an independent construct, but a generalization
over possible event structures; its statement is a matter of convenience.

- THE SEMANTIC ROLES THAT FIGURE IN THE TH:

- Since this conception is defined with respect to verbs and their arguments, it can only
apply to arguments—and not adjuncts—and then only to coarguments of a verb.

- Each event structure defines a set of roles that may cooccur as arguments of verbs. The
inventory of event structures determines the possible sets of cooccurring roles, and, thus,
what sets of roles may be ranked. There is no way of ranking noncooccurring roles.

- The roles will be coarse-grained, as they name positions in an event structure, and there
are taken to be fairly few event structures involving a small set of rather general predicates.

- A role in such a TH may stand in for several related finer-grained roles in other THs.

EXAMPLE: The first argument of the frequently posited predicate CAUSE is taken to define
a semantic role. This role is usually identified as “agent” (e.g., Jackendoff 1972), but it is
probably more accurately labeled “causer” since the first argument of CAUSE is not filled
only by agents in a strict sense; for some verbs, it could also accommodate natural forces
and certain instruments (Baker 1997; Van Valin & Wilkins 1996).

- THE PLACE OF SUCH A TH IN ARGUMENT REALIZATION:

This conception is often coupled with an assumption that prominence relations between
arguments in event structure are “preserved” in the syntax (e.g., Marantz 1993), so that
semantically more prominent arguments are mapped onto structurally higher syntactic po-
sitions (Belletti & Rizzi 1987; Carrier-Duncan 1985; Larson 1988; Ostler 1979).

(17) Constituent structure at D-structure represents (the) semantic compositionality (of
events). (Marantz 1993:143, (51))

(18) ... the lowest role on the Thematic Hierarchy is assigned to the lowest argument in
constituent structure, the next lowest role to the next lowest argument, and so on.
(Larson 1988:382)

- ESTABLISHING SEMANTIC PROMINENCE:

Need independent criteria to establish when one argument of a multiargument verb is
semantically more embedded than a second.

- When such a verb has a complex event structure, comprised of one event embedded
in a second, then an argument of the higher event is less embedded than an argument
of the lower event and should outrank it in the TH.

EXAMPLE: Causative verbs (e.g., *break*, *kill*) have been attributed a complex event structure (Dowty 1979; McCawley 1971; Morgan 1969; von Stechow 1995, 1996). In this event structure the caused event containing the patient is embedded under CAUSE, which also takes the causer as an argument, justifying the ranking ‘causer > patient’.

(19) [[x ACT] CAUSE [BECOME [y <STATE>]]]

— When such a verb is noncausative and has a simple event structure, there is a problem: e.g., with verbs like *wipe*, *scratch*, *want*, *see*, *love*, *have*.

As one argument is realized as subject and the other as object, one must be more prominent than the other, yet their relative ranking cannot be established independent of their morphosyntactic realization, which the ranking is supposed to predict.

THE PROBLEM EXEMPLIFIED: RRG’s actor-undergoer hierarchy

(20) (Revised) RRG actor-undergoer hierarchy (Van Valin & LaPolla 1997:126–27):

Arg of	>	1st arg of	>	1st arg of	>	2nd arg of	>	Arg of state
DO		do' (x,...		pred' (x, y)		pred' (x, y)		pred' (x)

In this hierarchy, the semantic representations of many two-argument verbs implicitly assume a prominence relation between their arguments:

they identify a “first” and “second” argument of **pred'**(x, y).

Yet an independent criterion for establishing first and second argument is lacking.

This issue arises for verbs of pure location, perception, cognition, desire, possession, and emotion (e.g., *love*).

5.2 The TH as a Reflection of the “Salience” of Event Participants

A SECOND UNDERSTANDING OF THE DERIVATIVE STATUS OF SEMANTIC ROLES:

Semantic roles are defined in terms of sets of lexical entailments imposed by verbs on their arguments by virtue of the parts they play in the events the verbs describe:

Semantic roles represent clusters of “event-based” properties of arguments, with each property contributing to the ranking of arguments, and, hence, to the place of the semantic roles defined over them in a TH.

THE BEST KNOWN EXEMPLAR: Dowty’s proto-roles, which allow the content of traditional semantic roles is unpackaged into more basic components, but these components do not constitute a set of jointly necessary and sufficient conditions on any given role.

(21) Contributing properties for the Agent Proto-Role:

- volitional involvement in the event or state
 - sentience (and/or perception)
 - causing an event or change of state in another participant
 - movement (relative to the position of another participant)
 - (exists independently of the event named by the verb)
- (Dowty 1991: 572, (27))

- (22) Contributing properties for the Patient Proto-Role:
- undergoes change of state
 - incremental theme
 - causally affected by another participant
 - stationary relative to movement of another participant
 - (does not exist independently of the event, or not at all)
- (Dowty 1991: 572, (28))

NOTE: Some Proto-Agent and Proto-Patient entailments come in pairs

(Dowty 1991:574; Croft 1998:37; Koenig & Davis 2001:83; Primus 1999:52–53):

- Proto-Agent “causing an event or change of state in another participant”
and Proto-Patient “undergoes change of state”
- Proto-Agent “movement (relative to the position of another participant)”
and Proto-Patient “stationary relative to movement of another participant”.

Paired entailments arise due to asymmetric relations between event participants, and, thus, they implicitly define a ranking of arguments (Primus 1999).

THE RESULTING CONCEPTION OF THE TH:

The TH may be seen as the “cumulative result of interacting relative prominence relations among semantic entities” (Mohanani 1994:28).

Thus, if semantic roles are defined by sets of lexical entailments, a TH made up of such roles would represent a conflation of the effects of such statements.

Roots of this idea: Fillmore (1977:102) suggests the TH be replaced by a series of rankings:

- (23) a. An active element outranks an inactive element.
 b. A causal element outranks a non-causal element.
 c. A human (or animate) experiencer outranks other elements.
 d. A changed element outranks a non-changed element.
 e. A complete or individuated element outranks a part of an element.
 f. A ‘figure’ outranks a ‘ground’.
 g. A ‘definite’ element outranks an ‘indefinite’ element.
- (24) The intention is that this hierarchy is to be consulted in the order in which these statements are listed, Thus, an active element outranks everything else, a causal element outranks everything but an active element; and so on. (Fillmore 1977:102)
- (25) a. ... since every sentence has to have a subject, the scene entity that has the highest rank will be realized as the subject ...
 b. ... if two entities are in the nucleus, that is, are in perspective, the roles of the first and second terms will be allocated according to relative position in the hierarchy.
 c. If it is a verb that can take either of two things as direct object, the one that outranks the other on the Saliency Hierarchy wins out.

(Fillmore 1977:102)

Properties in (23) overlap considerably with Dowty’s Proto-Agent and -Patient entailments. This suggests agreement in the semantic elements most important to argument realization.

What does “prominence” mean in statements such as those in (23)?

Fillmore (1977): such statements specify the relative “salience” of event participants. Roles are ranked not in terms of their position in an event structure, but rather in terms of the semantic components that contribute to “salience” or perhaps “topicworthiness”: Givón (1984) and Hawkins & Hyman (1974) see the TH “as representing a scale of discourse topicality of argument types rather than an order of semantic composition” (Bresnan & Kanerva 1998:23-24).

The TH, then, is similar to various natural prominence scales, which are appealed to in accounts of a wide range of linguistic phenomena, including coding properties of arguments, such as word order and morphological case.

- (26) a. PERSON: first, second > third
b. REFERENTIALITY: pronoun > proper name > common noun
c. ANIMACY: human > animate > inanimate
d. DEFINITENESS: definite > specific > non-specific

In these scales, prominence is understood as akin to “cognitive salience” (McCarthy 2001; Newmeyer 2002) or “topicality” (Givón 1984), where these are determined on the basis of some semantic properties of NPs.

The TH is fundamentally different from these hierarchies:
It ranks semantic roles, which are event-based properties (cf. Evans 1997);
the others rank properties of “fillers” of semantic roles.

CONSEQUENCES OF THIS CONCEPTION FOR ARGUMENT REALIZATION

- THE STATUS OF THE TH: The TH is not an independent theoretical construct, but emerges from the interaction of properties that determine salience.

- THE SEMANTIC ROLES THAT FIGURE IN THE TH:

— This conception ranks adjuncts, as well as arguments, and it can also rank arguments which do not cooccur in the same predicate.

— The relevant lexical semantic notions can be finer-grained than on the structural conception because they are not limited to those defined over an event structure and, thus, may involve a more varied set of semantic properties.

- THE PLACE OF SUCH A TH IN ARGUMENT REALIZATION:

This conception alone can’t determine argument realization, nor can it define possible semantic role combinations (e.g., what excludes a verb with experiencer and goal arguments?).

Although these entailments have a contribution to make, reference to the geometry of event structure is also required.

The lexical entailments said to figure in argument realization are not all equally important.

EXAMPLE: Causation outranks all Dowty’s other Proto-Agent entailments in determining subjecthood (Davis & Koenig 2000:75-76).

In languages with productive morphological causatives, the introduced causer is invariably the subject of the causative, regardless of the Proto-Agent entailments of the causee.

- (27) a. Ha-b'dixa hicxika oti.
 the-joke laugh.CAUS I.ACC
 'The joke made me laugh.' (Hebrew)
- b. Uutinen puhu-tt-i nais-i-a pitkään.
 news.item talk-CAUS-PAST woman-PL-PART long-ILL
 'The news made the women talk for a long time.'
 (Finnish; Davis & Koenig 2000: 75, (26))

Causation also takes priority over the Proto-Agent entailment, sentience:
 a sentient participant is subject only when there is no causer (Dowty 1991).

- (28) a. The toddler (*deliberately) feared the lion.
 b. The lion (deliberately) frightened the toddler.

And causation again takes priority over the Proto-Agent entailment, motion:
 a moving participant is subject only when there is no causer (Dowty 1991).

- (29) a. The train passed/crossed the border.
 b. The wind blew the napkin off the table.

Why does causation outrank other Proto-Agent entailments in subject selection?
 It is the only Proto-Agent entailment corresponding to a notion definable in event structures.

A causer is the least embedded argument in a typical causative event structure.
 Supposing that event structure prominence is preserved in argument realization,
 then, the causer would take precedence over any other argument for subject selection.

The same idea could be carried over to Proto-Patient entailments and object selection:
 Among these entailments, "changes state" outranks the others.
 It too may derive from proposed event structures via predicates BECOME or CHANGE.

Event structure may be important to subject and object selection, but alone it is inadequate
 and will need to be supplemented by other event-based statements of prominence.

Event structure doesn't impose a semantic prominence relation on the arguments of multi-
 argument simple event verbs (e.g., *see*, *wipe*): their arguments are equally embedded.
 But statements as in (23) may define semantic prominence relations and, hence, may
 determine the relative syntactic prominence of the arguments.

In fact, many properties identified by Dowty and Fillmore lack analogues in event structures.
 They often differentiate among finer-grained instantiations of the coarse-grained roles
 defined by event structure positions.

The use of such event-based properties allows semantic roles to be broken down into
 smaller components that figure in argument realization.
 Such properties will be investigated in the next lectures.

CONCLUSIONS OF CASE STUDY: A TH used to determine a verb's argument realization
 options might arise from more basic properties of the verb's lexical semantic representation;
 it should not be considered a primitive construct.

6 A second case study: Fillmore's (1968) hierarchy revisited

(30) Agent > Instrument > Patient

- This often-cited hierarchy cannot be a universal primitive construct:
 - The structural interpretation is not possible.
It doesn't capture possible syntactic c-command relations among NPs with these roles.
In sentences with an agent, an instrument, and a patient, the instrument is never structurally more prominent than the patient.
 - The salience interpretation is lacking:
Instruments are always less salient than patients.
- What is the source of this hierarchy? It conflates two generalizations:
 - The causer argument of a change of state verb is more prominent than the patient.
 - The causer argument can be "filled" by agents, natural forces, instruments (in English).
The ranking of agent over instrument indicates that the choice of instrument as the cause argument precludes the expression of an agent, while the choice of an agent as the cause argument does not preclude the expression of instrument.

7 Conclusions: A revised perspective on the TH and on existing THs

- Various generalizations are statable with the same TH notation, but these generalizations fall into different types, and neither can, nor should, be given a single explanation.
- Every posited TH is worthy of serious scrutiny since it represents an attempt to capture a linguistic generalization.
- A particular TH may remain a convenient way of stating a valid generalization even though it is derivative.
- The TH as it figures in argument realization is epiphenomenal, derived from the basic elements of lexical semantic representation; nevertheless, these elements should, in principle, give rise to a clear ranking of semantic roles.
- Other posited THs, used as statements of various generalizations over semantic roles, may differ in the roles they rank and in the relative ranking of these roles.
- These differences should be determinable from what each ranking aspires to represent and what generalizations it is intended to capture.
- A close examination of existing THs provides a window into the nature of semantic prominence relations, suggesting that some derive from the the nature of event structure, while others derive from finer properties of events.

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