The Interaction of Causation and Affectedness in Transitivity

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In this paper I examine the interaction of causation and affectedness in determining the transitivity of a verbal predicate, and propose a restricted system for classifying two argument verbs in terms of how causal and affectedness properties are distributed across their arguments that relies crucially on force-dynamic structure. Work by Hopper and Thompson (1980) has shown that transitivity can be defined in terms of a myriad of factors, including affectedness of the O argument, potency of the A argument, telicity of the predicate, etc. Subsequent work by Tsunoda (1981, 1985, 1999), Blume (1998) and Testelec (1998) has typologized verbs depending on their semantics (though sometimes identifying different classes). Testelec in particular has argued that we can classify verbs by the distribution of features of [+con(trol)] and [+aff(ected)] across participants (i.e. roughly bearing proto-agent and proto-patient properties; Dowty 1991). Furthermore, Blume and Testelec have identified core transitives (e.g. verbs meaning *break*, *make*, *destroy* across languages) as those which maximally distinguish the semantic features of the A and O arguments.

Ostensibly, however, assuming two privative features [+con] and [+aff] for each of two arguments of a verb we might expect to be able to identify up to 16 verb classes across languages. However, this full spectrum of basic predicate types does not appear to be attested, in particular there are no predicate types in which the 0 argument is causal while the A argument is not. In this paper I propose a system that combines Dowty-style proto-role entailments with the force-dynamic event structures of Talmy (1976) and Croft (1990, 1991, 1993, 1998, in prep) , which assumes inherent causal asymmetries between co-arguments, as a way of constraining and systematizing the set of possible verb types. I define a participant as [+aff] (a generalization over being changed, moved, impinged, or attained; Beavers 2006) if it bears proto-patient properties. I define a participant as [+cause] if either (a) it bears proto-agent properties or (b) it is causally precedent in the force-dynamic structure. Assuming that all verbs encode a real or coerced causal structure (Croft 1993), several logical possibilities are immediately ruled out, since one participant will always be causal by condition (b) and this will always be the A argument (following Croft 1998). I outline the predicted classes below, focusing on their semantic classification; I discuss also their corresponding morphosyntactic properties in terms of transitivity, but I do not attempt to derive the specific possibilities of each class from the semantics (a separate matter I leave for future work, though see the above references).

Looking first at core transitives, these are verbs in which the A and O arguments are maximally distinguished. One participant is the proto-patient and thus is [+aff]; the other is [+cause] since it is causally precedent (represented by a simplified Croft-style causal chain) and may also have proto-agent properties.

(1) a. John broke/killed/destroyed the robot   b. $John \longrightarrow robot$
$$* * * * V * * * * * * * * *$$
[+cause]   [+aff]

In addition, Testelec identifies verbs in which both participants are [+aff], including *take*/*pull* where the A simultaneously moves the O and also acquires it (from here on I do not notate the causal chain though it determines [+cause] for all A arguments):

(2) $John_{[+cause,+aff]}$ took the $book_{[+aff]}$.

Verbs in which the A argument is [+aff] instead of the O include self-directed motion verbs towards a goal or along a path:

(3) $John_{[+cause,+aff]}$ walked/climbed (up) the $mountain_{[\ ]}$.

These predicates display transitive or intransitive encoding across languages (with the O marked as an oblique), ostensibly due to the less than maximal distinction between the arguments. A fourth class is defined where no participant is [+aff] but the second participant bears proto-agent properties and is thus [+cause]. Blume (1998) identifies such a class as human interaction verbs such as *thank* and *praise*, in

which the A argument is clearly an agent (and causally precedent) but the O argument is a proto-agent in some superevent of the event described by the predicate (e.g. the event for which the O received praise):

(4)   John$_{[+cause]}$ praised/thanked/greeted Bill$_{[+cause]}$.

According to Blume such predicates tend to show dative marking on the O, again ostensibly due to the non-maximal contrast. We can distinguish three additional classes in which both participants are [+cause], depending on the distribution of [+aff]: verbs in which the O argument is [+aff] (e.g. *help*), verbs in which A argument is [+aff] (e.g. *depend (on)*, where the A is affected in some superevent, following Blume), and verbs in which both A and O are [+aff] (e.g. *fight*; Testelec 1998). Each class admits intransitive encoding across languages, and the latter class also allows various types of reciprocal encoding, corresponding to the symmetry of the thematic roles of each argument:

(5)   a.   John$_{[+cause]}$ helped/aided Bill$_{[+cause]+affcs}$.   b.   John$_{[+cu]}$$_{]ffa}$ needs/depends on Bill$_{[+cause]}$.
       c.   [John and Mary]$_{[+cu]ffcs}$ fought.   d.   John$_{[+cu]}$$_{]ffa}$ fought (with) Mary$_{[+cause]ffcs}$$^{\rightarrow}$.

Another class are verbs in which the A is [+cause] but the O has no features whatsoever, corresponding to perception verbs and activity verbs where the O is a "root" argument that is not affected (Levin 1999):

(6)   a.   John$_{[+cause]}$ saw/looked at Bill$_{[\ ]}$ b.   John$_{[+cause]}$ wiped the table$_{[\ ]}$.

As Tsunoda (1981, 1985) notes, perception verbs often admit intransitive encodings. Finally, there are two argument verbs that do not describe dynamic events and thus have no causal chain, no proto-agent properties, and no proto-patient properties. These are symmetric predicates like *resemble* as in *John resembled the pope*. Following Croft (1993), though, these are "coerced" into a force-dynamic relationship, in which case the precedent entity is assigned a control feature and no affectedness is assigned (similar to (6)), though either participant may be coerced into this position (cf. also *The pope resembled John*).

In summary, we have distinguish and expanded most of the classes proposed by Testelec and Blume (I give their notation for each class here to indicate which classes they identified and which they did not):

(7)

| Example | Featural Distribution+Causal Precedence | | | | |
	A	O	Testelec	Blume	Note
make, kill, break	[+cause]	[+aff]	IV/V	I	Core Transitive
pull, take	[+cause,+aff]	[+aff]	V	I	Transitive?
walk (to), traverse, search	[+cause,+aff]	[ ]	???	???	Self-directed motion
praise, see, resemble (coerced)	[+cause]	[ ]	VI/VIII	III	Psych/coerced statives
speak to, ask	[+cause]	[+cause]	I/II/III	II	Interactional, Nom/Dat
help/aid	[+cause]	[+cause,+aff]	II??	II??	Interactional, Nom/Dat?
depend (on)	[+cause,+aff]	[+cause]	II??	II??	Interactional, Nom/Dat?
fight/quarrel with	[+cause,+aff]	[+cause,+aff]	II	II??	Reciprocal

These classes plus the ones ruled out exhaust the 16 possibilities allowed by the distribution of binary [+aff] and [+cause] factors, suggesting that this approach can capture a restricted typology of verbal types. Presumably the exact nature of the proto-agent and proto-patient entailments that determine many of the [+aff] and [+cause] features will determine subclasses of each case, something I address briefly in the talk. Finally, this approach can be extended to single argument predicates as well, where there are no a priori force-dynamic chains. In this case [+cause] and [+aff] are determined solely by proto-role properties, producing three logical types, corresponding to unaccusative, unergative, and stative predicates:

(8)   a.   The vase$_{[+aff]}$ broke.   b.   The winner$_{[+cause]}$ smiled.   c.   The winner$_{[\ ]}$ is happy.

Thus the system proposes here utilizes the notion of causal chains and force-dynamic structure (assumed to underlie all verbal predicates, even when coerced) to constrain the set of possible verb classes. When combined with proto-role properties, this provides a classification that unifies, constrains, and expands previous classifications. I have focused here primarily on semantic classifications. Future work will necessarily involve predicting the morphosyntactic possibilities of each class from the semantics, though already the crucial notion of maximal distinctiveness that underlies transitivity falls out of these classifications.

Narration, causality and epistemic modality

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The present paper is an attempt at studying the role played by causality within narrative discourses, both with respect to discourse connectives and to so-called discourse relations (in the sense of Asher & Lascarides 2003). It has been observed by many authors that causality plays a crucial role w.r.t. to (i) the coherence of narrative discourses, and (ii) the semantics of temporal and inferential connectives – see Jayez & Rossari (2001), Degand & Pander Maat (1999), Bras et al. (2001a/b), etc. I will try and bring together these results, and show not only causality but also epistemic modality are involved in construing narrative coherence, particularly with discourse connectives. More specifically, I will study *puis* and *donc* and claim that their completementary distributions within narrative contexts can be explained by their opposed contributions in terms of *epistemic causality*.

1   Narration and causality: strong vs. weak *Narration*

Many authors have observed that causality plays a central role in establishing a narrative discourse structure, cf. Asher & Lascarides (1993, 2003), Bras et al. (2001a/b), Moens & Caenepeel (1994)… Now if we simplify the typology of narrative discourse structures proposed Caudal (2006), two main empirical classes of narrative structures are worth contrasting, as I will show.

1.1   Establishing *Narration* in the absence of temporal connectives: weak/strong causality

In the absence of temporal discourse connectives, weak or strong causality is the key factor to narrative coherence – in SDRT terms, weak/strong causality is necessary in order to establish the *Narration* discourse relation (which is often coined in that case "weak Narration", cf. Bras et al. 2001). By strong causality, I refer to an actual causal relationship between two events e_α and e_β, as in (1) (where e_α is the event referent underlying speech act referent α, etc.):

(1)   Max pushed John (α). John fell (β).

By weak causality, I mean some kind of script-like knowledge about sequences of events – each sucessive event being somehow the expected outcome of some causal/temporal 'antecedent' event by virtue of world-knowledge rules; cf. Asher & Lascarides (1993). This is formally implemented in SDRT by means of axioms such as (2) (cf. Bras et al., 2001a/b). As an illustration, in the case of (3), the corresponding **Falling and Helping** axiom appears under (4): it tells us that when an event e_α of falling and an event e_β of helping-up underlie two connected speech act terms α and β, then α stands in an *Occasion* relation to β. *Occasion*(α,β) expresses a scriptal relation, under which β somehow follows from α (non-monotically: >), thus reflecting a *contingent* kind of causality (namely, e_β is only one of the many possible consequences of e_α). This in turn can help establish the *Narration* discourse relation (Asher & Lascarides, 2003), cf. (5).

(2)   **Occasion :** $(? (\alpha,\beta,\lambda) \wedge [\phi(e_\alpha)]\alpha \wedge [\psi(e_\beta)]\beta) > Occasion(\alpha,\beta)$[1]

(3)   *Max fell. (π_1). John helped him up. (π_2)*   (cf. Asher & Lascarides 2003)

(4)   **Falling and Helping:** $(?(\alpha,\beta,\lambda) \wedge [fall(e_1, x)]\alpha \wedge [help\text{-}up(e_2, y, x)]\beta) > Occasion(\alpha,\beta)$

(5)   **(Weak) Narration :** $(?(\alpha,\beta,\lambda) \wedge Occasion(\alpha,\beta)) > Narration(\alpha,\beta,\lambda)$[2]

Note however that weak causality/scripts cannot account for narrative sequences such as (6). Instead, it seems that a general law about 'event incompatibility' makes us interpret (6) as involving temporal succession: John cannot stop smiling AND take a bite of his sandwich at the same time.

(6)   John stopped smiling (e_α). He took one more bite of his sandwich (e_β).

Caudal (2006) named *Sequence* this sort of 'bare-bone' narrative relation; in can serve to construe the weakest possible kind of *Narration*, and involves causality in a negative way (namely, for *Sequence* to hold, e_α and e_β must not be causally related in any way).

1.2   *Narration* with discourse connectives: causality again

The second major class of narrative discourses involves discourse connectives. As opposed to 'Weak *Narration*', temporal connectives such as *puis* are generally described as establishing a 'strong' brand

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[1] $[\phi(e_\alpha)]\alpha$ means that condition $\phi(e_\alpha)$ is part of the propositional content of term α.

[2]   This means that β is to be attached to α with the *Narration* relation, α being an available site within the current context, and that the discourse relation is to be incorporated into the logical form as a conjunct on the formula labelled λ.

of *Narration*, cf Bras et al. (2001). Now it has been observed that *puis* seems to reject strong causality:

(7) a. L'acide tomba dans le liquide. Le mélange réagit en explosant.   (Bras et al. 2001)
     b. L'acide tomba dans le liquide. *Puis le mélange réagit en explosant.

This led e.g. Bras et al. (2001a/b) to conclude that it should be somehow stipulated within axioms at the semantics/pragmatics interface that *puis* rejects causality (or at least forbids the establishment of overtly causal discourse relations such as *Result*). Interestingly, Caudal (2006) observed that *donc* and *puis* have opposed distributions w.r.t. to causality. Thus, *puis* is perfectly felicitous with non-causal narratives involving the *Sequence* relation, whereas *donc* absolutely rejects it (cf. (8)), and *donc* is perfectly felicitous with strongly causal narratives, whereas *puis* rejects them (cf. (9)):

(8)   Jean cessa de sourire. Puis/#Donc il mordit encore dans son sandwiche.   (no causal relation)
(9)   Jean poussa Max. Donc/#Puis Max tomba.   (strong causal relation)

1.3   Why *donc* and *puis* are related to *(weak) epistemic causality*
But it would be a bit hasty to conclude that the *donc*/*puis* contrast simply boils down to causality. It rather involves *epistemic causality*. Indeed, *donc* is known to be an inferential connective, operating both on the propositional content and on the illocutionary force (cf. Jayez & Rossari, 2001), but also involving some form of *epistemic (causal)* attitude (cf. Degand & Pander Maat, 1999). Thus in (10), the speaker deems the falling of tiles to be a likely/necessary consequence of the storm. And in (11), the causal link established with *du coup* differs substantially with that established by *donc* inasmuch as the speaker does not deem the inference made to be logically necessary from her point of view (i.e., *du coup* could be apologetic in this context, whereas *donc* could not: the speaker judges his (bad!) action to be perfectly logical/expected with *donc*; *donc* expresses an (epistemic) propositional attitude).

(10)   Il y a eu beaucoup de vent. **Donc** des tuiles sont tombées du toit.
(11)   J'étais en retard, donc/du coup j'ai pris le sens interdit.

Now as Caudal (2006) has demonstrated, both *donc* and *puis* are in fact sensitive to very weakly causal inferencial links. E.g, the inference conveyed by *donc* can involve intentions rather than events (cf. (12) (it is therefore more a matter of planning than of causality), or it can be an instance of general reasoning based on more than one premise, as in (13). This suggests that *donc* involves a (vaguely causal) epistemic reasoning where elements of the discourse context are associated with world-knowledge to form the *conversational background* (CB; Kratzer, 1991) of the modal inference. Such a modal inference could be noted as follows, in the case of (13): *Donc-EPISTEMIC* (*CB*)(ψ), where *CB* contains the appropriate contextual antecedents (in this case, it must contain propositions ϕ and ξ).

(12)   Grand-mère se mit en colère : "Mais pourquoi as-tu (…) choisi la petite malle? Puisque c'est ainsi, moi je vais aller chercher la grosse (α)!" Grand-mère partit **donc** (β) (#Puis Grand-mère partit). (Google)

(13)   "Vous deux, vous êtes stériles, vous ne pouvez pas me donner d'enfant (ϕ). Et mourir sans enfant est insupportable (ξ) !" Il partit **donc** (ψ) chercher la jeune fille. Dès son retour, il célébrerait leur mariage. (Google)

Since *puis* would not be licensed in those weakly causal inferential contexts (cf. (12)), it cannot be so much blocked by causality itself than by the same some sort of epistemic inference: *puis* says that some new event is not (highly) expected given some CB. This bit of data raises in turn an important theoretical question, which is that of the actual *nature* of the relationship between epistemic modality and causality in discourse structure-obviously, both notions involve inferences, but at different levels.

The remainder of this paper will focus on how epistemic causal connectives should be modelled within a formal discursive framework, by considering the three possible treatments identified in von Fintel & Gillies (2006): (i) by means of a multidimensional semantics (cf. Potts, 2005) treating modality on a par with commentatives/parentheticals (cf. e.g. Scheffler, 2006), (ii) by treating epistemic modals in terms of illocutionary force modifiers (cf. e.g. Faller 2006), or (iii) by proposing a more intricate treatment at the semantics/pragmatics interface. I will favour the later option, which is empirically supported by the fact that modal expressions have been demonstrated to affect not only illocutionary force/propositional attitudes but also propositional contents (cf. e.g., Papafragou 2005). This patterns well with the fact that discourse connectives too have been demonstrated to span these three levels of the semantics/pragmatics interface (Jayez & Rossari, 2001).

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Interesting Facts? Events, Inadvertent Cause and Unaccusativity in English present participles
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This talk draws attention to interpretive effects involving English pre-nominal present participles, distinguishing those derived from certain unaccusative predicates from those derived from unergatives. The contrast is also shown to partition the set of Experiencer predicates, where, unexpectedly from a theoretical viewpoint, a subset of Object Experiencer predicates pattern with unergatives, rather than unaccusatives: see Belletti (1988), Belletti & Rizzi (1988), *cf.* Pesetsky (1995). Part of the analysis of this contrast is in terms of a syntactic distinction, due to Travis (2000), between two types of structurally represented CAUSE elements, distinguishing intentional from 'inadvertent' cause. The analysis also appeals to a structurally represented Event anaphor, determining the temporal anchoring of both types of predicate under a particular realization; *cf.* Klein (1998). Confirmation of both constructs is provided by relevant data from Vietnamese.

Part 1. Asymmetries in English present participles. While much attention has been paid to asymmetries in prenominal *perfective* participles—e.g., a broken spoke *vs.* *a coughed patient, see Ackerman & Goldberg (1996) and refs. therein—*present* participles have been largely neglected. The main descriptive claim here is that unergatives and unaccusatives differ with respect to their possible interpretations: whereas unergative participles [1a] permit either a (verbal) TEMPORALLY-BOUND reading or an (adjectival) DISPOSITIONAL reading, unaccusatives [1b] allow only the former: i.e., a crying baby may be one that is crying at the moment of their having it, or one that characteristically cries, but a burning candle can only be one that is actually burning at the time of purchase.

This *unaccusative-unergative* asymmetry is reflected in several other ways. For example, whereas crying-type participles typically bear the same thematic relationship to their head noun as the corresponding verb does to its sole argument, this is not so for burning-type participles, whose head nouns are either interpreted as instrumentals or co-erced into (unintentional) causer readings: *cf.* [2a] *vs.* [2b], [3c]. Second, unergative A-N collocations may become semantically opaque, and can be disambiguated from their verbal counterparts by compound stress [3a]; unaccusatives—where available at all—remain semantically compositional, and cannot be so disambiguated [3b].

Experiencer predicates exhibit a similar split: whereas ObjExp present participles freely allow dispositional readings, the present participles of SUBJEXP verbs allow neither reading in prenominal position: [4a] *vs.* [4b]. Note that as with unaccusatives, the restriction is not due to pragmatics: in every case in [4b], the desired reading is conveyed perfectly by a non-participial adjective (fearful, envious, knowledgeable, *etc.*). As important as this asymmetry is the restriction *within* the class of ObjExp predicates: in their dispositional readings, OBJEXPS only permit an 'achievement/inadvertent cause' reading, as opposed to the pure activity reading that is also available in the temporally-bound reading: e.g., an entertaining person is one who typically causes others to feel entertained, not necessarily one who acts in an entertaining fashion; *cf.* entertainer.

Part 2. Analysis. The analysis of these contrasts exploits the configurational approach to Aspect and Event representation proposed in Travis (2000). Travis' analysis—based on Western Malayo-Polynesian data—involves two related constructs illustrated in [5]: (i) an Event-phrase—more specifically, a syntactically-represented [+eventive] anaphor, relating propositions to specific events or situations (Topic Times); (ii), a structurally-represented 'Inner Aspect', whose specifier hosts arguments that are interpreted as 'inadvertent causes', *just in case Asp is +[bounded]*. Taking [5] as the underlying 'verbal' projection of present participials in l-syntax (*cf.* Reuland (1983), the derivation of the adjectival form of these participles—which yields the dispositional reading—is restricted by the mapping constraint in [6], which allows only an 'external argument' in [Spec, $Asp_{+[Telic]}$] to be theta-identified with the head-noun in the adjectival form (Higginbotham (1985)). The interaction of this constraint with the inherent argument structures of different classes of predicate is shown to yield all of the observed restrictions—including the 'reverse' judgments for (passivized) perfective participles [1]. The analysis also generates a number of novel predictions about the relative acceptability of 'ObjExp backwards binding' in activity (*) *vs.* achievement ($\sqrt{}$) contexts, as in [7]: contrasts that are unexpected on Pesetsky (1995)'s simultaneous analysis follow directly from the structural ambiguity analysis proposed here.

(1) a. They didn't want to take care of a <u>crying</u> baby.

   b. She wants to buy a <u>burning</u> candle.

(2) a. I'd like to buy a <u>rocking</u> chair, but not a <u>squeaking</u> one/Hire <u>non-singing</u> (i.e., instrumental) bands for your event/Do you have any <u>chatting</u> room-mates in your house?

   b. I'd like to get a <u>melting</u> iron/knife/He drove her to <u>breaking</u> point/The conjuror performed the usual <u>vanishing</u> tricks./The <u>melting point</u> of this substance can be readily determined.

(3) a. 'Rocky the Flying **Squirrel**' wasn't in fact a **Flying** Squirrel./Those dancing **girls** aren't **dancing** girls: the **dancing** girls are sitting over there!/Don't confuse that running **back** with the **running** back: they're different players.

   b. The Falling Leaf is not a falling leaf; it's an aerobatic stunt/A blooming letter is not the same thing as a blooming ('bloomin') letter/On one side of the parapet was a disappearing gun; on the other, a Disappearing gun, which happened not to be disappearing that day.

   c. A **sinking** ship is not a submarine, but a battleship/destroyer.

(4) a. Frightening animals are best avoided/Troubling tenants are a nuisance/Astonishing discoveries have been made in every century/This is a surprising fact.

   b. *She is a fearing woman/*He was an envying man/*She is the most knowing person I have ever met./*Loathing people are to be avoided if possible/*She is an extremely noticing person.

(5)

EP (Event Phrase)
 E   VP1
        NP   V1'
      (Agent)
              V1   AspP (= Inner Aspect)
            (cause)
                      NP   Asp'
              (accidental causer)
                              Asp   VP2
                           [+bounded]
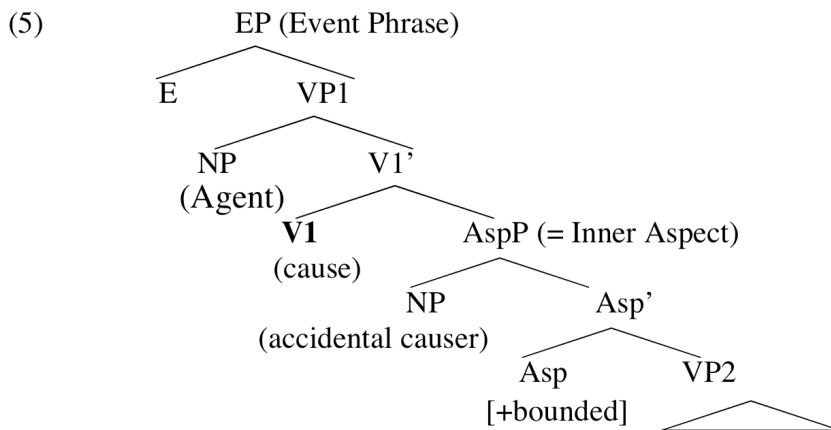
(6)   [VP 1 [v1' [AspP X   [Asp' **+bounded**   [VP2 (y) [v' Ving]]]]

                        ↓

       [AP   X   [a'   [A   Ving]]]

(7) a. *Their own$_i$ sheepdog was worrying John's flock$_i$ all last summer.

   b. ?For that reason, his own$_i$ dog began to t$_i$ worry John$_i$ himself.

   c. *Each other$_i$'s flies were bothering the horses$_i$ all day (fly = Agent).

   d. ?Typically, each other$_i$'s flies didn't bother the horses (horse = Exp).

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"Kill", "Intend to Kill", "Kill Intentionally" –
On the Knobe Effect and the semantics of intentional action.

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Abstract: In a series of recent papers, the philosopher and moral psychologist Joshua Knobe has brought to light an intriguing asymmetry in people's semantic judgments on the intentionality of specific actions in ordinary language. The asymmetry is now commonly referred to as "the Knobe Effect". In one of Knobe's scenarios (Knobe, 2003b), Jake is described as a character trying to kill his aunt to inherit a certain amount of money: "*One day, he sees his aunt walking by the window. He raises his rifle, gets her in the sights, and presses the trigger. But Jake isn't very good at using his rifle. His hand slips on the barrel of the gun, and the shot goes wild… Nonetheless, the bullet hits her directly in the heart. She dies instantly.*" More than 90 percent of the subjects tested by Knobe answer positively to the question "*did Jake intentionally kill his aunt?*". However, less than 30 percent give a positive answer to the analogous question "*did Jake intentionally kill the bull?*" in a situation in which Jake is trying to shoot a bull to win a certain contest, and manages to hit it by the very same chancy process.

While Knobe and his critics have emphasized the moral contrast between the scenarios and widely discussed whether the ordinary concept of intentional action does involve a moral component or not, they have said relatively little about the semantic analysis of the adverb "intentionally" proper. In further experiments, however, Knobe observed a semantic contrast between minimal pairs involving the expressions "intended to help" and "helped intentionally" (Knobe, 2004). Furthermore, Knobe distinguishes between a skill sense of "intentionally", and a moral sense of the word. In this paper I propose to examine into more detail the hypothesis that "intentionally", in "A intentionally did X", might indeed be ambiguous between two senses: a "bouletic" or "goal-directed" sense, according to which the agent's *goal* or *motivation* for his action(s) was to achieve X, and an "epistemic" or "action-oriented" sense, whereby the agent could *foresee* or *control* that his action(s) would indeed achieve the result X. If correct, this analysis suggests that in the aunt's scenario, most people disambiguate the question by favouring the goal-oriented sense of "intentionally", while in the bull's scenario a majority of people refer to the action-oriented sense. In each occurrence, however, both senses should remain available, as suggested by the fact that judgments can diverge among speakers within each scenario. Like Adams and Steadman's (2004a,b), the present account favors the view that "intentionally" is morally neutral, but that the disambiguation depends on pragmatic mechanisms influenced in part by moral considerations. I will discuss the question of the derivability of the ambiguity here postulated, and examine to what extent this analysis can be used to explain the results obtained by Knobe in other scenarios, in which the agent could perfectly foresee and thereby control a certain consequence of his action, but in which this specific consequence is a side-effect of his action, subordinated to a distinct goal.

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Teleology and animacy in external arguments
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In this paper we consider a number of phenomena in English, and other languages (Italian, Greek, Russian) involving external arguments where *prima facie* animacy seems to constrain grammaticality. Our discussion comes to the conclusions that, at least in the cases under analysis, a more appropriate notion should be evoked, i,e. the notion of teleological capability and that the inherent abilities of an entity to participate in an event is at the basis of its grammatical occurrence. In particular, we argue that the notion of teleological capability is crucial in correctly diagnosing apparent animacy effects in the interaction of grammar and conceptual structure. The relevant notion which distinguishes Agents from Causers is the subject's internal teleological capability of generating the event on their own, from start to finish—*not* the animacy of the subject. The two notions overlap in many cases, since there are many verbal events which can only be generated by animate entities, but in the case of verbal events which can be internally generated by inanimate entities, we see that the syntactic behavior of the external argument does not change. Conversely, Causers (again which maybe animate or inanimate) may trigger the initiation of an event, but do not exercise control over its unfolding, due to their teleological *incapability*.

In the second part of the paper, we discuss cases where animacy seems to have a more properly syntactic effect. In relation to this, we present the proposal put forward in Folli and Harley (2005, 2007) according to which the v° which introduces the external arguments is different when the external argument is a Causer, rather than an Agent. In particular, little v comes in different flavours depending on two things, the external argument it introduces and the complement it takes. True Agent-selecting v_{DO} may take a nominal complement, while the v_{CAUSE} which can introduce Causer external arguments c-selects for a small-clause complement. In the terms of the discussion here, v_{DO} requires a teleologically-capable Agent argument in its specifier, while v_{CAUSE} does not.

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Interdependency between Object Case and Event Type: Accusative-Dative Alternation in Japanese
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A small number of Japanese verbs allow an alternation of object case between accusative –o and dative –ni (1), which is accompanied by three other alternations: interpretation of objects (*path* vs. *goal*), subjects (*agent* vs. *theme*), and event type (*durative* vs. *instantaneous*) (Kuno 1973, Sugamoto 1982). In this paper, we argue that the apparent accusative-dative object case alternation (*the ACC-DAT alternation*) in fact involves two different verbs and two distinct syntactic structures. This seemingly undesirable conclusion (postulating two phonologically identical verbs based on object case) nonetheless offers an account for differences between accusative-object (ACC-object) verbs and dative-object (DAT-object) verbs in Japanese, which, under the proposed analysis, represent different types of event.

Kuno (1973) claims that *the ACC-DAT alternation* is accompanied by a change in interpretation of objects, showing that the objects that can only be interpreted as *goal* and *path* are only compatible with dative and accusative case, respectively (2). He also notes that interpretation of event type changes with *the ACC-DAT alternation* as well. For instance, completive aspect verbs are only compatible with an ACC-object (3), which suggests that these verbs are interpreted as instantaneous (achievement) with a DAT-object, but as *durative* (activity/accomplishment) with an ACC-object (Sugamoto 1982). Another change accompanying *the ACC-DAT alternation* involves interpretation of subjects. While human subjects are compatible with both DAT- and ACC-object (1), inanimate subjects are only compatible with a DAT-object (4), suggesting that subjects must be *agent* with ACC-object. These differences are summarized in (5).

There are at least two ways to account for the alternation. One may assume that there is one lexical entry for the 'alternating' verbs and the two sets of characteristics are derived from it. Alternatively, one may assume that there are no alternations but two lexical entries, each of which corresponds to the two sets of characteristics. Evidence from quantifier float and relative scope of arguments strongly suggests that the latter is the case. While a stranded numeral quantifier phrase (NQP) following a DAT-object can be associated with subjects, such an association is impossible with an ACC-object (6). Assuming Miyagawa's (1989) mutually c-command restriction for an NP and its associate NQP, the contrast means that subjects with a DAT-object originate in a position that is lower than the object, while subjects with an ACC-object are never lower than the object. Scope facts support this assumption. A universal quantifier *subete* 'all' in the subject position can take either narrow or wide scope with an existential quantifier *nanika* 'something' as a DAT-object; however, with the same existential quantifier as an ACC-object, the inversed scope is harder to obtain (7). These data suggest that subjects with an ACC-object are base-generated, while subjects with a DAT-object are derived.

We argue that the 'alternating' verbs with an ACC-object are ergative verbs, which require *v* introducing *agent*. This *v* can also introduce accusative case, which licenses the path argument, and an event argument that is [+durative], which creates a durative interpretation (8a). In contrast, the 'alternating' verbs with a DAT-object are unaccusative verbs, which require *v* with neither an external argument nor structural case, which nonetheless introduces an event argument that is [-durative]. The dative marked *goal* argument is both introduced *and* case-licensed by a silent applicative verb, which leaves the *theme* argument as the only argument which can be the subject (8b). Under the single-lexical-entry approach, however, the fact that the 'alternating' verbs behave like both ergative and unaccusative is difficult account for, especially under the assumption that external arguments are introduced by a separate functional head, i.e. *v*. Moreover, the single-lexical-entry approach suggests that *the ACC-DAT alternation* can be productive. However, it is limited to only a small group of verbs. That favors the two-lexical-entry approach, which is compatible with idiosyncrasy. Finally, the proposed analysis can be extended to the cases of Japanese verbs whose sole internal argument *must be* dative marked. What is interesting is that these 'DAT-object' verbs never passivize and are always interpreted as achievement (9). If the DAT-object verbs have the structure in (8b), the achievement interpretation is due to the [-durative] event argument of *v*, and the impossibility of passive is due to dative case being provided by the applicative head, not by *v*. The proposed analysis, therefore, provides a way to account for the interdependency between object case marking, interpretation of arguments, and the event type of sentences, which derive from different combinations of lexical verbs and different types of *v*.

(1) a. Gakusei-ga   yama-o/ni   (2-tsu) nobor   -ta
     student-NOM   mountain-ACC/DAT   (2-CL) climb   -PERF
     'Students climbed (two) mountains.'

   b. Kodomo-ga   kabin-o/ni   (2-tsu) sawar   -ta
     children-NOM   vase-ACC/DAT   (2-CL) touch   -PERF
     'The children touched (two) vases.'

(2)   Gakusei-ga   {kaidan-o/*ni}   /   {yane-*o/ni}   nobor   -ta
     student-NOM   {stairs-ACC/*DAT} /   {roof-*ACC/DAT} climb   -PERF
     'Students climbed the stairs/to the roof.'

(3)   Gakusei-ga   yama-o/*ni   nobori kir   -ta
     student-NOM   mountain-ACC/*DAT   climb   complete   -PERF
     'Students finished climbing the mountain.'

(4)   Kimono-ga   yuka-*o/ni   sawar   -ta
     Kimono-NOM   floor-*ACC/DAT touch   -PERF
     'Kimono touched the floor.'

(5) Summary	object	subject	event type
Accusative object	path	agent	activity/accomplishment
Dative object	goal	theme	achievement

(6)   Gakusei$_i$-ga   yama-*o/ni   5-nin$_i$ nobor   -ta
     student$_i$-NOM   mountain-*ACC/DAT   5-CL$_i$ climb   -PERF
     'Students, five of them, climbed the mountain.'

(7)   **Subete**-no-gakusei-ga   **nanika**-ni/o   swar   -ta
     all-GEN-student-NOM   **something**-DAT/ACC   touch   -PERF
     'All the students touched something.' DAT = { $\forall > \exists$, $\exists > \forall$ }, ACC = { $\forall > \exists$, ?? $\exists > \forall$ }

(8) a. [$_{vP}$ Agent [$_{v'}$ [$_{VP}$ Path   V] v[AGENT, ACC, +Durative]   ]]]

   b. [$_{vP}$ Theme$_i$ [$_{v'}$ [$_{ApplP}$Goal   [$_{VP}$ ~~Theme$_i$~~   V]   APPL[DAT]]v[Ø, Ø, -Durative]]]]

(9) a. Keiko-ga   Takeshi-ni   (*2-jikan)   aw/bustukar/dekuwas   -ta
     K-NOM   T-DAT   (*2-hours)   meet/run_into/come_across   -PERF
     'Keiko met/ran into/came across Takeshi (*for two hours).'

   b.*Takeshi-ga   (Keiko-ni)   aw/bustukar/dekuwas   -are   -ta
     T-NOM   (K-BY)   meet/run_into/come_across   -PASS   -PERF
     'Takeshi was met/run_into/come_across by Keiko.'

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The Semantic Role of the Middle Subject

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On the surface, ergatives (*The cup broke*), middles (*This book reads easily*) and passives (*The man has been shot*), are all intransitive one-argument structures. Structurally, however, they hide important differences which have been well documented in the literature. These revolve, on one hand, around the original Agent argument, which is deleted in the case of ergatives, not present though implied in middles, and optionally realized in passives, and, on the other, around the stativity of middles and the eventiveness of ergatives and passives. Comparatively little attention has been devoted to the semantic changes that the transitivity alternations impose on the resulting structures. Whilst in the case of ergatives and passives these changes do not go beyond what we would expect from the grammatical rearrangement of their arguments, they are much more idiosyncratic in middles and yield a highly marked constructional meaning which we refer to as 'the middle interpretation'.

This paper explores the nature and the makeup of that semantic peculiarity. In order to do so, the role of both the middle subject and of the implied agent argument need to be examined. The semantic status of the former, which has been described as exhibiting agent-like properties and as being the primarily responsible participant (Erades 1975, Lakoff 1977, Van Oosten 1977, Dixon 1991, Fagan 1992, Rosta 1995) is analysed. These notions are refined in the light of different interpretations of the notion of agentivity (Fillmore 1968, Jackendoff 1972, Dowty 1981), and of Hopper and Thompson's (1980) semantic concept of transitivity, which includes a number of components such as agentivity, punctuality, kinesis etc. The subject of a middle is thus seen as an *attribuant* (Halliday 1967), the argument about which a property is being predicated and the subject of a semantically *in*transitive structure. It is further argued that this argument engages in a clash of forces with the implied agent argument. This clash is described within Talmy's (1985) theory of force dynamics, where the implied agent acts as the *agonist*, the force-exerting entity, and the subject as an *antagonist*, the force element that opposes it. For example, the middle *This book translates easily* implies that properties of this particular book are such that, contrary to expectations, it lends itself to an easy translation. The subject is the *antagonist*, the element that opposes (or neutralises) the force, or the effort, that the implied Agent would have needed to accomplish in order to carry out a successful translation.

Once we have gained an understanding of the middle interpretation and of the clash of forces it instantiates, we are in a better position to account for the requirement for middles to have some type of modification, which, if an adverb, will typically be a 'facility' (Vendler 1984) or a 'middle' (Fellbaum 1989) adverb, like *easily*, *well*, *nicely* etc. The suitability, or indeed the requirement for these adverbs to appear in middles – and the impossibility for manner adverbs (like *carefully*) to do so – is analysed is terms of their (im)compatibility with the semantics of the middle arguments and of the extent to which they help instantiate the clash of forces that characterises the construction.

Force Antagonism in the Semantics of Movement Verbs

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In the empirical part of this paper, we investigate the range of variation in the interpretation of a certain group of movement verbs, namely the German counterparts of *fall, fly, climb*. Our theoretical concern is to argue for an approach in which semantics and conceptual models are distinguished as two levels of meaning representation. Semantic objects are inherently underspecified with respect to conceptual content and must always be resolved into a conceptual model for an interpretation to be complete. A conceptual model can be understood as a fine-grained representation of real-world facts that is able to serve as an interface to a perceptual representation. While a number of researchers seem to agree that some such account is desireable (cf. e.g. also Wiese (2004) for a slightly different linguistic perspective, or Vigliocco et al. (2004) for a psychological implementation), it is still a desideratum to spell out specific examples of how encyclopedic knowledge and situational context is processed in order to derive a conceptual model from the linguistic content of a word.

From this background, we consider the interpretation of movement verbs as a case in point, in order to show how the variability of possible interpretations is conditioned by factors external to the semantic specification. The situations described by motion verbs are promising candidates in this respect, since they form a clear-cut and well-understood domain. Nevertheless, motion encoding in language causes a vast amount of problems whose solution is hidden to purely linguistic analysis. Consider the variability in the readings of verbs like *climb* or *fly* and their German counterparts in the following data:

(1)   a.   *Ein Vogel flog vorbei.*   (A bird was flying past)
           b.   *Der Airbus fliegt nach Brüssel.* (The Airbus is flying to Brussels)
           c.   *Ein Stein flog durch das Fenster.* (A stone flew through the window)

Do we have to posit two readings of *fliegen / fly*, namely active movement (1a,b) and passive ballistic movement through air (1c)? The distinction at issue here is reminding of the agentive / non-agentive alternation in the readings of movement verbs like *roll*, amply discussed in Levin & Rappaport Hovav (1995). However, it can be shown that the alternation in (1) is of a different kind: first, agency is associated with differences in the manner of the movement; second, all variants of *fliegen* actually seem to pattern with the agentive class of movement verbs (the RUN class of Levin 1993) in terms of their grammatical properties. (The proof of the second claim is somewhat intricate and cannot be summarised here).

Furthermore, consider the case of German *steigen* (and English *climb*, cf. Jackendoff 1985):

(2)   a.   *Peter stieg vom Baum.*   (Peter climbed down from the tree)
           b.   *Der Luftballon stieg.*   (The balloon was climbing (i.e., upward))
           c.   *Der Pilot stieg aus dem Wrack.* (The pilot climbed out of the wreck)

Some uses of *steigen* are compatible with downward direction of the movement (2a), while others specify upward direction (2b); and there are other variants in which the direction may remain completely unspecified (like (2c), if we don't know about the orientation of the plane's exit after the wreckage). The differences in the directional interpretation again appear correlated with differences in agency and manner of movement.

In our view, the key to understanding the variation in these data lies in the fact that the verbs in question describe an antagonism of forces, whose outcome has to be calculated. We can observe that the spectrum of possible variation in verb meaning is organised along the physically given dimension of gravitation: *climb* involves a movement directed against gravitation, thus, the moving object has to provide a force, which leads to a spectrum of variation depending on the manner in which this is done. The meaning of *fly* describes an

interaction of a vertical force component with a propelling force (an horizontal component), and again the different manners in which the event proceeds depend on properties of the moving object. In contrast, *fall* describes a non-antagonistic situation in which an object is carried along by gravitation; notably, this verb does not exhibit any similar kind of variation.

Our leading hypothesis is that the force antagonism involved in a motion event provides the parameters of meaning variation in the motion verbs at issue. Hence, we need to include a notion of force antagonism and causation into semantic-conceptual modelling. This, we argue, has to be done by using notions of intuitive physics, which describes the basis of human conceptualisation of forces. These notions belong to implicit knowledge and provide defaults for fast and automatic cognitive processing (which can, however, be overridden by reasoning) (cf. Kozhevnikov and Hegarty 2001). A key notion, in particular, is impetus theory, the central idea of which is that an impetus internal to the object is responsible for the object's motion, which leads to a force antagonism with respect to surrounding forces like gravitation (cf. McCloskey and Kohl 1983, among others). The implicit concept of impetus is an intuitive approximation to Newtonian (i.e. 'correct') physics in a world with omnipresent friction.

Using this framework, we will explain the variability of motion predicates as in (1-2) above from the different extents to which objects are able to generate a movement impetus, and the manners of movement they support: for example, while *fall* situations are fully determined by the external situation, *climb* situations depend on the moving object, on its manner of motion and properties of the supporting ground object. Specifically, we argue that the semantic entry of *steigen / climb* specifies the manner of a directed movement, but does not determine a specific direction. Rather, the path of movement results from a specification of all present forces and their interaction (by means of a Path Shape Adaptation Rule).

In sum, a factor of antagonism between gravitation and movement defines a semantic field of verbs, and moreover defines the body of world knowledge that has to be factored into the conceptual model. We hypothesise that it is especially the variability in the manner component which triggers most of the variation observed in the examples above. Another essential ingredient to our proposal is the recognition of principles of naïve (intuitive) physics as operative in the interpretation

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On a Non-volitional Transitive Construction

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1.   Introduction

The purpose of this paper is to give a principled account for the problems of a non-volitional transitive construction in Japanese.   Although the previous studies such as Amano(1987) and Kageyama(1996) provide the descriptive analyses, they don't sufficiently explain this construction theoretically.

2.   The data and the previous studies

Both (1) and (2) are the examples of the non- canonical transitive sentences provided by Amano(1987, translated by the author).

(1) shinseki no hito ga   taifuu de   ie   no yane o   tobashi ta.
    relative gen man nom   tyhoon by house   gen roof acc   blow pst.
    "My relative had his roof of his house blown off by the typhoon."

(2) karera wa   kuushuu de kazaidoogu o   minna   yai   ta.
    they   top   raid   by household effects acc   all   burn   pst.
    "They had his all household effects burned out by the raid."

The volitionality of the subjects in (1) and (2) is not observed though the S-syntactic structures show the usual transitive constructions; the predicates take two arguments as well as the objects are marked by accusative case. The subjects of these sentences do not receive agent interpretations but instead the experiencer ones. In addition, as Amano(1987) pointed out, they should include a whole-part relationship between *ga*-DP and *o*-DP.   The subject is not understood as a non-volitional agent if the whole-part relationship is not sustained as shown in (3).

(3)* kare wa   taifuu   de   yuujin no ie   o   nagashi ta
     he   top   typhoon by friend gen house acc wash   pst
     "*He had his friend's house washed away by the typhoon."

Thirdly, the predicate of the non-canonical transitive is limited to a change of state verb. The activity verb such as *tataku* "hit" can not construe the non-canonical transitive as shown in (4).

(4) *kare   wa   kaze de   mado   o   tatai ta
     he   top   wind by   window acc   hit   pst
     "*He had his window hit by the wind."

Kageyama(1996) defines the subject of the non-canonical transitive as "an experiencer placed on the unaccusative structure" which is an example of expansion of *schema*. Though the descriptive analysis of Amano(1987) and Kageyama(1996)'s event structure analysis seem to be basically correct, those are not good enough to explain the properties which the

target construction exhibits as pointed out above.

3.   Our proposal

Our main claims are: (I) The aspectual interpretation of the predicate is significantly related to a thematic role of *ga*-marked DP (i.e. volitional or non-volitional subject). (II) The possessor restriction is required in assigning a thematic role to the *ga*-marked DP. Following the analysis of *have*-causative construction by Ritter & Rosen(1993, 1997), we will claim the non-volitional subject is obtained from thematic transfer through the whole-part relationship. Based on the insights of Hale and Kayser (1993) and Travis (1992), we propose that the inner Aspect of which [+/-telic] determines assignment of the external argument. If aspect is specified as [+telic], then the external theta role is not assigned to the nominative marked DP.   However the *ga*-marked DP must receive a theta role from somewhere else. We propose that the whole-part relation makes it possible that the *ga*-marked DP gets its role. The co-indexed *pro* located in the object position transfers its role to the *ga*-marked DP.

4.   Summary

We will explain how the non-volitional transitive structure is construed. First, we will see that the aspectual information of its predicate contributes to interpretation of the subject. Second, the possessor relation is thematically necessary for the *ga*-marked DP to be interpreted properly.   Lastly, we will present the phrase structure of the VP which accounts for derivation of the non-volitional transitive by the Lexical-syntactic structure proposed by Hale and Kayser (1993) and Travis (1992).   We also suggest that this analysis may be applied to other constructions which involve whole-part relationships in other languages.

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# The involuntary state construction in Serbo-Croatian

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The involuntary state construction is a puzzling construction whose meaning does not seem to be derivable from its morphosyntactic composition for several reasons. First, it occurs with an active eventive verb, and yet has a noneventive and modal meaning. Thus, the sentence in (1) does not denote an occurring event of eating cookies, but rather an involuntary desire, need, or urge to participate in the event denoted by the predicate. Second, the source of this *involuntary desiderative* meaning has no overt morphological or lexical expression, and therefore seems entirely unmotivated. Finally, even though the verb selects for an agent, the construction occurs with an unselected dative NP. Compare (1) and (2).

(1)   Marku   se   jedu   keksi.   (involuntary state construction)
Mark.DAT   SE   IMPERF.eat.PRS.3. PL   cookies.NOM.PL
'Mark is in the cookie-eating mood.'

(2)   Marko   jede   kekse.   (causative eventive construction)
Mark.NOM   IMPERF.eat.PRS.3.SG   cookies.ACC.PL
'Mark is eating cookies.'

The involuntary state construction occurs primarily in Slavic languages, and has long been overlooked in the literature. So far, noneventivess and the involuntary desiderative meaning of this construction have been derived primarily by recourse to phonetically null elements: a null modal verb (Franks, 1995; Rivero, 2003), or a covert psych-verb with the "feel-like" meaning (Marusic and Zaucer, 2005). Starting from a similar construction in Albanian, Kallulli (2004) abstracts away from null elements and proposes a feature-based approach that involves elimination of the agent argument through suppression of the feature [+intent] on *v*, followed by creation of a new theta-role of the *affected actor* (metaphorically understood as experiencer) through bundling of [+affected] and [+act] feature.

In contrast, I argue that the meaning of the involuntary state construction emerges from its structure and the overtly expressed morphosyntactic elements in the following fashion. The involuntary state construction takes an eventive verb which selects for an agent, and combines it with the deagentivizing clitic pronoun *se*, thereby creating an unaccusative predicate, i.e. predicate with no external argument and no accusastive case to assign. Simultaneously, an extra argument bearing dative case marker is added to the structure, and "sandwiched in" between the upper and the lower VP of the Larsonian style (Table bellow).

(3) Involuntary state construction:

(4) Causative eventive construction:
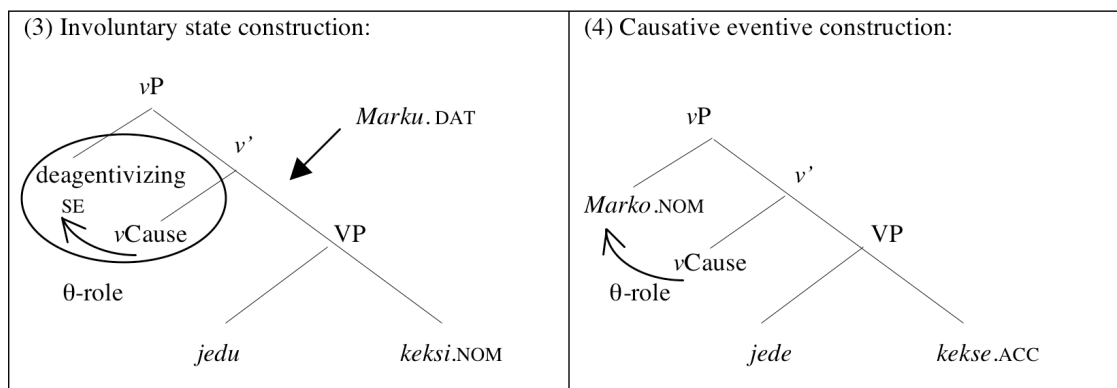
The deagentivizing properties of *se* stem from semantic bleaching of the feature [HUMAN],which is why it cannot refer to any potent (prototypically human and volitional) agent capable of instigating a causal event. As a result, the inherent aspectual value of *v*Cause changes to noneventive, or stative. This can be summarized as follows. When an eventive predicate verb, i.e. a verb that requires an agent-instigator, adjoins a noneventive *v*Cause with no external argument, it becomes likewise

noneventive, as it cannot be instigated. Such is the case with the involuntary state construction (3). In contrast, when an eventive predicate verb adjoins an eventive *v*Cause with a volitional agent-instigator, it remains eventive, as it can be instigated. Such is the case with the causative eventive construction (4).

Similar to Pylkkänen (2000), I argue that the stative *v*Cause denotes a causation which is *triggered* by the *properties* of the internal argument (i.e. stimulus), rather than *instigated* by the *activities* of the external argument (i.e. causer). This triggered causality affects the dative NP, which is the argument just bellow the *v*P, evoking a mental or psychological reaction in it, which is why this argument is interpreted as an experiencer. The duration of the temporary state denoted by the involuntary state construction is measured out by the internal argument of the VP, as the state will last only for as long as the stimulus is perceived (physically or mentally) by the affected argument, i.e. the dative experiencer NP.

Finally, as neither of the two arguments involved in this construction acts volitionally, nor has control over the triggered mental state (the stimulus can't help triggering it, and the experiencer cannot control the mental state which the stimulus triggers in it, as Arad (1998) puts it), this construction seems to resemble Finnish stative psych-verbs with the experiencer object and a causative marker (Pylkkänen (2000). Similar to deagentivizing *se* in Serbo-Croatian, which eliminates the external argument and thereby presents *v*Cause as stative, Finnish psych-verbs with the experiencer objects and the causative marker occur without the external argument, which also results in stativity of the causative head. It is therefore not surprising that Finnish has a Desiderative causative construction (5), which is similar both in form and meaning to the involuntary state construction in Serbo-Croatian (but restricted to unergatives).

(5) Maija-a   laula-tt-a.   (Finnish desiderative causative construction)
    Maija- PAR sing-**CAUSE**-3-SG
    'Maija feels like singing.'

(6) Marku   se   peva.   (Serbo-Croatian, involuntary state construction)
    Mark.DAT **SE**   IMPERF.sing.PRS.3.SG
    'Mark feels/is feeling like singing.'

Both constructions occur with a derived subject bearing an oblique case (partitive and dative, respectively), express the involuntary desiderative meaning, and assign noneventive interpretations to the eventive predicate verbs by presenting them independently of their external argument which is either completely missing (Finnish), or is semantically blocked by means of the deagentivizing *se* (Serbo-Croatian). In short, Finnish makes a predicate noneventive by adding the causative head to the derivation without adding the external argument (Pylkkänen, 1999b). This is represented overtly by the causative morpheme *–tt* (5), (7). On the other hand, Serbo-Croatian, which lacks an overt causative morpheme, applies a different mechanism and uses the deagentivizing *se* as the external argument of the light verb *v*Cause in order to present it as noneventive (6), (8). These two constructions illustrate crosslinguistic variation on how lack of control in a construction involving an agentive predicate can be syntactically encoded in natural language.

(7) Finnish:	(8) Serbo-Croatian:
*v*P	*v*P
|	/\
*v*CAUSE **noneventive**	Spec *v*CAUSE **noneventive**
|	*deagentivizing se* …
-*tt* …	
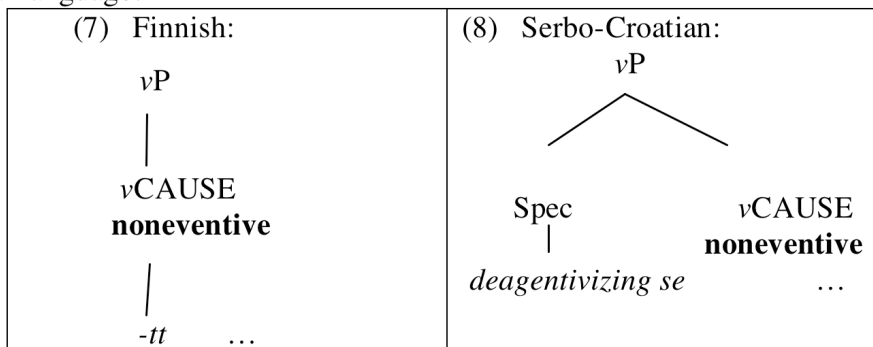
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Two types of causal statements

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The philosophical debate about the nature of causation seems to have reached a dead end: each of several incompatible theories is defeated by counterexamples, while it overcomes problems that its competitors cannot solve.

The aim of this metaphysical debate is twofold: a satisfactory account of causation should account for commonsense intuitions, as expressed in ordinary and scientific causal statements. But it must also provide a coherent picture of what makes those statements true. The price of coherence may be to judge literally false some intuitively correct causal statements.

I suggest that the existence of equally plausible but incompatible theories of causation has its source in the conflict between two types of intuitions. Some causal judgments are justified by the intuition of nomic dependency, i.e. dependency of one state of affairs on another by virtue of laws of nature. Other causal judgments are made on the basis of a material influence or transmission between events. These two types of intuition lie behind the tension between an explanatory concept and a mechanistic conception of causation.

In this talk, I show first that causal statements relating facts express the explanatory aspect of causation, and causal statements relating events express the mechanistic aspect. Second, I propose a framework that reconciles the two aspects and shows the logical relations between statements of the two sorts. Third, I analyze some types of causal statements that do not seem to fit in the proposed scheme: statements expressing interruption, triggering and omission.

Evénement causatif et ses structures prédicatives

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Par quelles structure syntaxique et formes lexicales l'événement causatif peut-il être verbalisé ? Nous montrons dans notre exposé que le japonais et le français peuvent exprimer un seul et même événement de manières diverses et que la diversification des expressions dépend largement de la disponibilité des mots dans chacune des langues.

L.Tesnière remarque que la notion de verbe causatif est tellement développée en français qu'on y fait souvent appel, notamment pour traduire des phrases étrangères au moyen de phrases qui ne sont pas de type directement causatif. Celui-ci dit, à propos des événements causatifs saisis par notre esprit, que le français offre un large éventail de possibilités nous permettant de les exprimer à travers des verbes causatifs avec leurs actants requis. En japonais, de tels moyens lexicaux sont moins autorisés. Nous avons en effet constaté, dans notre corpus parallèle du japonais et du français, que les phrases appariées de ces langues montrent de nombreuses divergences sur le plan de la structure syntaxique de surface, alors qu'elles représentent le même événement évolutif causatif.

Tableau 1

(1)	Elle a remis son chandail à son enfant.	actif VS factitif	elle prtcl_sujet/thm enfant à chandail prtcl_objet Kanojo_ wa kodomo_ni kaadigan_ wo se mettre faire passé haora_se_ ta .
(2)	Le vent a éteint la bougie.	v.transitif VS v. intransitif	vent à cause de bougie prtcl_sujet s'éteindre passé Kaze_ de rôsoku_ ga kie _ ta .
(3)	La guerre civile a déchiré ce pays en deux.	actif VS passif	guerre à_cause_de ce pays prtcl_sujet/thm deux en Sensoo_ de kono_kuni_ wa futatsu_ni déchirer v_aux_passif passé hikisak_ are _ ta .
(4)	Elle a raccourci sa robe.	verbe VS prédicat adjectival (prd. statif)	elle prtl_sj/thm robe prtl_objt court rendre/faire Kanojo_ wa doresu_wo mijikaku_ shi _ passé ta .

Par exemple, si la voix est active en français, elle peut être factitive ou passive en japonais(cf. (1) et (3) du tableau) ; lorsque le verbe employé du français est transitif, le verbe japonais peut être intransitif(inaccusatif ou inergatif) (cf. (2)); quand l'aspect inhérent au verbe français est à l'évolutif, celui du japonais ne l'est pas nécessairement mais peut être au statif (cf. (4)).

D'où viennent de telles divergences ?

Nous considérons qu'elles peuvent être attribuées aux faits suivants :

       - disponibilité des unités lexicales de chaque langue

       - contraintes syntaxiques et/ou sémantiques qu'impose chaque verbe à ses actants

Nous examinerons les origines de la diversité des expressions causatives en prenant comme exemples les phrases figurant dans le tableau 1.

Opposition actif et factitif

En empruntant à Jackendoff et à Kageyama la 'structure conceptuelle', on peut respectivement formuler les notions de (5) causation, de (6) changement d'état et de (7) état (résultatif ou non) comme suit :

       (5) [X cause [Y become [Y be_at Z]]]

       (6) [Y become [Y be_at Z]]

       (7) [Y be_at Z]

En français ou en japonais, les événements appréhendés en (5) et (6) sont souvent lexicalisés au moyen

de morphologies identiques ou apparentées :

<p align="right">Tableau 2</p>

français			japonais		
évolutif causatif	évolutif	état	évolutif causatif	évolutif	état
sortir(X,Y)	sortir(Y)	sorti	^{sortir} dasu(X,Y)	^{sortir} deru(Y)	nil
nil	exploser(Y)	explosé	^{exploser} bakuhasuru(X,Y)	^{exploser} bakuhasuru(Y)	nil
marier(X,Y)	se marier(Y)	marié	nil	$^{se\ marier/épouser}$ kekkonsuru(Y)	nil
raccourcir(X,Y)	raccourcir(Y) se raccourcir(Y)	raccourci court	nil	nil	^{court} mijikai

Cependant certains verbes, n'ayant pas de forme alternative, se montrent défectifs : En pareils cas, toute langue dispose de moyens de suppléer à la lacune. Au cas où seul le verbe intransitif est disponible, on peut combler le manque par la factivation à l'aide du verbe auxiliaire 'faire' ou 'saseru'. Celui-ci introduisant dans l'énoncé la cause ou l'instigateur, l'ensemble devient alors un énoncé causatif.

(8)-fr Elle a remis son chandail à son enfant.

(8)-jp Kanojo_ wa kodomo_ni kaadigan_ wo haora_se_ta .

(gloss: elle prtcl_sujet/thm enfant à chandail prtcl_objet se mettre faire passé)

Verbe transitif versus verbe intransitif

Bien qu'un verbe ait l'emploi alternatif, il se peut que des conditions telles que la restriction sémantique rendent impossible la construction causative. La langue française a une prédilection pour le sujet causatif dont le trait sémantique est non humain. Par contre les verbes transitifs japonais ne prennent dans leur majorité qu'un nom à trait animé pour son sujet grammatical. On emploie alors, comme en (9)-jp, le verbe intransitif et procède à l'interversion des actants : le terme désignant la source du changement vient en position du circonstant, causatif en l'occurrence.

(9)-fr Le vent a éteint la bougie.

(9)-jp Kaze_ de rôsoku_ ga kie _ta .

(gloss: vent à cause de bougie prtcl_sujet s'éteindre passé)

Passivation

Lorsque, comme en (9) ci-dessus, l'emploi transitif n'est pas autorisé par la restriction sémantique du sujet et qu'en sus de cela, la langue ne dispose pas de verbe intransitif, y a-t-il des solutions ? Dans les exemples attestés de notre corpus, on trouve des phrases passivées en japonais.

(10)-fr La guerre civile a déchiré ce pays en deux.

(10)-jp Sensoo_ de kono_kuni_ wa futatsu_ni hikisak_ are _ta .

(gloss: guerre à_cause_de ce pays prtcl_sujet/thm deux en déchirer v_aux_passif passé)

Cette solution permet de contourner la contrainte sémantique du sujet dans l'expression causative et de former la phrase équivalente en se passant de verbe intransitif.

Verbe attributif et prédicat statif

Les verbes attributifs tels que 'devenir', 'rendre', ' suru ' ou 'naru' sont ceux qui peuvent changer l'aspect du terme statif. Aussi dans les exemples ci-dessous, faute de verbe causatif, l'événement se traduit en japonais par la séquence adjectif et verbe attributif, 'mijikaku_ suru , alors qu'en français il est construit grâce au seul verbe causatif :

(11)-fr Elle a raccourci sa robe.

(11)-jp Kanojo_ wa doresu_ wo mijikaku_ shi _ta .

(gloss: elle prtl_sj/thm robe prtl_objt court rendre/faire passé)

Que ce soit par factivation, passivation ou emploi du prédicat non causatif, on voit ainsi combien la langue regorge de solutions pour mettre en forme les événements causatifs.

Event-structural prominence and forces in verb meaning change
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Philippine languages are well-known to exhibit a set of verbal affixes that signal *how* the arguments are involved in the event depicted by the verb, e.g. whether they fail, succeed or are out-of control. It is rarely stressed that this function to indicate how the arguments participate in the event extends also to the so-called focus or voice affixes of simple activity verbs. These do not only determine the most prominent argument/ subject, they also determine the interpretation of verbs, based on the fact that Actors and Undergoers are viewed as participating differently in Actor and Undergoer Voice sentences. Best known are those cases in which Undergoer Voice leads to a telic reading, while Actor Voice leads to an atelic reading, as shown in (1) and (2).

(1) a. L-um-angoy   **sila**   sa ilog.
       AV:UM-swim   3p.NOM   DAT river
       'They went swimming in the river.'
    b. Ni-languy   nila   **ang ilog**.
       UV.REALIS- swim   3p.GEN   NOM river
       'They swam the river (and conquered it).'   (Nolasco 2005)
(2) a. Na-nood   **si Alex**   ng Extra Challenge.
       AV:MA.REALIS-watch   NOM Alex   GEN extra challenge
       'Alex watched Extra Challenge (and other shows).'
    b. P-in-anood   ni Alex   **ang Extra Challenge**.
       UV.REALIS-watch   GEN Alex   NOM extra challenge
       'Alex watched the Extra Challenge.'   (Saclot 2006)

However, Undergoer Voice does not always have a bearing on the aspectual interpretation of verbs. In (3) the choice of Undergoer Voice leads to a change in the direction of the movement depicted by the verb, while in (4) it seems to lead to a change with respect to the nature of the event.

(3) a. L-um-abas   **si Pedro**   sa kapit-bahay.
        AV:UM–go.out   NOM Pedro   DAT neighbour('s house)
        'Pedro left the neighbour('s house).'
    b. L-in-abas   **ni Pedro**   ang kapit-bahay.
        UV.REALIS-go.out   GEN Pedro   NOM neighbour('s house)
        'Pedro went out to go to his neighbour (= He went out to fight with his neighbour). '
(4) a. P-um-asok   **ka**   ng/sa bahay.
        AV:UM-go into   2s.NOM GEN/DAT house
        'Go into a/the house.'
     b. Pasuk-in   mo   **ang bahay**.
        go into-UV:IN   2s.GEN   NOM house
        'Break into the house (Go into the house to steal).'

As the examples show, with activity verbs taking animate Actor arguments, a prominent Undergoer is preferably construed as the motivation/reason for the Actor to bring about the event, and it is the involvement of the Undergoer in the event that is viewed as determining the run-time of the event. If the Actor is the prominent argument, then the reasons for the occurrence of the event (and the run-time) are tightly linked to the Actor (or properties of the Actor) and not to the Undergoer. Saclot (2006) and others have tried to capture this distinction by the rather problematic notions 'voluntary' versus 'deliberate' action and 'centripetal' (action moving towards the Actor) versus 'deliberate'/ 'centripetal'(action moving away from the Actor) event. One of the reasons why these notions are problematic is that they only seem to make sense for animate Actors. It must be noted, however, that with inanimate Actors the Undergoer forms still induce similar changes in meaning, as the example in (5) shows.

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(5) a. T-um-angay   ang agos   ng mga kahon.
      AV:UM-carry away   NOM current   GEN PL box
      'The current carried away boxes (among other things).'

     b. T-in-angay   ng agos   ang mga kahon.
       UV.REALIS-carry away   GEN current   NOM PL box
       'The current carried away the boxes.'   (Dell 1984: 198)

Given these facts, it is clear that the notion of force (the Undergoer as purpose, cause or reason) in the examples with animate Actors above is something that falls out as a side-effect from something more basic, which I suggest is event-structural prominence of arguments. Event-structural prominence implies that an argument plays a crucial role for the event depicted, i.e. the start and the run-time of the event are viewed as tightly linked to this argument. Obviously event-structural prominence is a matter of the speaker's perspective on the event. As the discussion of multiple examples will show, based on differences in event-structural prominence(, and taking into account verb meanings, properties of Undergoer arguments as well as socio-cultural factors,) not only the changes in verb meaning in (1)- (5), but also the ungrammaticality (or lack) of certain voice forms in Tagalog can be explained. The question of the status and the possible representation of phenomena like event-structural prominence will be discussed in the remainder of the paper.

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Causativization and Event Structure

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Problem. An event-based approach to causativization recently advocated by Pylkkänen 2002 whereby the causative morpheme is analyzed along the lines of (1) assumes crucially that the semantic contribution of the causative is a causing event. While successful in accounting for the meaning and distribution of causatives in a variety of genetically unrelated languages, this approach seems to require further refinement in order to explain where the difference between what we call monoeventive vs. bieventive causatives comes from.

Data and discussion. In Karachay-Balkar (Altaic, Turkic), the causative can be formed from unaccusatives (2), unergatives (3), and transitives (4). Standard tests on adverbial modification show that causatives from unaccusatives are unambiguous (see (5a-b)), hence **monoeventive**, whereas causatives from unergatives and transitives are ambiguous, hence **bieventive** (see (6)-(7)). The difference between two types of causatives (which is referred to in the literature as manipulative vs. directive (Shibatani 1976), contact vs. distant, immediate vs. mediated (Kulikov 2001), causer-controlled vs. causee-controlled (Wierzbicka 1988, Shibatani 2000), lexical vs. syntactic (Harley 1996), L-syntactic vs. S-syntactic (Travis 2000)) is problematic for Pylkkänen, since she assumes, crucially, that the causative morpheme must be either root-selecting, verb-selecting or phase-selecting (Pylkkänen 2002:77, see (8)). As a result, we have to postulate for languages like Karachay-Balkar two different causative morphemes with the same phonological spell-out, one of which has to be root-selecting to yield a monoeventive structure, and another one to be phase-selecting to yield a bieventive structure with the Causee originating in the external argument position. An obvious complication is that there is no independent motivation for two different causative morphemes. Secondly, such an account misses a significant generalization that the event structure of the causative is fully predictable from syntactic and semantic characteristics of the non-derived structure.

Analysis. The above complications disappear if we assume that what happens in languages like Karachay-Balkar is exactly the opposite: there is a single causative morpheme with no tight selectional restrictions; this morpheme can embed either VP or vP.

Following (Travis 2000) and (Ramchand 2003, 2005), we assume a syntactic notion of event. More specifically, we take an event to be minimally a VP and maximally a vP, assuming a Larsonian-style VP-shell structure. Syntactic events, then, are sensitive to lexical information, so that unaccusatives only project VP whereas the transitives and unergatives project VP embedded under vP. Semantically, both v and V (as well as the head of Resultative Phrase, embedded under VP, which is not relevant for the present discussion) contribute subevental structure that combines to yield the semantic representation of the whole event. Each subevental component introduces a corresponding participant of the event that bears a particular thematic relation to the event argument of a verb. In particular, v is associated with the causing subevent and the Initiator of the whole event, sitting in Spec, vP, whereas Spec, VP introduces the Undergoer of the whole event (=a participant of the process subevent associated with V), as represented in (9).

Following many current proposals (e.g. Folli, Harley 2003, Ramchand 2003), we suggest that the causative morpheme is a v head. When this morpheme attaches to the stem which projects a vP itself, the resulting structure contains two vPs, as in (11a)-(12a) while its interpretation in (11b)-(12b) involves two events (in (12b) the embedded event consists of two subevents itself). Note that semantically DPs sitting in Spec, vP positions bear the same thematic relation to the corresponding events. This explains why such structures are necessarily bieventive — otherwise violation of the Uniqueness of Participants (e.g., Krifka 1998) would happen. Projecting a single vP yields a mono-eventive structure in, and that is the reason why causatives from unaccusatives are monoeventive (see(10a)), despite the fact they are composed by two subevents (see (10b)).

Examples

(1) $\lambda P \lambda e \exists e'[\text{CAUSE}(e')(e) \wedge P(e')]$

(2)   a. butaq   sın-dɨ.   b. alim   butaq-nɨ   sın-dɨr-dɨ.
       branch   break-PST.3SG   A.   branch-ACC   break-CAUS-PST.3SG
       'A/the branch broke.'   'Alim broke a/the branch.'

(3) a. zascɨk cap-tɨ.
       boy   run-PST.3SG
     'The boy ran.'

     b. alim   zascɨk-nɨ   cap-tɨr-dɨ.
        A.   boy-ACC   run-CAUS-PST.3SG
     'Alim made the boy run.'

(4) alim ešik-ni ac-tɨ.
     A. door-ACC open-PST.3SG
     'Alim opened the door.'

     b. kerim alim-ge ešik-ni   ac-tɨr-dɨ.
        K.   A.-DAT   door-ACC   open-CAUS-PST.3SG
     'Kerim made Alim open the door.'

(5) a. alim fatima-ʁa   acuuʁa   butaq-nɨ sɨn-dɨr-dɨ.
        A.   F.-DAT   to.spite   branch-ACC break-CAUS-PST.3SG
     'Alim broke a/the branch to spite Fatima.' (unambiguous)

     b. alim eki   sekunt-xa   butaq-nɨ   sɨn-dɨr-dɨ.
        A.   two   second-DAT to.spite branch-ACC   break-CAUS-PST.3SG
     'Alim broke a/the branch in two seconds.' (unambiguous)

(6) a. alim terk   zascɨk-nɨ   cap-tɨr-dɨ.
        A.   quickly   boy-ACC   run-CAUS-PST.3SG
     1. 'What Alim did quckly was make a boy run.'
     2. 'What Alim did was make a boy run quickly.'

     b. alim fatima-ʁa acuuʁa zascɨk-nɨ   cap-tɨr-dɨ.
        A.   F.-DAT   to.spite   boy-ACC   run-CAUS-PST.3SG
     1. 'What Alim did to spite Fatima was make a boy run.
     2. 'What Alim did was make a boy run to spite Fatima.

(7) a. kerim biš minut-xa   alim-ge ešik-ni   ac-tɨr-dɨ.
        K.   five minute-DAT A.-DAT   door-ACC   open-CAUS-PST.3SG
     1. 'What Kerim did was make Alim open the door in five minutes.'
     2. 'What Kerim did in five minutes was make Alim open the door.'

     b. kerim   alim-ge   fatima-ʁa acuuʁa   ešik-ni   ac-tɨr-dɨ.
        K.   A.-DAT   F.-DAT   to.spite   door-ACC   open-CAUS-PST.3SG
     1. 'What Kerim did was make Alim open the door to spite Fatima.'
     2. 'What Kerim to spite Fatima was make Ali open the door.'

(8) Root-selecting causative: [CAUSE Root]
     Verb-selecting causative: [CAUSE [v Root]]
     Phase-selecting causative: [CAUSE [θ_{ext} [v Root]]]

(9) [$_{vP}$ INITIATOR v [$_{VP}$ UNDERGOER V [$_{RP}$ RESULTEE R XP]]] (Ramchand 2003)

(10) a. [$_{vP}$ alim dɨr [$_{vP}$ butaq-nɨ sɨn-]].
     b. $\lambda e \exists e'$[Agent(Alim)(e) $\land$ CAUSE(e')(e) $\land$ break(e') $\land$ Undergoer(branch)(e')]

(11) a [$_{vP}$ alim tɨr [$_{vP}$ zascɨk-nɨ cap-]].
     b. $\lambda e \exists e'$[Agent(Alim)(e) $\land$ CAUSE(e')(e) $\land$ run(e') $\land$ Agent(boy)(e')]

(12) a. [$_{vP}$ kerim tɨr [$_{vP}$ alim-ge [$_{vP}$ ešik-ni ac-]]].
     b. $\lambda e \exists e' \exists e''$[Agent(Kerim)(e) $\land$ CAUSE(e')(e) $\land$ Agent(Alim)(e') $\land$ cause(e'')(e') $\land$
            open(e'') $\land$ Undergoer(door)(e)]

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On "Non Agentive Verbs" Presupposing an Action
Agent-oriented Adverbs and Psych-verbs

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Introduction.   As is well-known, only a subset of causative psych-verbs is compatible with what Geuder (2000) and Bonami et al. (2004) call agent-oriented manner adverbs (AOMAs) like *cautiously*, *patiently*, or *relentlessly*. On the relevant reading, these adverbs are paraphrasable by *in a cautious, patient, relentless way* and are often assumed to be predicates of event.[1]

(1)   a. Mary cautiously seduced me.

          b. ? ?Mary cautiously attracted me.

          a. He patiently encouraged them/ relentlessly bored me.

          b. ? ?He patiently stimulated them/ ? ?relentlessly irritated me.

The verbs compatible with these adverbs will be called *encourage*-verbs, and the other ones *stimulate*-verbs.

Roughly, two explanations of the contrasts illustrated in (1) have been proposed. According to the first one (advocated e.g. by Di Desidero (1993) and van Voorst (1995)), AOMAs are unacceptable when the entity denoted by the subject (henceforth "S") is not a plain Agent in reality (one cannot act with sufficient intent, volition and control to provoke the desired reaction of the Experiencer). In other words, the Seducer, but not the "Attracter", is a real Agent. However, this solution faces two problems. First, contrary to uncontroversially non-agentive verbs like *suffer* or *know*, *stimulate*-verbs can often be used in constructions which are also said to require the presence of an Agent (see (2)-(3)). This suggests that with *stimulate*-verbs, S *can* be an Agent in some way. Second, even in cases where S is obviously an Agent (as the doctor in (4)), the possibility to have an AOMA is not guaranteed.

(2)   ? ?It was stupid of Mary to suffer/ clever of Mary to know how to answer.

(3)   OK It was stupid of Mary to irritate them.
          OK It was clever of Mary to stimulate them.

(4)   The doctor patiently tried to persuade me to take the medicine/ ? ?patiently persuaded me to take the medicine.

(5)   In doing this, Mary stimulated everybody.

Following a second approach to the problem illustrated in (1), *stimulate*-verbs are not compatible with AOMAs because their subject always denotes an abstract entity. Since an abstract entity is not able to act, their subject cannot be associated with the thematic role Agent (Bouchard (1995), p. 258 *et sq.*). However, while it is certainly right to say that the subject of *stimulate*-verbs *can* denote an abstract entity (as it is explicitly the case with a propositional subject), it seems exaggerated to say that it is always the case. For instance, in (5), the subject of *stimulate* corefers with the implicit subject of the agentive gerund, which is obviously an Agent.

A new proposal.   My explanation of (1) relies on two hypothesis. Hyp. 1 : An AOMA can only apply to an event whose occurrence is *asserted* by the verb ; Hyp. 2 : Contrary to *encourage*-verbs, *stimulate*-verbs do not *assert* the causing event ; they *presuppose* it. In two words, the idea is that AOMAs are unacceptable in (1b) because they cannot have access to the causing event, which is potentially an action of S, but only to the caused (psychological) event, which is not an action, and *a fortiori* not an action of S.

I will firstly show that Hyp. 1 can be used independently to explain the incompatibility of AOMAs with achievement verbs like *find* or *persuade*. Then I will come back to psych-verbs.

AOMAs and achievement verbs.   Several authors have argued that achievement verbs like *find* or *persuade* lexically presuppose an event (a search, an attempt to persuade), and assert the right boundary of this event (Zybatow (2004), Malink (2007), Piñón (2007)). Evidence for this is that these verbs presuppose an event under negation :

(6)   Peter didn't find the key.
          → Peter was looking for the key, or did something that could have resulted in his finding the key.

Given Hyp. 1, we can straightforwardly explain the unacceptability of a sentence like (7):

(7)   ??Peter intensively found the key.

The AOMA *intensively* can only modify the finding itself, and not the search. But as the finding is instantaneous, it cannot be an action, and thus cannot serve as the argument of an AOMA.

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[1]"Mary cautiously attracted me" can also mean something like "It was cautious of Mary to attract me". On this reading, *cautiously* is not commonly assumed to be a predicate of events and is compatible with almost every causative psych-verbs. This reading is thus ignored here.

Back to psych-verbs. Following Hyp. 2, among causative psych-verbs, only *encourage*-verbs assert the causing event (the action of S); *stimulate*-verbs *presuppose* it. One of the arguments in favour of this idea is that *stimulate*-verbs pass the classical tests for presupposition:

(8)   a. Peter didn't encourage them.
         $\not\to$ Peter had done something that could have made them encouraged.

       b. Peter didn't stimulate them.
         $\to$ Peter had done something that could have made them stimulated.

(Note that (8) also presupposes a perception by the Experiencer of the event to which Peter participates).

Hyp. 1 allows us to explain why *stimulate*-verbs are incompatible with OAMAs, without committing us to say like van Voorst that S is never an Agent with these verbs. The subject of sentences (1b) can *well* and truly be an Agent; however, the action, if any, is presupposed by the verb and thus cannot be accessed by the AOMA.

In order to capture this presupposition, I propose to associate to the "agentive" version of *stimulate*-verbs a lexical representation as the one proposed in (11) for *stimulate*, on the model of what is proposed by Piñón (2007) for achievement verbs. Piñón adopts the type of representation used by Malink (2007), where the top formula of the two-dimensional array corresponds to the assertion and the bottom formula to the lexical presupposition, as suggested in (10). t_r is the reference time. [2]

$$(10) \quad \begin{bmatrix} Assertion \\ Presupposition \end{bmatrix}$$

$$(11) \quad stimulate_{ag} \Rightarrow \lambda y \lambda x \lambda v \begin{bmatrix} \mathsf{Stimulate}(v) \wedge \mathsf{Causer}(x,v) \wedge \mathsf{Exp.}(y,v) \wedge \tau(v) \sqsubseteq t_r \\ \begin{bmatrix} \exists v' \exists v''[\mathsf{Agent}(x,v') \wedge \mathsf{Perceive}(v'') \wedge \\ \mathsf{Exp.}(y,v'') \wedge \mathsf{Theme}(v',v'') \wedge (\tau(v') < t_r) \end{bmatrix} \end{bmatrix}$$

On the other hand, *encourage*-verbs can be used in two ways. Either they assert the action, as in (12), or they presuppose it, as in (13).

(12)   She actively encouraged$_1$ me.

(13)   A woman left the cinema in the middle of the film. In doing so, she encouraged$_2$ me also to leave.

(14)   She didn't actively encourage$_1$ me to leave. But, nevertheless, in leaving, she encouraged$_2$ me also to do so.

(15) $encourage_1 \Rightarrow \lambda y \lambda x \lambda e \lambda e'[\mathsf{Encourage}(v) \wedge \mathsf{Ag}(x,v) \wedge \mathsf{Cause}(v,v') \wedge \mathsf{Be\text{-}encouraged}(v') \wedge \mathsf{Exp}(v,v')]$

(16)   A woman left the cinema. #In doing so, she cautiously encouraged$_2$ me also to leave.

I argue that *encourage*-verbs are ambiguous and do not denote the same kind of change of state in both uses; this ambiguity explains why (14) is not (completely) contradictory. In (12), the verb *encourage*$_1$ asserts an attempt to encourage, and implies a resulting change of state consisting of being the Patient of this attempt. It only *implicates* that the Exp. is encouraged in the sense of *feeling* encouraged (hence the possibility to continue (12) by *...but she didn't succeed*). In (13), the verb *encourage*$_2$ presupposes an action (which can be of any kind), and implies a resulting change of state consisting of feeling encouraged. Accordingly to this analysis, *encourage*$_1$ is represented as any "traditional" causative verb (cf. (15)), whereas the proposed representation of *encourage*$_2$ resembles the one of *stimulate*-verbs. In conformity with Hyp. 1, only *encourage*$_1$ is compatible with AOMAs, as suggested by the unacceptability of (16).

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[2]Appealing to the reference time is the trick used by Piñón to define better the presupposed event of achievement verbs.

Note that the representation (11) does not ensure that the action v' of x **causes** the psychological result v. This is desirable, since the presupposed action is *not* a causing event in the case of negative sentences. As suggested by Piñón (2007), the relation between the presupposed and the asserted event can be translated by an independent axiom associated to each of these presuppositional verbs (see below for *stimulate*):

(9) $\forall x \forall y \forall v \forall t_r[\mathsf{Stimulate}(v) \wedge \mathsf{Causer}(x,v) \wedge \mathsf{Experiencer}(y,v) \wedge \tau(v) \sqsubseteq t_r \to$
      $\exists v' \exists v''[\mathsf{Participant}(x,v') \wedge \mathsf{Perceive}(v'') \wedge \mathsf{Experiencer}(y,v'') \wedge \mathsf{Theme}(v',v'') \wedge \mathsf{Cause}(v',v) \wedge (\tau(v') < t_r)]]$

The presupposition in (11) is redundant with the axiom in the case of positive sentences (which already captures the presupposition each time a psych result occurs), but plays a crucial role in the case of negative ones.

Vandals splashed red paint on the walls and ran the rats into the White House: **Manner Conflation as 'Welcome Invasion'**

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In this paper we argue that so-called 'manner conflation' (Talmy 1985, 2000) is a local process whose semantic interpretation is syntactically determined; in particular, our main purpose is to show how our revision of H(ale) & K(eyser)'s (2002, 2005) analysis of constructions like (1) naturally leads us to analyze a variety of 'manner' constructions from an even more radical syntactically-driven perspective than theirs.

Interestingly, H&K (2002, 2005) have shown that the reason whereby an intransitive alternant is possible for (1a), but not for (1b), is related to the different properties of the 'manner feature' inherent in the semantics of the roots involved: it is the case that (2a) is grammatical since *splash* involves a manner feature which is 'linked' to the internal argument *mud*, while (2b) is ungrammatical since the manner feature associated to *smear* can only be linked externally: crucially, (2b) is ruled out since there is no agent to license such a feature. In other words, the manner feature is patient-oriented in (1a), but agent-oriented in (1b). This said, some important remarks are in order: H&K's analysis does not appear to capture the relevant fact that *splash* is not locally conflated in (2c) (vs. cf. (2a)). In fact, notice that they posit the same l-syntactic analysis for (1a) and (1b): see (2c)-(d). Our proposal is to analyze the l-syntactic argument structure of *splash* verbs as similar to that of deadjectival verbs on the basis that both typically enter into the causative alternation and both have a patient-oriented root: cf. (3). Indeed, we will take pains to show that there is a crucial difference concerning their formation: while deadjectival verbs are formed via incorporation of A into V (H&K 2002), *splash* verbs involve a syntactic conflation of their root with the inner verb via a 'plug-in' device (Mateu & Rigau 2002, McIntyre 2004, and Zubizarreta & Oh in press). [NB: Mateu & Rigau's (2002) syntactic plug-in operation has been appropriately referred to as 'welcome invasion' by Hirschbühler (2006)]. Indeed, as emphasized by these authors, the insertion of the root *splash* and *smear* should not be taken as a trivial process (*contra* H&K's (2002, 2005) simple analyses in (2)) since the syntactic formation of these complex verbs involves adjunction of a root onto a light verb -a causative one (upper V) or a transitional one (inner V)-. Accordingly, we argue that H&K's l-syntactic analyses in (2) should be recast as in (4): the fact that now in (4) conflation is locally represented (e.g., cf. (4c-d) vs. (2c-d)), and the fact that conflation is represented via a syntactic plug-in device contribute to showing a more syntactically transparent semantic interpretation of the manner component.

On the other hand, we show why the parametrized operation of 'welcome invasion' (Mateu & Rigau 2002; Zubizarreta & Oh (in press)) involved in these examples allows us to account for Talmy's (1985, 2000) typological predictions: i.e., Manner verbs (of which those ones in (1) are only a particular case) are more abundant in Germanic than in Romance (Slobin 1996f). We show that examples like (1) (but crucially *not* their Romance counterparts) are in fact complex resultative(like) constructions where the P head is in fact to be decomposed into a complex one, whereby the visible *on* is combined with an abstract *TO*: indeed, we will show the correctness of adopting H&K's (2002: chap. 7) proposal that terminal coincidence relations are more complex than central coincidence ones (see Svenonius (2006), i.a., for an insightful syntactic recasting of these notions as Path and Place heads). Accordingly, complex resultative constructions like those in (5a) and (5c) can also be analyzed as involving conflation of the 'welcome invasion' kind: e.g., like *smear*, *kick* and *push* are agent-oriented roots (H&K 2002, 2005) whereby the l-syntactic analysis in (6) seems to be appropriate (cf. (4b)-(4d)). On the other hand, parallel examples to the *splash* case analyzed above where 'welcome invasion' is carried out internally can interestingly be found as well in another lexical semantic area: e.g. cf. causative constructions where the Theme can be said to move in a particular manner. Indeed, we show that our present syntactic analysis of strict local conflation naturally leads us to analyze causative constructions like (7a) from a different, more syntactically-driven perspective than the one adopted by Folli & Harley (2006): while they argue that both (7a) and (7b) have the very same syntactic argument structure where the root {$\sqrt{\text{RUN}}$/$\sqrt{\text{WHISTLE}}$} is inserted under a causative *v*, their relevant differences being then not syntactically/configurationally represented, we argue, in contrast, that conflation applies in a more local way whereby the syntactic locus of 'welcome invasion' is different in (7a) from (7b): cf. (8a)-(8b). By using syntactic tests like the causative alternation (H&K 2002; but see Harley 1995), we will be arguing for the hypothesis that two verbal heads are syntactically represented for (1a) and (7a), but not for (1b), (5a) or (7b): cf. (3a)/(8a) and (4d)/(6a)/(8b), respectively.

(1)   a.   The kids splashed mud on the wall.

          b.   The kids smeared mud on the wall.   H&K (2002; 2005)

(2)   a.   [$_V$ Mud [$_V$ splash [$_P$ on the wall]]]   (cf. *Mud splashed on the wall*)

          b.   *[$_V$ Mud [$_V$ smear [$_P$ on the wall]]]   (cf. **Mud smeared on the wall*)

          c.   [$_V$ splash [$_P$ mud [$_P$ on the wall]]]   (cf. (1a))

          d.   [$_V$ smear [$_P$ mud [$_P$ on the wall]]]   (cf. (1b))

               NB: The external argument is not present at l-syntax (H&K 1993; 2002)

                                 H&K (2002: 23-25; 2005: 19-21)

(3)   a.   ([$_V$ [$_v$ Ø]) [$_V$ Mud [$_V$ [$_V$ √SPLASH –V] [$_P$ on the wall]]]]]

          b.   ([$_V$ [$_v$ Ø]) [$_V$ the sky [$_V$ V [$_A$√CLEAR]]]] (cf. *The strong winds cleared the sky /*
                                                       The sky cleared)

(4)   a.   [$_V$ Mud [$_V$ [$_V$ √SPLASH –V] [$_P$ on the wall]]]

          b.   *[$_V$ Mud [$_V$ [$_V$ √SMEAR –V] [$_P$ on the wall]]]

          c.   [$_V$ [$_v$ Ø] [$_V$ mud [$_V$ [$_V$ √SPLASH –V] [$_P$ on the wall]]]]]

          d.   [$_V$ [$_V$ √SMEAR –V] [$_P$ mud [$_P$ on the wall]]]

(5)   a.   The kids kicked the ball into the kitchen.

          b.   *The ball kicked into the kitchen.

          c.   John pushed the car into the garage.

          d.   *The car pushed into the garage.

(6)   a.   [$_V$ [$_V$ √KICK –V] [$_P$ the ball [$_P$ to [$_P$ in- the kitchen]]]]   (cf. (4d))

          b.   *[$_V$ The ball [$_V$ [$_V$ √KICK –V] [$_P$ to [$_P$ in- the kitchen]]]]   (cf. (4b))

(7)   a.   He ran the rats through the maze.   (cf. *The rats ran through the maze*)

          b.   Mary whistled Rover to her side.

                                    Folli & Harley (2006)

(8)   a. ([$_V$ [$_v$ Ø]) [$_V$ the rats [$_V$ [$_V$ √RUN –V] [$_P$ through the maze]]]]]

          b. [$_V$ [$_V$ √WHISTLE –V] [$_P$ Rover [$_P$ to her side]]]

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Young Children's Understanding of Ongoing vs. Completion in Imperfective and Perfective Participles

Abstract

In this talk, I will introduce results of the experiment that investigates how English speaking children interpret imperfective and perfective participles used attributively in a prenominal position, as in 'burning/burned candle'. These participles exhibit a pure aspectual distinction between ongoing and completion that is independent of the temporal entailments contributed by a finite verb. I will report results from 45 children (1;6-6;8) who participated in an experiment investigating whether they know that the two types of adjectival participles are used to pick out different situations; namely, the imperfective participles map onto ongoing events and the perfective participles map onto completed events (Klein, 2004). We found that the elimination of the tense-aspect interaction resulted in an improved results compared to those in Wagner (2002). However, the results in this paper as well as those from Wagner's (2002) study of grammatical aspect morphology both find that children do not master the aspectual distinction before around age 5 when object-related information is given—in the absence of agency cues.

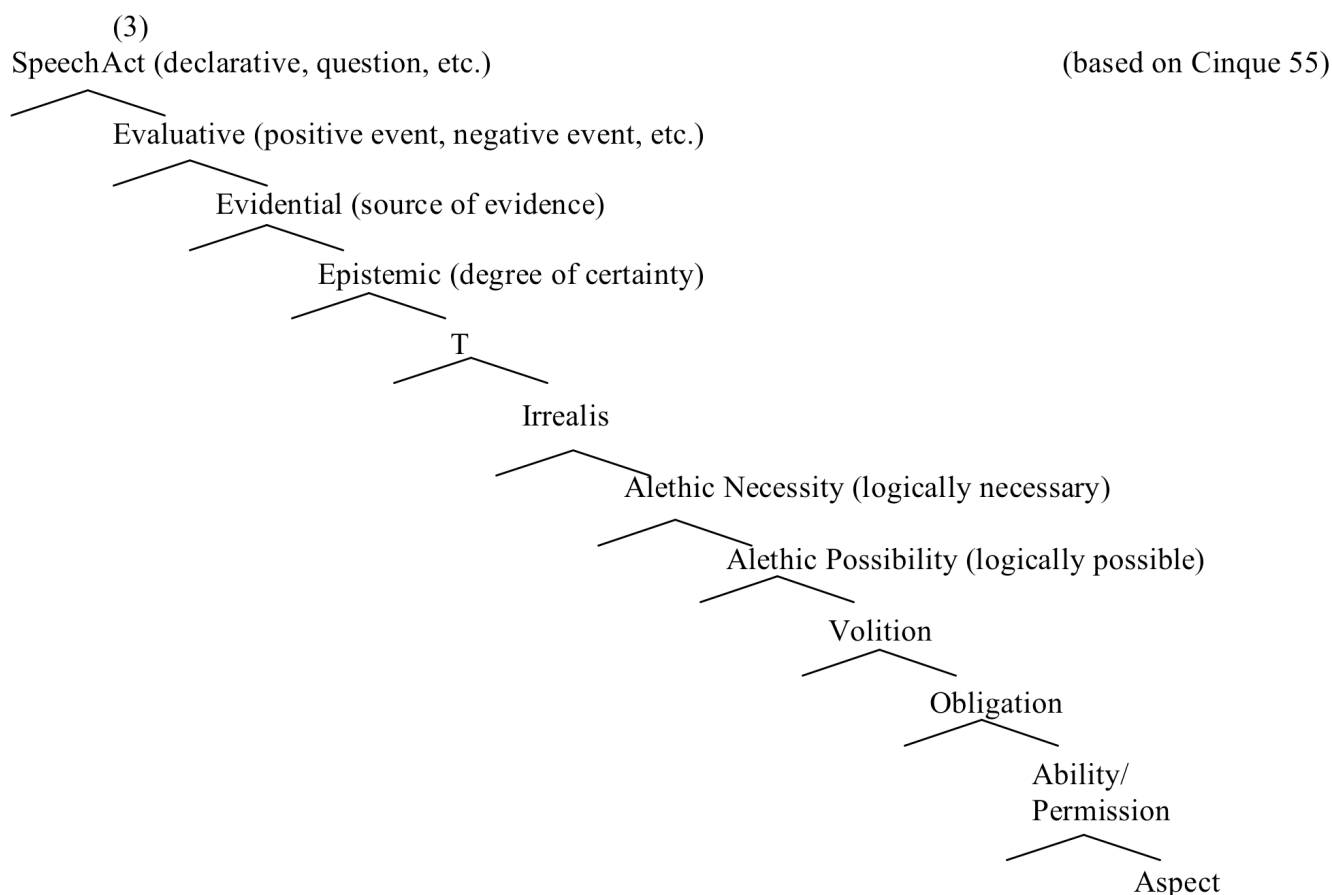# The Raising/Control Distinction and the Pragmatic Nature of Modals

Sumayya Racy, University of Arizona

This paper concerns the classification of modals (e.g. *must*, *can, may*) as raising verbs and as control verbs, and argues in favor of a semantico-pragmatic approach to understanding modality. Epistemic modals pertain to speaker certainty (e.g., some situation logically must be the case, etc.). Root modals are those which pertain to obligation, desire, ability, and permission (e.g. someone is able to do something, etc.). Some authors, such as Drubig (2001), argue that epistemic modals should be viewed as raising verbs and that root modals should be viewed as control verbs (an asymmetrical analysis). Others, such as Wurmbrand (1999) argue that all modals should be viewed as raising verbs (a symmetrical analysis). Both authors present syntactic arguments for their viewpoints. But I demonstrate that there is a certain degree of language variability with respect to the syntactic criteria. I suggest that a sematico-pragmatic approach is more fruitful when addressing the classification of modals. In (1), we can see that a root modal, such as obligation-*must* allows only a subject which may act with intention. In (2), we can see that an epistemic modal, such as certainty-*must*, allows both agentive and non-agentive subjects.

(1)   a. Sally must glide in the door!
            b. # The chair must glide in the door!

(2)   a. John must be home by now; I can see his car in the driveway.
            b. The furniture must be in the office by now; it's already 4:00.

However, when we consider an appropriate context, (1b) becomes acceptable, as when a director is giving an order to a stagehand. Applying other raising/control tests to modals in other languages reveals yet a higher degree of variability.

        Cinque (1999) argues for a hierarchy of functional projections below C, including the syntactic heads which contain modals. This is illustrated below.

(3)
SpeechAct (declarative, question, etc.)   (based on Cinque 55)

      Evaluative (positive event, negative event, etc.)

           Evidential (source of evidence)

               Epistemic (degree of certainty)

                   T

                      Irrealis

                        Alethic Necessity (logically necessary)

                           Alethic Possibility (logically possible)

                             Volition

                               Obligation

                                Ability/
                                Permission

                                   Aspect

These higher functional projections seem to be sensitive to discourse in ways that lower projections are not. Because of this, I suggest that root modals must connect up with appropriate arguments in the discourse.

This is in line with Langendoen's (2002) analysis of the logical form of modals, whereby root modals bear coindexation with arguments. In this work, the author presents a logical analysis of modal operators, where expressions of possibility, ability, and permission (which may be expressed by *may*, *might*, *can*, *could*) are all fundamentally derived from logical possibility (represented as $\Diamond$). Thus, for example, $\Diamond$P means *it is possible that P happens*. If we modify the $\Diamond$ operator to be $\Diamond$a, or *ability*, then we may get $\Diamond$a(P(i)), or *individual i is able to do P*, where the logical representation contains the indexical *i*, which links up with some individual in the discourse—the one who has the ability. Similarly, expressions of necessity and obligation are fundamentally derived from logical necessity (represented as $\Box$). I present all of Langendoen's operators below:

(4) $\Diamond$P = 'it is possible that P happens'

$\Diamond$a(P(i)) = 'individual i is able to do P'

allow-h(P(i)) = $\Diamond$d?(P(i)) = 'individual h allows/permits individual i to do P'

$\Box$P = 'it is necessary that P'

require-h(P(i)) = $\Box$d?(P(i)) = 'individual h requires/obliges individual *i* to do P'

The arguments that link up with the operators may be either syntactically present or discourse-prominent.

I argue that this pragmatic aspect of modals is the most important factor in their classification, which is in line with approaches such as that of Papafragou (2000). Specifically, whether they behave like raising or control verbs in any given language is the result of language-specific properties and the crucial identifying property of modals is semantico-pragmatic in nature. Overall, this paper argues for a rich but restricted connection between syntactic structure and semantic interpretation on the one hand, and discourse factors on the other.

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Direct and Indirect Causation in Hindi

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1. Introduction: One of the most prominent questions in the recent literature on causativization/transitivization concerns the issue of the direction of the derivation: is causative formation 'structure building' , or are we dealing with productive detransitivization processes? Levin and Rappaport Hovav 1995, Chierchia 2004, and Reinhart 2002 all claim the latter for English and Romance. The first aim of this paper is to argue directly against a detransitivization approach for the morphological alternations in Hindi, and so, indirectly, to cast doubt on a detransitivization analysis for the English causative/inchoative alternation as well. The second aim of the paper is to provide an analysis for the difference between 'direct' and 'indirect' causation in Hindi/Urdu. Many languages exhibit a distinction between two types of morphological causative constructions (cf. e.g. Shibatani 1976), sometimes referred to as 'inner' and 'outer' causatives. Inner causatives are like transitivizers and yield direct causation (direct involvement of the causer in the event). Outer causatives are more like periphrastic causative constructions, often giving a sense of indirect causation (or permission or assistance in some languages). The question is whether this regular alternation, as found in Hindi/Urdu should be analysed in terms of 'lexical' vs. 'syntactic' processes, or some syntactic version of 'inner' and 'outer' involving recursion of a causative head.

2. Hindi/Urdu *-aa* and *-vaa*: Consider the examples from Hindi/Urdu below. The *-aa* morpheme attaches to an intransitive root to give a transitive form involving 'direct' causation, as in (1a); the *-vaa* morpheme attaches to the same intransitive root to give a transitive form that seems to embody 'indirect' causation (1b). Note that in the (b) example, an instrumental-marked causee is made possible.

(1)   a.   Anjum-ne   makaan ban-aa-yaa.
             Anjum-ERG house   make-I.CAUS-PERF
             'Anjum built a house'
       b.   Anjum-ne   (mazdurõ-se)   makaan ban-vaa-yaa.
             Anjum-ERG laborers-INSTR house   make-O.CAUS-PERF
             'Anjum had a house built (by the laborers)'
             (ERG = ergative, PERF = perfective, INSTR = instrumental).

However, it can be shown that the Hindi/Urdu *-vaa* is not an outer causative (agreeing in several essential respects with Saksena 1982). Strikingly, the *-vaa* suffix shows no difference in distribution compared to the *-aa* form— it attaches to essentially the same roots that the *-aa* suffix does. In particular, both forms attach to unaccusatives, unergatives and transitives. For some transitives attachment of a causative suffix increases the valency (the so-called 'ingestive' class), whereas for others, the valency is not increased. The point here is that with respect to these distributional patterns, *-aa* and *-vaa* causativization behave identically. Moreover, comparing the forms created by attaching the *-vaa* suffix and the the *-aa* suffix to the same root, we show from entailment properties that the former does not semantically embed the latter (cf. also Saksena 1982). Both suffixed forms are equally opaque with respect to subsequent syntactic operations and embeddings (i.e. they both act like underived verbal forms), and they both give rise to verbal forms with idiomatic flavours and/or idiosyncratic selectional restrictions. Thus, the two forms do not seem to differ with respect to 'lexicality' or 'productivity', nor can the one be analysed as embedding the other. The striking differences in their semantics remain however:
●The 'indirect' causative always licenses the presence of an instrumental marked causee. The 'direct' causative only sometimes does, depending on the type of root it attaches to.
●The 'indirect' causative allows only subjects that are active, volitional instigators. The 'direct' causative tolerates abstract causes in subject position.

3. The Analysis:
     The heart of the analysis is a generalization of the causative relation as the principled semantic means by which subevents are put together in the syntax. In previous accounts, the

existence of two 'causers' as in the classic outer causative seems to require a recursion of vP, (an embedding of one complete functional complex within another). Under a more fine-grained decomposition of the vP, I argue that the subevental components of initiation, process and result are all linked by event causation. A so-called 'causative' morpheme can then in principle link either 'initiation' and 'process' or 'process' and 'result'. I argue that the case of Hindi/Urdu -*aa* vs. -*vaa* is direct morphological evidence for this view.

Under the analysis, the -*aa* (direct causative) morpheme is an initiational head (essentially little v) which expresses a causative relation between the initiational state and the subsequent process (cf. also Hale and Keyser 2002, Harley 1995 inter alia). The verbal root lexicalizes the process component of the event in this case and the two form a complex event description. The -*v* (indirect causative) morpheme on the other hand, is a processual head that expresses a causative relation between the process and a subsequent result state. In this case, the root lexicalizes only the result. This argues for a decomposed *v*P, which contains three hierarchically ordered heads: *v* (initiation), V (process/transition) and *res* (result).

The immediate advantages of this analysis over previous accounts are as follows: (i) both -*aa* and -*vaa* causatives are complex events formed at the *v*P level with no difference with respect to monoclausality or ability to be idiomatized; (ii) We can decompose -*vaa* into -*v* (the process head) and -*aa* (which is just the 'direct' causational head (iii) the very same underspecified roots can be input to causative formation for each type, and -*vaa* causation never embeds -*aa* causation.

At the same time, the differences between -*aa* and *vaa* causatives are also captured on this kind of decomposition. Indirect causation with -*vaa* follows from the fact that two distinct potentially non-overlapping subevents are involved in the complex macroevent so formed. Thus, the effect of indirect causation comes about *not* because the -*v* morpheme in Hindi/Urdu is an outer causative (it is actually lower in the structure than *i-aa*, under this analysis), but because it disrupts the relationship between the initiating subevent and the result of that initiation. (A similar distinction between direct and indirect resultatives has been proposed by Levin and Rappaport-Hovav 1999). While the subjects of -*aa* causatives can be stative causers, subjects of -*vaa* causatives have to be actors who are actually involved in the process described, a fact that I account for because the argument introduced by the -*vaa* morpheme must be the specifier of both process and initiation, while the argument introduced by -*aa* is a pure (potentially stative) initiator.

4. Conclusion: The analysis of direct vs. indirect causation turns out to provide evidence for a tripartite decomposition of verbal meaning, where causation is not just associated with the uppermost head within the *v*P, but is the semantic relation that links all three subevents. The paper shows that a structure building account of causative formation is both possible, and necessary in the case of the morphosyntactic facts from Hindi. With this analysis in hand, I reexamine the arguments in favour of de-causativization accounts of the English causative-inchoative alternation and show that they disappear under an explicitly constructionalist approach.

Causative constructions in Swedish and Dutch.

A corpus-based syntactic-semantic study.

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This poster contains a short presentation of my PhD-research on causative constructions in Dutch and Swedish (Rawoens, forthcoming). The structure of this presentation is threefold.

First, I give an overview of all possible linguistic expressions of causality in modern Swedish and Dutch, including both verbal and non-verbal expressions. The non-verbal expressions of causality contain a number of conjunctions (e.g. the Swedish *därför att* and the Dutch *omdat* 'because'), adverbials (e.g. the Swedish *därför* and the Dutch *daarom* 'therefore') and prepositions or prepositional phrases (e.g. the Swedish *till följd av* or the Dutch *als gevolg van* 'as a consequence of'). In some cases, no explicit causal marker is used even though causality is implied (asyndetic expressions). Among the verbal expressions of causality, a group of lexical and productive causative verbs can be discerned (cf Shibatani 1976). Lexical or synthetic causatives include verbs which have only one simplex form, such as the Swedish *orsaka* and the Dutch *veroorzaken* 'cause' or verbs such as the Swedish *visa* and the Dutch *tonen* 'show' and other formally unmarked causatives such as the Swedish *smälta* and the Dutch *smelten* 'melt' (see also Viberg 1980). The group of productive causatives contains periphrastic or analytical causative constructions (consisting of a causative verb plus a complement e.g. an infinitival complement) and morphological causatives (which are constructed by means of an affix). The latter are practically non-existent in Swedish and Dutch.

Second, I analyze the Swedish analytical causative constructions which consist of the verbs *få*, *komma*, *ha*, *förmå* and *låta* followed by an infinitival complement. I investigate the underlying syntactic and semantic factors that determine the actual choice of one construction over another in a particular (socio)linguistic context. This investigation is based on a corpus of Swedish press material taken from the Språkbanken corpora (40 million words). The data are analyzed both quantitatively and qualitatively. The quantitative analysis shows that the verbs *få* and *låta* are the most frequent causatives occurring in this type of construction. The verbs *komma*, *ha* and *förmå* can be considered as an alternative to *få*. However, their frequency is relatively low due to semantic and stylistic restrictions. It can be observed that none of these four verbs is interchangeable with *låta* since this causative covers a slightly different scale of meanings ranging from purely causative to permissive. In the qualitative part of the research I examine and analyze the semantic valency patterns of these constructions within the theoretical framework of functional grammar according to Dik (1997). An extension of Dik's functional model is used to describe semantic properties of the main participants in these constructions: CAUSER, CAUSEE and AFFECTEE. It is shown that various causation types in the different analytical causative constructions are determined by these participants in combination with the nature of the verbs involved – both the causal predicate and the effected predicate.

Third, I analyze Dutch and Swedish analytical causative constructions from a contrastive perspective, based on the Swedish-Dutch parallel corpus (3 million words) (Rawoens 2003). An overview of the translation patterns is given (e.g. the Swedish translations of the Dutch causatives *doen* and *laten* and the Dutch translations of the Swedish causatives *få, komma, ha, förmå* and *låta*) and a number of hypotheses are tested. Special attention is given to the influence of language-specific features and translation strategies. One result from this investigation is that the relation between the analytical causative constructions and their translations is asymmetrical and that one-to-one relations do not represent the majority of the cases. Moreover, synthetic causatives appear to be more common in Swedish whereas Dutch uses more analytical causative constructions – especially with *laten* – and more non-verbal causal constructions such as prepositions and adverbials.

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Volitional force in WANT constructions

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My paper sets out from an observation made in modal verb constructions involving the verb WANT (all instances of WANT in the respective languages used here are set in italics):

(1) Germ. Mein Sohn *will* dieses Buch kaufen.
             "My son wants to buy this book."

In example (1), the German modal verb *wollen* 'want' is a control verb: The subject *mein Sohn* 'my son' is the external argument of the matrix verb *wollen*, and it controls the subject of the subordinate clause, an empty PRO. Thus, one should assume that there must be a kind of semantic compatibility between the (positional) subject-θ-role of the main verb, which might be called volitional, and that of the embedded predicate. Also, the examples (2) and (3) contain a control structure, with the difference that the embedded clause is a passive construction:

(2) Germ. Jeder *will* geliebt werden.
             "Everybody wants to be loved."
(3) Germ. Dieses Buch *will* gelesen werden.
             "One should read this book."

Dieses Buch 'this book', in (2), as well as *jeder* 'everybody', in (3), are the external arguments of the matrix verb and they control a PRO, which has been raised from the position of an internal argument to the syntactic subject position of the embedded clause. Surprisingly, in (3), but not in (2), the volitional θ-role has disappeared. This phenomenon seems to be tightly connected to the fact that an inanimate subject, such as a book, cannot have an intention, i.e. it cannot express *volitional force* - the phenomenon is not connected to the passive construction itself, as shown by the interpretation of (2). However, in (4), the animate subject is indeed intentional, but it does not seem to have a volitional θ-role:

(4) Germ. Dieser Mensch *will* bestraft werden.
             "This man should be punished."

Example (4) goes together with example (3) in that the original volitional meaning of *wollen* is lost in favour of an interpretation of pure necessity, which is not tied to a visible "ordering source." Thus, it is not only the animacy or intentionality of the positional subject of WANT which activates the volitional vs. deontic modality, but also the semantico-pragmatic compatibility of the embedded predicate's meaning with the presupposed intention or volition of the subject: Since nobody really *wishes* to be punished, on a pragmatic level, the modal meaning is shifted towards an arbitrary "ordering source".

Interestingly, we have passive-like constructions with WANT, namely WANT + participle, in some varieties of Italoromance (here Calabrian and Sardinian), as well as in Midland American English, cf. (5)-(7):

(5) Cal.   Tutti figghioli *vonnu* amati.   (Speaker from Bovalino)
             "All children need to be loved."
(6) Sard. Deu *bollu* agiudau po fai is iscalas.   (*Sa-Limba* 1999-2005)
             "I need help to climb up the steps."
(7) Engl. This car *wants* washed.   (Murray & Simon 1999)

As in the example (2) above, (5) and (6) might still be interpreted with a reading that includes the volition of the subject (it might be also the wish of the children to be loved), whereas (7) couldn't. In some varieties, we also can reactivate the removed external θ-role in the embedded sentence; yet, the volitional force does not attach to the reactivated, clearly agentive argument, cf. (8):

(8)   Sard..   Sa mákkina *keret* accontzada dae unu meccánicu.   (Jones 1993:125)
                 "This car needs to be adjusted by a mechanic."

Volitional force, here, seems to be central to the syntactic subject. However now see (9):

(9)   It.   Questi figli s*ono voluti* da Dio.
                 "These children are wanted by God."

Here, it is the reactivated external argument which bears the original volitional θ-role of WANT. Thus, the syntactic differences between passives embedded under WANT (as (2), (3), (4) and (9)) and deontic (auxiliary) WANT-passives (as in (5), (6), (7) and (8)) have to be considered, too.

Moreover, there are constructions such as the one in (10) from Italian, where WANT is an impersonal, i.e. a subject-less verb. Also here, WANT is a modal marker of necessity since there is no subject to which volitional force could be attributed:

(10)   It.   Ci *vuole* una macchina per andarci.
                 "One needs a car to go there."

From these examples a couple of questions arise: WANT is the prototypical modal verb of volitionality. But volitional force can only be expressed, if the ordering source is a compatible external argument of a matrix sentence. Otherwise, volitional force is lost. Here, we have to distinguish three cases: Either there is no subject (as in (10)), or the subject is incompatible with an intentional, volitional θ-role, or the predicate of the embedded sentence is such that it does not allow the subject to be interpreted as the external force or impetus towards the ideal set of worlds encoded by the predicate. Let's have a look at another example:

(11)   Germ.   Er *will* die Frau nie gesehen haben.
                 "He maintains that he never saw this woman."

Here the ordering source of voltional modality still is the external argument of the matrix sentence. But since the embedded clause is in the past, it cannot refer to an ideal set of worlds to be realized. Thus, the volitional force of the intentional subject shifts to an epistemic marker: The predication proposition in the embedded clause is marked as asserted by the subject – not by the speaker itself.

In my talk, I will propose that the verb WANT should undergo a modular analysis (cf. Kayne 1993 and Harley 2003). I propose that WANT is composed of at least three components: first, a modal base of necessity (meaning more or less MUST), second, an argument, which hosts the ordering source (or interested party) for this modality and, third, an argument which represents the modal target (the ideal set of worlds). As for the second element, if it is not linked to an external argument, it can shift towards the context or 'the stage'.

In this talk, the above mentioned and other examples of WANT-constructions will show that, crosslinguistically, WANT is an ideal verb to explore how force interacts with semantic and syntactic relations in grammar.

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Between causation and intention: semantic bleaching of causatives in Kalmyck dependent clauses

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1. The study is focused on the syntax and semantics of causative verbs in Kalmyck, a Mongolic language spoken in the steppes to the North-West of the Caspian Sea. The data were collected during an expedition organized by the Saint-Petersburg State University in the summer of 2006.

2. Like other Mongolic languages, Kalmyck enjoys extensive use of causative morphology on verbs. There are several causative morphemes in Kalmyck, the choice between which is usually lexically patterned, although in some cases there are two causatives derived from one and the same non-causative verb. The S-argument of the "underlying" intransitive verb is coded in the position of the direct object of the causative verb (1-2), while in causatives derived from transitives the "underlying" A-argument is usually demoted to an oblique position coded by Instrumental or Dative (3-4):

(1)   giich-nər   tarə-v
       guest-PL   go.away-PST
       'The guests went away'.

(2)   Badma   giich-nər-igə tar-a-chkə-v
       B.   guest-PL-ACC go.away-CAUS-PRF.TR-PST
       a. 'Badma has driven his guests out (of his home)'.
       b. (less natural without contextual support) 'Badma made his guests go away.' (e.g. ordered them to do so).

(3)   bi   lekc   umsh-u-v
       I   lecture   read-PST-1SG
       'I gave a lecture'.

(4)   tedn   namar   lekc   umsh-ul-v
       they   I.INSTR   lecture   read-CAUS-PST
       'They made me give a lecture' (≈ 'they arranged a lecture to be delivered by me').

While some causatives, especially those derived from intransitives, are "normally" interpreted as direct causatives (2a), most causative verbs allow for non-direct or permissive reading (2b, 4). When used in the main clause, the causative may lack the property of intentionality and can thus receive a force reading:

(5)   kiitn salykən /   *emchə   namagə   xanya-lqə-v
       cold   wind /   doctor   I.ACC   cough-CAUS-PST
       'The cold wind / *the doctor made me cough'.

The participant coded as the subject in (5) is thus not a prototypical Agent in that it has the property of actual bringing about the event, but lacks the ability of control and intentionality.

3. Causatives are systematically employed in dependent adverbial clauses of purpose. In order to illustrate that, let us first examine the usual non-causative purpose clauses. In Kalmyck, there are two basic strategies of coding the purpose event; the first strategy is used in same-subject configurations:

(6)   bi   [unt-xar]   tedn-igə   xär-ül-ck-ü-v.
       I   [sleep-CV.PURP]   they-ACC   send.back-PRF.TR-PST-1SG
       'I have sent them back home in order **for me** to sleep'.

The converb in -xar is a dedicated "purpose converb"; it is etymologically analysed as the Instrumental form of the future tense / irrealis participle. However, this strategy is not possible if the subject of the main event is not coreferent with the subject of the dependent purpose event. One strategy that can be used in this latter case is illustrated in (7):

(7)   bi   [tedn-igə   unt-txa   giqäd]   xärül-chk-ü-v.
       I   [they-ACC   sleep-TXA   GIQÄD]   send.back-PRF.TR-PST-1SG
       'I have sent them back home in order **for them** to sleep'.

The conjunction-like word giqäd in (7) is a grammaticalised converb of the verb gi-xə 'to say' and the verb in the dependent clause is in an optative-like mood. Thus, the most literal translation of (7) would be 'I have sent them back home saying "let you sleep"'.

4. However, an alternative to (7) that is central for further discussion is represented in (8):

(8)   bi   [tedn-igə   unt-ul-xar]   xärül-chk-ü-v.
       I   [they-ACC   sleep-CAUS-CV.PURP]   send.back-PRF.TR-PST-1SG

'I have sent them back home in order **for them** to sleep'.
Here the same-subject constraint is not violated, since the dependent verb is causativized, which makes the A-participant of the main event also the subject of the embedded clause. Thus syntactically, causativization in these contexts is a mechanism that introduces a new argument to the embedded verb, which is semantically external to the event itself (the sleeping of 'them' in (8)). It is crucial that out of this context, the normal reading of the causative verb *unt-ul-xə* would imply a direct causation ('to lull to sleep'). Thus, the A-participant of the embedded clause in (8) is not a prototypical Agent. It is volitional, like a prototypical Agent, but lacks implication of actual bringing about the event caused.
5. The semantic modification of causative verbs just described is all the more evident in two more types of syntactic contexts, namely in the desiderative construction and in sentential complements of several verbs that have a volitional component in their semantics. The non-causative uses of these two constructions are illustrated in (9) and (10) correspondingly:

(9) *bi*   *shkol-də*   *sur-xar*   *bää-nä-v.*
    I   school-DAT   study-CV.PURP   be-PRS-1SG
    'I want to go to school.'

(10) *bi*   [*shkol-də*   *surquly-an*   *säänär*   *sur-xar*]   *sed-nä-v*
    I   [school-DAT   studies-P.REFL   well   study-CV.PURP]   try-PRS-1SG
    'I try / want to study well at the school'.

These constructions involving the purpose converb in *–xar* are similar to adverbial purpose clauses in that they show the same-subject constraint. Not unexpectedly, these constructions, too, often employ causativization of the embedded verb if the "underlying" subjects are not coreferent:

(11) *bi*   [*küükt-än*   *shkol-də*   *sur-q-kar*]   *bää-nä-v.*
    I   children-P.REFL   school-DAT   study-CAUS-CV.PURP   be-PRS-1SG
    a.'I want that my children study at school'; b. 'I want to teach my children at school'.

NB: despite the fact that the causative verb *sur-q-xə* is normally interpreted as 'to teach' in the independent clause, the subject of (11) is not necessarily bringing about the desired event himself, as shown by the grammaticality of (12):

(12) *bi*   [*shkol-də*   *küükt-än*   *uxa-ta*   *bagsh-ar*
    I   [school-DAT   children-P.REFL   brains-with   teacher-INSTR
    sur-q-kar]   *bää-nä-v.*
    study-CAUS-CV.PURP]   be-PRS-1SG
    'I want that my children be taught by an intelligent teacher at the school.'

For some verbs there is no ambiguity of the type illustrated in (11):

(13) [*chamagə*   *edg-ül-xär*]   *bi*   *sed-dhä-nä-v.*
    you.ACC   recover-CAUS-CV.PURP   I   want-PROG-PRS-1SG
    'I want that you recover (from illness).'

Note that (13) is not natural in the meaning 'I want to heal you', for which meaning another causative *edg-ä-xə* is reserved.
Finally, in the constructions discussed, the event that is desired can belong to the type of events that are not possibly brought about by human beings ('I want that the sun rise early tomorrow morning'), and still, the causative is found in its place on the embedded verb.
6. It may be concluded that if somewhat informally the semantics of 'A causes P' can generally have two semantic components: i) 'A has the intention that the event P takes place' and ii) 'some activity on the part of A brings about the event P', then
  ➢ in the independent use of Kalmyck causatives, it is the latter component that is most prominent (hence availability of force readings of causative constructions);
  ➢ in the embedded causatives of the types discussed, it is the former component that is most prominent. Of course, the force reading is not attested in causative purpose clauses and in complements of desiderative predicates.
The Kalmyck data will be discussed in the light of typological data on semantic/syntactic co-opting of argument-determined constructions. The emergence of partially desemanticized syntactic uses of argument-determined constructions is widely discussed with respect to passives and antipassives, while for causatives this kind of apparent syntacticization is arguably less commonly attested in the languages of the world.

Causer, recipient and possessor: the grammatical subject of *get* and the context-sensitivity of P$_{\text{HAVE}}$

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This paper explores the possessive use of *have got* + DP and argues for an origin of the construction in perfective *have got(ten)* + DP. Within the framework of Distributed Morphology (Halle and Marantz 1993) it will be shown that the inferential process of the conventionalization of conversational implicatures (Traugott and König 1991), which led to the development of the possessive meaning of *have got* + DP, can be modeled in terms of the presence vs absence of an eventive *v* head and the context sensitivity of P$_{\text{HAVE}}$, one of the components of GET. The different structures that lead to the spell-out of *got(en)* display a variety of roles for their subject: a causer who is in control of the event, a recipient who is not in control of the event and finally a possessor in a non-eventive environment.

GET has been analyzed as a combination of an empty preposition P$_{\text{HAVE}}$ and v$_{\text{BECOME}}$ (Harley 2004). In the 'receive' sense there is no external argument, the beneficiary raises to SpecTP (see 1). An incorporation of P$_{\text{HAVE}}$ into v$_{\text{CAUSE}}$ results in the 'acquire' meaning with an external causer argument and two internal arguments (see 2). The external argument and the internal beneficiary can be referentially identical, (*John got himself/Ø a beer*; reflexive pronoun and empty object are both possible) or non-identical (*John got Mary a beer*). In both the 'receive' and the 'acquire' sense the possession relation between the specifier of P$_{\text{HAVE}}$ and its complement results from the structural configuration they appear in (Harley 2004). I argue that v$_{\text{BECOME}}$ and v$_{\text{CAUSE}}$ modify the basic meaning of possession further: 'onset of possession' is coupled with a lack of control of the event (v$_{\text{BECOME}}$), while 'causation of possession is coupled with control of the event (v$_{\text{CAUSE}}$)

(1) *John got a beer* (John = beneficiary; no control of the event)

[$_{\text{TP}}$ John$_j$ got [$_{\text{vP}}$ v$_{\text{BECOME}}$ [$_{\text{PP}}$ t$_j$ P$_{\text{HAVE}}$ [$_{\text{DP}}$ a beer]]]]

　　　　　　　incorporation: spellout *got*

(2) *John got Mary / himself a beer* (John = causer; control of the event)

[$_{\text{TP}}$ John$_j$ got [$_{\text{vP}}$ tj v$_{\text{CAUSE}}$ [$_{\text{PP}}$ himself/Mary/Ø P$_{\text{HAVE}}$ [$_{\text{DP}}$ a beer]]]]

　　　　　incorporation: spellout *got*

I propose that the differences in meaning between perfective *have got(ten)* and possessive *have got* can be modeled on Embick's (2003, 2004) distinction between stative and resultative participles. (Embick 2003: 149, 152) shows that the participial morphology in the perfective patterns with that of the resultative and the eventive passive, while stative participles may show different forms. Using the diagnostic of adverbial modification, Embick (2004: 357) shows that resultative participles contain an eventive *v* head (*The package remained <u>carefully opened</u>*) while stative participles do not (**The package remained <u>carefully open</u>.*) Both resultative and stative participles combine with aspect heads which are sensitive to their (non)eventiveness: "Asp$_R$ defines a state out of an eventive subcomponent, while Asp$_S$ defines a simple state." (Embick 2004: footnote 11, page 363).

While possessive *have got* patterns with statives in terms of adverbial modification, (**John has quickly got a beer*), perfective *have got(ten)* patterns with the resultative (*John has quickly gotten a beer*). A resultative Asp head combining with the eventive structures depicted in (1) and (2) assigns resultative meaning which spells out as *–en* in American English and as Ø in British English. Auxiliary HAVE in the perfective *have got(ten)* is analyzed along the lines of Kayne (1993) and Harley (1998) as P$_{\text{HAVE}}$ which incorporates into v$_{\text{BE}}$ and takes a verbal complement, in this case an AspP. We can then argue that P$_{\text{HAVE}}$, in combination with an eventive v$_{\text{BE}}$ and a resultative AspP complement gives us perfective aspect (see 3 for a structure of *have got(ten)* in the sense of 'have received').

(3) *John has got(ten) a beer* (John = recipient)

[$_\text{Vaux}$ v$_\text{BE}$ [$_\text{PP}$ P$_\text{HAVE}$ [$_\text{AspPresult}$ –en [$_\text{vP}$ v$_\text{BECOME}$ [$_\text{PP}$ John P$_\text{HAVE}$ [$_\text{DP}$ a beer]]]]]]

incorporation: spellout *have* incorporation: spellout *got*

   To account for the impossibility of adverbial modification in possessive *have got* structures, I propose along the lines of Embick's (2004) analysis of stative participles that there is no verbalizing v$_\text{CAUSE}$ or v$_\text{BECOME}$. The Asp head directly combines with the PP projected by P$_\text{HAVE}$. P$_\text{HAVE}$ incorporates into the Asp head, yielding the spellout *got*. In this non-eventive structure control of the event is no longer an issue. The absence of verbalizing v$_\text{CAUSE}$ and v$_\text{BECOME}$ directly accounts for the meaning of the construction: only the possessive meaning resulting from the structural configuration of P$_\text{HAVE}$ with a DP specifier and a DP complement is left, 'onset of possession' and 'causation of possession' are no longer possible due to the absence of v$_\text{BECOME}$ and v$_\text{CAUSE}$ respectively. The upper P$_\text{HAVE}$ combines with the now stative AspP and no longer yields perfective aspect. (see example 4).

(4) *John has got a beer* (John = possessor)

[$_\text{Vaux}$ v$_\text{BE}$ [$_\text{PP}$ P$_\text{HAVE}$ [$_\text{AspPstative}$ Asp$_0$ [$_\text{PP}$ John P$_\text{HAVE}$ [$_\text{DP}$ a beer]]]]]

incorporation: spellout *have* incorporation: spellout *got*

   In sum, this paper shows that many of the different uses of GET can be captured nicely within the framework of Distributed Morphology where the role of the grammatical subject falls out from the different structural configurations the subject originates in. It can also be shown that P$_\text{HAVE}$ is context-sensitive and yields different meanings depending on the material it combines with:

'onset of possession'	[$_\text{vP}$ v$_\text{BECOME}$ [$_\text{PP}$ Possessor P$_\text{HAVE}$ [$_\text{DP}$ possessee]]]
'causation of possession'	[$_\text{vP}$ Causer v$_\text{CAUSE}$ [$_\text{PP}$ Possessor P$_\text{HAVE}$ [$_\text{DP}$ possessee]]]
'perfective'	[$_\text{Vaux}$ v$_\text{BE}$ [P$_\text{HAVE}$ [$_\text{AspPresult}$ –en [$_\text{vP}$…]]]
'stative possession'	[$_\text{Vaux}$ v$_\text{BE}$ [P$_\text{HAVE}$ [$_\text{AspPstative}$ Asp$_0$ [$_\text{PP}$ Possessor P$_\text{HAVE}$ [$_\text{DP}$ possessee]]]]]

   Further areas of interest with regard to *got* relate to a link between possessive *have got* and obligational *have got to*. The latter construction can be argued to have developed by analogy to the obligational *have to* construction (*John has to eat an apple > John has got to eat an apple*). Obligational meaning would be located in the configuration of P$_\text{HAVE}$ with a *to*-infinitive as its complement. Both control of the event as well as control over the subject by sentence-external forces have to be considered here.

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Force and German solitaires
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The talk discusses German independently used subordinated declarative and interrogative-clauses (*solitaires*) which can function either as *exclamative* ((1a') and (2b')), *directive* (1b'), or *interrogative* (2a') speech acts. Taking Pott's (2003) and Portner's (2006) expressing meaning theory as a starting point, which regards the sentence meaning as a pair consisting of its ordinary and expressive meaning, the talk shows that a solitaire and its corresponding root clause have the same ordinary meaning, but differ with respect to the expression of illocutionary meaning. The central claim of the talk is that declarative and interrogative root clauses express illocutionary force syntactically whereas solitaires do not. Their force can be inferred pragmatically if they are related to a situation which is given by the situational context. The inference can be supported by particular prosodic and lexical devices – cf. the particles *bloß* and *wohl*.

(1)   a.   *Die U-Bahn fährt ja   doch noch!*
                the   tube   runs PART PART still
                'The tube runs, indeed!'

         a'.   *Dass   die U-Bahn ja   doch noch fährt!*
                that   the tube   PART PART still runs
                'Well I never, the tube is still running!'

         i. $\exists M. M (\lambda s \text{ (is.running } (s), (\text{tube})))$

         ii. $\exists s \, \exists s' (\text{IS.SURPRISED } (\alpha), (s), (s')) \wedge (\text{is.running } (\text{tube}), (s))$

         b.   *Fahr   bloß jetzt an die Ostsee!*
                drive.IMP.SG   PART   now to the Baltic
                'You drive to the Baltic now.'

         b'.   *Dass du   bloß   jetzt an die Ostsee fährst!*
                that   you   PART now to the Baltic   drive
                'So drive to the Baltic now!'

         i. $\exists M. M (\lambda s \text{ (Baltic.drive } (\beta),(s)))$

         ii. $\exists s \, \exists s' ((\text{WANT } (\alpha), (s), (s')) \wedge ((\text{Baltic.drive } (\beta), (s))))$

(2)   a.   *Wer kommt   wohl?*
                who is coming PART

         a'.   *Wer wohl   kommt?*
                who PART   is coming
                'I wonder who is coming.'

         i. $M (\lambda x \in \text{PERSON } \lambda s \text{ (come } (s), (x)))$

         ii. $\forall a \, \exists s' \, \exists s ((\text{WANT } (\alpha), (s')) \wedge ((\text{KNOW } (\alpha), (\langle s, \langle a, (\lambda x \in \text{PERSON } \lambda s \text{ (come } (s), (x)))\rangle\rangle)$
               $(s')) \, 8 \, (\text{KNOW } (\alpha), (\neg \langle s, \langle a, (\lambda x \in \text{PERSON } \lambda s \text{ (come } (x), (s)))\rangle\rangle) (s')))$

         b.   *Wer kommt   denn dort!*
                who is coming PART   there

         b'.   *Wer dort kommt!*
                who there comes
                'Who on earth is coming there!'

         i. $\exists M. M (\lambda x \in \text{PERSON } \lambda s \text{ (come } (x), (s)))$

         ii. $\forall a \, \exists s' \, \exists s ((\text{IS.SURPRISED } (\alpha), (s), (s')) \wedge (\langle s, \langle a, \lambda x \in \text{PERSON } \lambda s \text{ (come } (x), (s))\rangle\rangle))$

German declarative root and dependent clauses share the sentence type (CP-type) *declarative* and thus the ordinary meaning *proposition*. Interrogative root and dependent clauses share the sentence type *interrogative* and the ordinary meaning *question*. Root clauses ((1a, b) and (2a, b)), however, indicate syntactically expressive illocutionary meaning by verb-second which indicates independency on a grammatical context, but dependency on an illocutionary context. The independency feature together with the sentence type feature is semantically represented by an expressive, illocutionary operator

(ASSERT or QUEST) which maps the ordinary meaning onto a particular complex of speech act conditions. A German dependent clause, which exhibits verb-final and a complementizer, indicates dependency on a grammatical context, on a matrix predicate. The dependency is represented as a predicate variable which is specified by a predicate which either characterises the illocutionary force of the subordinated clause (*ask*, *claim*, …) or enables the derivation of its illocutionary force (*be surprised*, *know*, *want*, …). The predicate can be given either linguistically, as it is the case with respect to canonically used dependent clauses, or be 'silent', as it is the case with respect to solitaires. Since the matrix predicate variable of solitaires is not specified linguistically, their semantic structure is undetermined (cf. (i) in (1) and (2)). The specification of the variable is given by the non-linguistic, situational context. The agent and the addressee instantiate the predicate variable pragmatically by an illocutionary predicate which maps the ordinary meaning of the declarative or interrogative solitaire onto a particular complex of conditions determining either an exclamative, a directive or a question act.

It will be shown that the pragmatic specification of the predicate variable of solitaires is restricted to SURPRISE and VOLITIONAL predicates. If one distinguishes between predicates that relate the ordinary sentence meaning, a proposition, to the subject (e.g. *wissen* 'know', *glauben* 'believe', *behaupten* 'claim', …) and predicates that relate situations, which exemplify the ordinary meaning, to the subject (e.g. *überrascht sein* 'be surprised, *wollen* 'want', …), only those predicates can specify the predicate variable of solitaires which relate a situation to the subject. The reason for this is that only situations, situations which are given by the utterance context in fact, are accessible for the addressee. A SURPRISE-predicate, for instance, takes the ordinary meaning of a declarative or interrogative and relates it to a situation the agent is surprised at ((1a'ii), (2b'ii)). In order to relate the ordinary meaning of the interrogative to the situation the agent is surprised at, the question, which is regarded as an interrogative function (cf. Krifka 2001), and its term answer a must form a question answer pair – cf. $\langle a, q \rangle$ in (2b'ii). A WANT-predicate also takes the ordinary meaning of a declarative or interrogative and relates it to a situation the attitudinal subject wants to be realized ((1b'ii) (2a'ii)). If a declarative solitaire is related to a contextually given deontic situation, the declarative solitaire functions as a directive (1b'ii). If an interrogative is related to deontic epistemic situations – the (wanted) epistemic situations that for all answers a, α knows a is coming or α knows a is not coming –, it is a directive epistemic speech act, a question speech act (2a'ii).

It will be demonstrated how the pragmatic inference of the expressive, exclamative and volitional meaning is supported by particles and/or intonation which also indicate a certain kind of expressive meaning.

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Logical Semantics for Causal Constructions
Richmond Thomason, University of Michigan

Montague's framework for semantic interpretation has always been less well adapted to the interpretation of words than of syntactic constructions. In the late 1970s, David Dowty addressed this problem, concentrating on the interpretation of tense, aspect, inchoatives, and causatives in an extension of Montague's Intensional Logic. In this paper I will try to revive this project, conceiving it as part of a larger task aiming at the interpretation of derivational morphology. I will try to identity some obstacles arising in Dowty's approach, and will suggest an alternative approach that, while it does not provide a global interpretation of causality, seems to work well with a wide range of the causal constructions that are important in word formation. I try to relate these ideas to some themes in contemporary philosophy and in the formalization of commonsense reasoning.

Force dynamics in causal meaning and reasoning
Phillip Wolff, Emory University

Most theories of causation specify the concept of CAUSE in terms of kinematics, that is, with respect to the observable properties of events. In contrast, the dynamics model, which is based on Talmy's (1988) theory of force dynamics, specifies causation in terms of dynamics: the invisible quantities that produce kinematic patterns. In the dynamics model, causation is characterized as a pattern of forces and a position vector. This model is supported by studies in which participants watched 3D animations generated from a physics simulator. In these experiments, the very same forces used to generate physical scenes were used as inputs into a computer model to predict how those scenes would be described. In a second line of experiments, the model is extended to sequences of events in which configurations of forces are linked together by their resultant vectors. As predicted by the model, people's overall descriptions of causal chains depended on the types of force configurations (e.g., CAUSE, PREVENT, NOT-ALLOW) from which the chains were composed. The model was able to predict when a causal chain could be described in more than one way, and to what degree. Thus, unlike any other model to date, the dynamics model offers an explanation of the relationship between deterministic and probabilistic causation, as well as of the semantics of several complex predicates.