Unergatives and the Autonomy of Syntax

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I. The syntax of unergatives

- As argued by the Relational Grammarians, "unergativity" is a syntactic configuration that is only indirectly, and only occasionally, related to semantics.

Initial puzzle: intransitives in causatives

- Cross-linguistically, many affixal and Romance *faire*-infinitive style causatives exhibit the following properties:
  - Causatives of transitives have the lower object as direct object of the construction, with the causee oblique or optional, and indefinite if optional
  - Causatives of intransitives, WHETHER unaccusative or unergative, have the causee as the obligatory direct object (definite interpretation if null)

Bothered me in the 1980's when working on Georgian

- Given that external arguments and internal arguments are "projected" differently
  - With external arguments involving a voice head over a vP
  - And internal arguments being sisters to v
- Why didn't unergative subjects pattern with transitive sibjects in causatives, with an oblique/ optional expression?
  - Why don't we "make sing (unspecified singer)" the way we "make kiss John (unspecified kisser)"?

Georgian examples of causatives from Léa Nash

- Note *a-* prefix on causatives across the board.
- Many interesting things to say about these constructions, but here focus on the cross-linguistic ordinariness of the causative pattern in Georgian.

Georgian Causatives of Unaccusatives

(16) a. *saxl-i a=šen-**d**-a*
house-NOM prev=build-INCH-AOR,3sg "The house got built"

b. *nino-m saxl-i a=**a**-šen-a*
Nino-ERG house-NOM prev=caus-build-AOR,3sg "Nino built the house"

(17) a. *potol-i ga=c'itl-**d**-a*
leaf-NOM prev=red-INCH-AOR,3sg "The leaf reddened"

b. *nino-m potol-i ga=**a**-c'itl-a*
Nino-ERG leaf-NOM prev=caus-red-AOR,3sg "Nino reddened the leaf"

(18) a. *gogo c'a=**i-**kc-a*
girl,NOM prev=NACT-fall-AOR,3sg "The girl fell"

b. *nino-m gogo c'a=**a**-kci-a*
Nino-ERG girl,NOM prev=caus-fall-AOR,3sg "Nino made the girl fall"

(19) a. *k'ar-i ga=**i**-ġ-o*
door-NOM prev=RM-open-AOR,3sg "The door opened"

b. *nino-m k'ar-i ga=**a**-ġ-o*
Nino-ERG door-NOM prev=caus-open-AOR,3sg "Nino opened the door"

Georgian Causatives of Unergatives

(33) a. *keti-m gogo* ***a****-varjiš-a*
Keti-ERG girl,NOM caus-exercise-AOR,3sg
"Keti made the girl exercise"

b. *keti-m gogo* ***a****-cek'v-a*
Keti-ERG girl,NOM caus-dance-AOR,3sg
"Keti made the girl dance"

c. *keti-m gogo* ***a****-cur-a*
Keti-ERG girl,NOM caus-swim-AOR,3sg
"Keti made the girl swim"

Georgian Causatives of Transitives (note *a…in* for causatives; think two voices; think Japanese −Sa-Se-)

(51) a. *keti-m iat'ak'i ga=**a**-c'mend-**in**-a*
Keti-ERG floor-NOM prev=caus-clean-caus-AOR,3sg
"Keti had the floor cleaned"

b. *keti-m pankar-i ga=**a**-tlev-**in**-a*
Keti-ERG pencil-NOM prev=caus-sharpen-caus-AOR,3sg
"Keti had the pencil sharpened"

c. *keti-m roman-i gada=**a**-targmn-**in**-a*
Keti-ERG novel-NOM prev=caus-translate-caus-AOR,3sg
"Keti had the novel translated"

d. *keti-m mankana ga=**a**-recx-**in**-a*
Keti-ERG car,NOM prev=caus-wash-caus-AOR,3sg "Keti had the car washed"

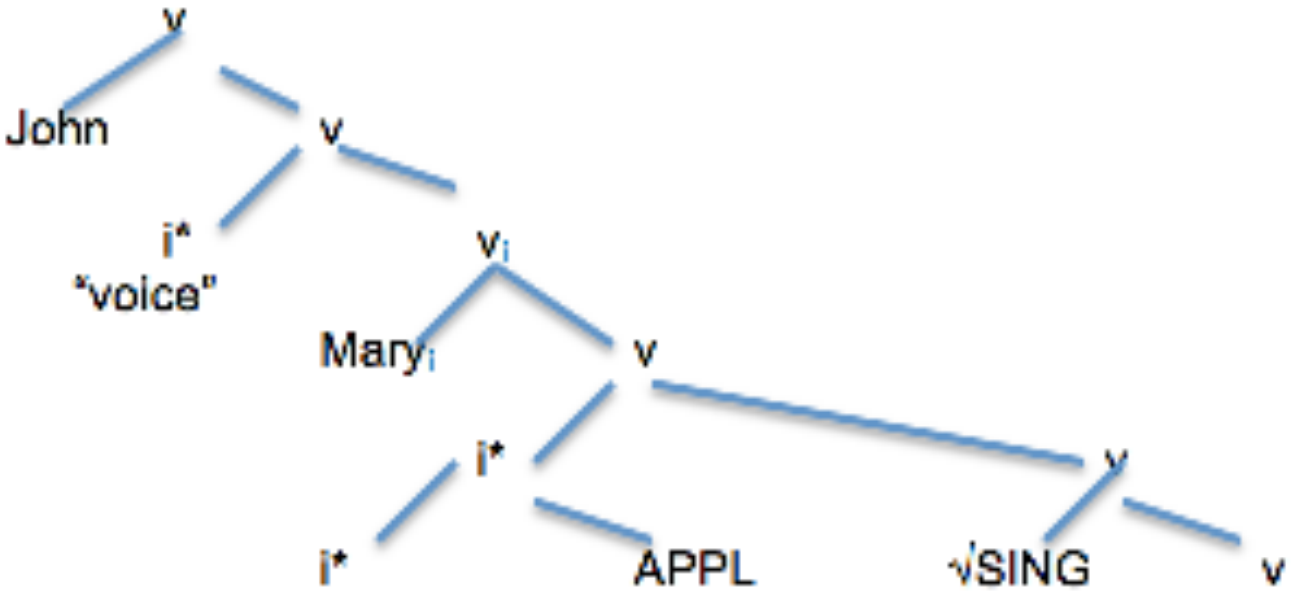
Tentative solution is complicated

- First, Wood & Marantz system, in which the difference between appl's and voice's is minimized − all argument introducers are i*'s.
- Second, further reduction to Wood & Marantz system such that the only difference between appl and voice is the presence of a "root" morpheme adjoined to i*: no longer assume that voice needs to close off the "extended projection" of v, allowing for voice over voice in the same extended projection of v = causative constructions.
- Third, adopt the "clause union" analysis of causatives such that the causative morpheme in the cases under discussion are voice=i*, adding an additional external argument to the clause but not adding an additional event.
- Fourth, adopt Nie's recent analysis of transitivity such that transitivity involves feature sharing between a v and a DP object and/or between an i* and the feature on the v/i* head of its complement (really just the RG notion of stratum and clause union). No (relevant) syntactic distinctions, then, between a high applicative argument (on an unergative vP) and a direct object.

This makes these structures syntactically equivalent:

- High applicative of an unergative.
  - Voice over Appl over v, with spec of Appl = direct object
- Causative of an unergative.
  - Voice over Voice over v, with spec of lower Voice = direct object
- Causative of an unaccusative.
  - Voice over expletive voice over v, with complement to v = direct object
- Simple transitive
  - Voice over v, with complement to v = direct object

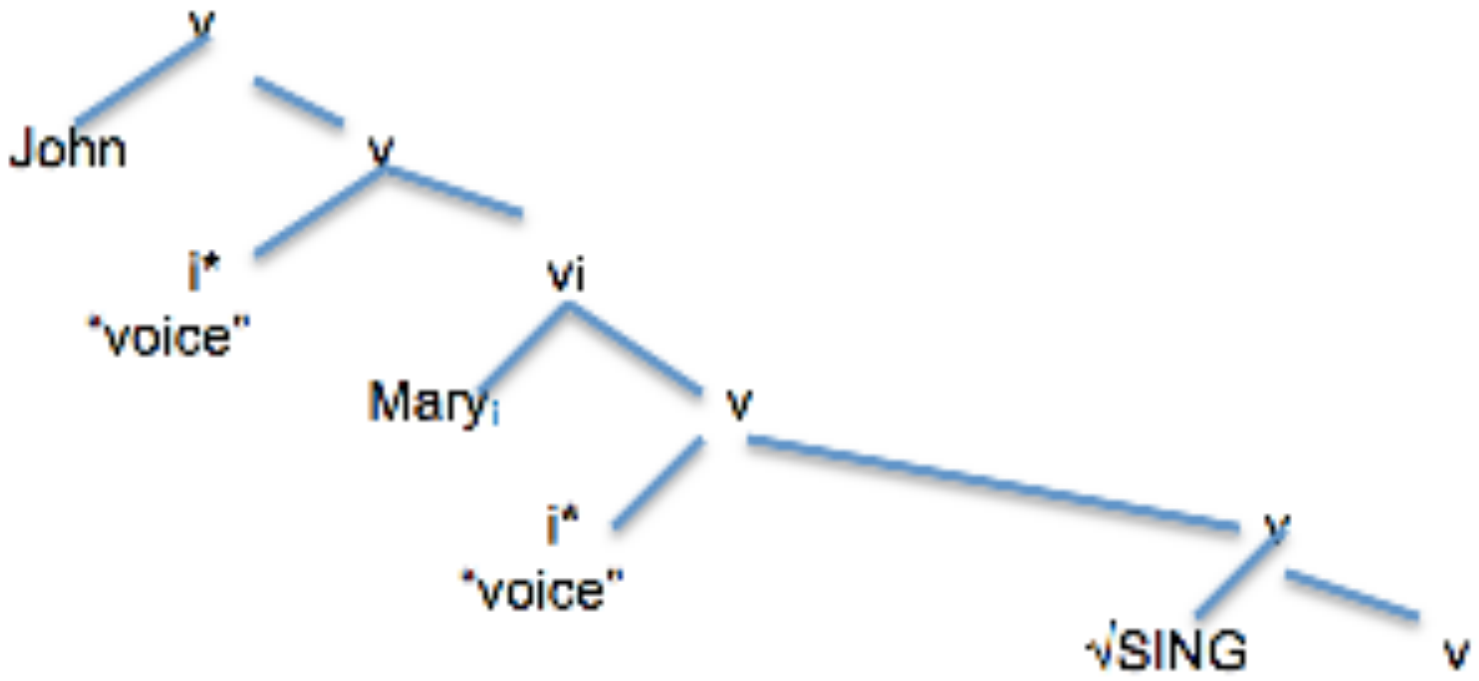
High applicative on unergatives



John sings for Mary.

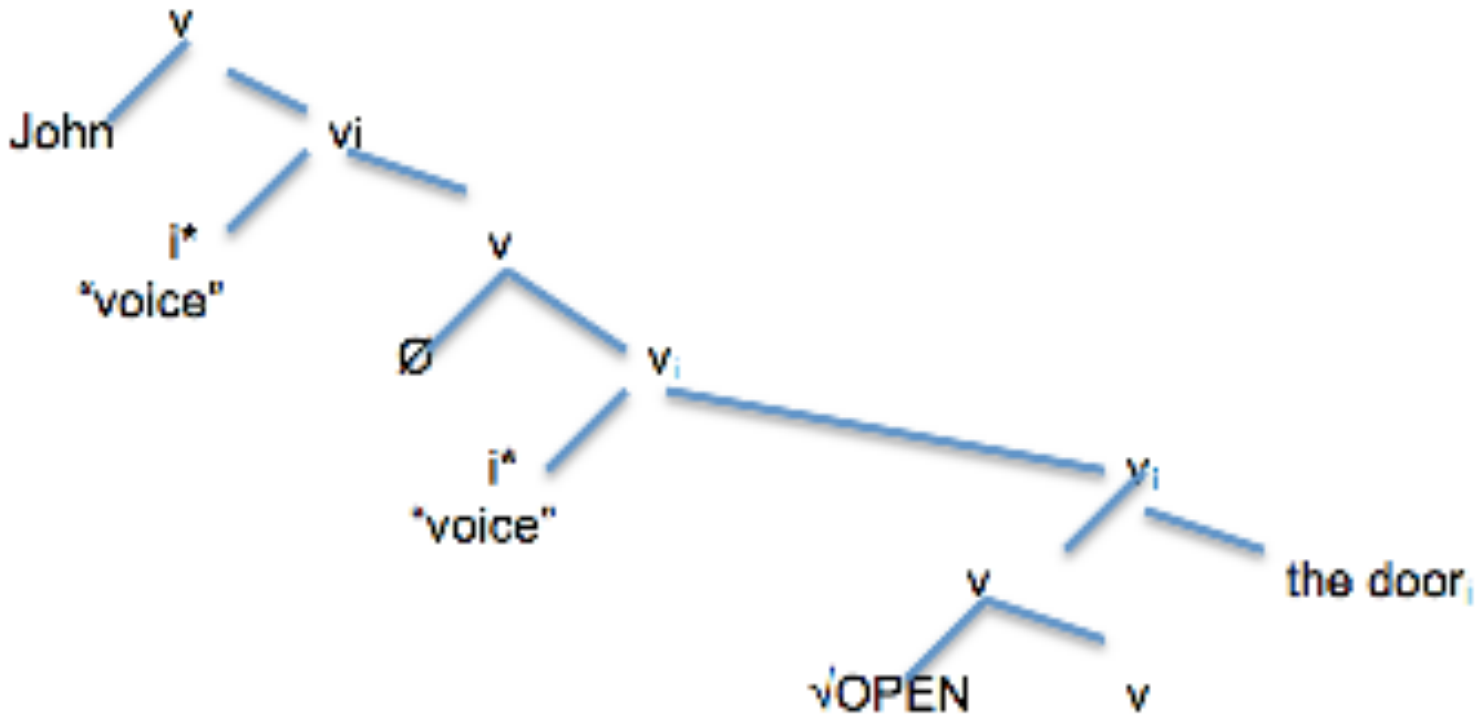
v

Causative of unergative



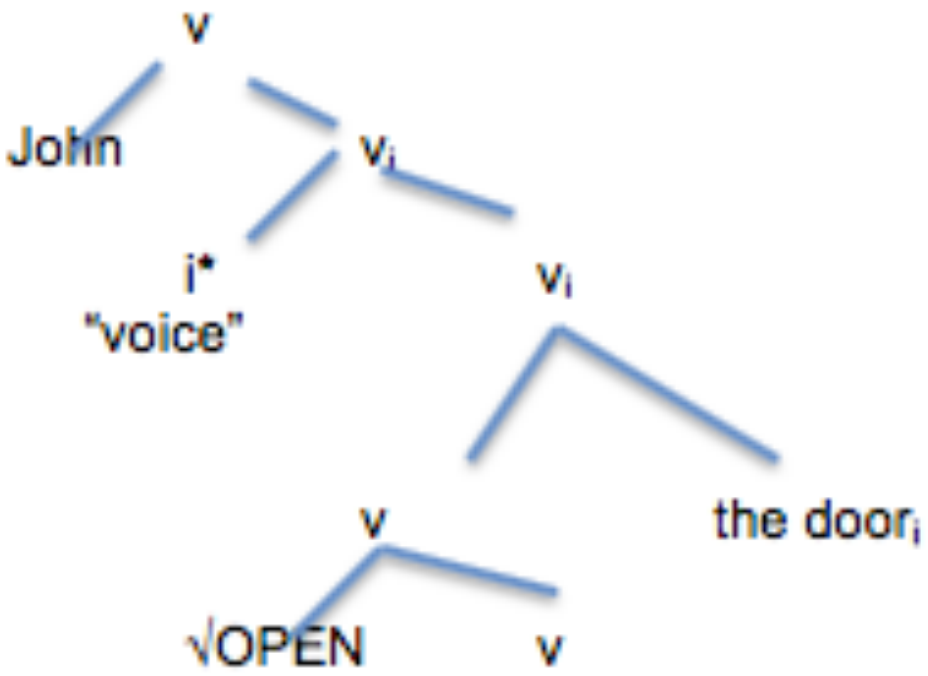
John makes Mary sing.

Causative of unaccusative



John opened the door.

Basic transitive



John opened the door.

Elements in the syntax distinguish these structures in ways that are relevant for the phonology and semantics

- "Appl" is a "root" merged with i*; can specify theta role assigned to spec of i* (which is not then the external argument of the vP).
- Voice (i* without root) over voice (as opposed to voice over Appl) is connected to causative interpretation = additional external argument.
- The complement domain of v is the locus of change of state semantics (for themes, results, etc.) where as the spec of i*Appl is not, so direct objects of causatives of unaccusatives and simple transitives may receive a theme interpretation, as opposed to objects in spec of Appl and spec of Voice.
- So the causatives of unergatives and causatives of unaccusatives yield potentially different interpretations of the causee.
- But these are uniformly canonical transitive sentences, as far as the syntax is concerned.

“Cause” as “voice” rather than “v”

- The canonical affixal causative is not bi/tri-eventive any more than any cause change of state is (that is, no systematic difference between “syntactic” and “lexical” causatives in this respect).
- As Oseki shows for Japanese, “anti-causatives” traditionally analyzed as a type of voice, and “causatives,” often analyzed as little v, are parallel in behavior (-R- vs. −S- marking). Overt little “v”s are category-changing, rather than causative forming, while standard “lexical” and “syntactic” causatives arguably involve (overt) voice heads.

Inherent causatives

- Inherent causatives (verbs that only appear with affixal causative morphology) parallel inherent reflexives (verbs that only appear with affixal anti-causative morphology).

kor- "kill":

causative: kor-os-u

inchoative: *kor-∅-u, *kor-ar-u, *kor-e-ru

sag- "seek":

causative: sag-as-u

inchoative: *sag-∅-u, *sag-ar-u, *sag-e-ru

Discovery of Nie, with Oseki

- Japanese overt −S- voice, often called a lexical causative marker, has been shown to place semantic restrictions on external arguments.
- Nie relates these restrictions to +D voice heads cross-linguistically, which require “transitivity” in the sense of feature agreement with an object.
- If ACC −o drop for Japanese transitives is related to differential object marking/anti-causatives and no feature agreement with v, expect −S- marked transitives to disallow −o dropping.
- YES! And this restriction extends to the “inherent causatives,” showing syntactic “activeness” of obligatory +D voice morpheme (root chooses this voice morpheme).

Georgian di-transitives with *a-*, where *a-* is spell out of voice over voice, with lower voice = low Appl = bare i* with DP complement; Japanese "causative" −S- also in some cases creates di-transitives

a. *da=**a**-nax-a*

prev=caus-see-AOR,3sg "He showed Y X"

b. ***a**-čuk-a*

caus-gift-AOR,3sg "He gifted Y with X"

c. ***a**-čven-a*

caus-vision-AOR,3sg "He showed Y X"

Implications for “unergative predicates”

- In pursuing the issue of the interaction of causative formation with unergativity, one is led to review the generalizations from the Relational Grammar literature.
- Unergativity is about the distribution of GRs at a stratum (“stage” in a derivation, anchored by a predicate).
  - Most importantly, for the most part, no distinction between “derived unergatives” and “initial stratum unergatives”

- Formally, “antipassive” (that detransitivizes a clause while retaining the existing 1 (subject) as subject) could derive an unergative
- And the resulting antipassive clause would/ could then feed causative clause union on par with first stratum unergatives.
- In particular, derived antipassives don’t behave like transitives under clause union but rather like first stratum unergatives.

Donna Gerdts on Halkomelem: canonical RG argument

- Gerdts made this observation about cause union and convincingly explained its theoretical implications.
- Causatives are built on intransitive clauses in Halkomelem.
- Transitive clauses undergo antipassive to feed causative clause union.
- See Gerdts' "Antipassive and Causatives in Halkomelem"

Nie: Austronesian languages (often) exhibit the same pattern − 1b = 2a

Ulivelivek (AV=agent voice, PV=patient voice)

1. a. me-senay i Asing.
   AV-sing ABS.P Asing ‘Asing sings.’
   b. ku=pa-senay-aw i Asing.
   1S.ERG=CAUS-sing-PV ABS.P Asing ‘I made Asing sing.’

2. a. ku=pa-na’u-aw za valray #(i Asing).
   1S.ERG=CAUS-read-PV OBL.IND book ABS.P Asing
   ‘I made Asing/him/*someone read a book.’
   b. pa-na’u=ku za valray (kani Asing).
   (AV.)CAUS-read=1SG.ABS OBL.IND book OBL.P Asing
   ‘I had Asing/someone/*him read a book.’
   c. ku=pa-na’u-wanay na valray (kani Asing).
   1S.ERG=CAUS-read-CV ABS.DEF book OBL.P Asing CV = lower voice = -in
   ‘I had Asing/someone/*him read the book.’

Hale, unergatives, and the nature of verbs

- Those of you familiar with Ken Hale's work on unergatives and the definition of syntactic categories might be thinking:
  - Of course derived unergatives behave like non-derived unergatives, because ALL unergatives are derived from transitive constructions.
  - Verbs are heads that take objects, in the l-syntax.

Hale and categories

- Extremely interesting proposal to define syntactic categories in terms of complement structure (taken up in another way by Baker, later).
- Kinda workable outable within an l-syntax framework, in which category determination could feed syntax.
- Not easily compatible with any current work.

In any case, Hale's insight recaptured in current work

- Current conception of the derivation of verbs from roots allows a "lexical" connection between "do a dance" and "dance," through the sharing of the root.
- More radical ideas about categories, like Kayne's, might have a noun at the bottom of every verbal category/projection, in a manner similar to that of a v head merging first with a root, if roots are inherently nominal.

Crucial point: detransitivization not limited to cases of "incorporation" or "conflation"

- "Antipassive," including cases of differential object marking, leads to derived unergatives even when:
  - The object is overt, but obliquely expressed.
  - Indefinite, but able to establish a new discourse referent.

Moreover, there's an association between unergativity and stativity (see Nash, building on Borer)

- Derived unergatives in English are stative:
  - John cooks. (John's a cooker)
  - That sort of thing sells (well). (middles are stative property assertions, arguably unergative (Ackema))
- Transitivity does NOT track stativity
  - Only some languages do predicate possession with a transitive verb − the HAVE having languages
  - And stative psych predicates track possession, with transitive subject psych predicates (fear, need) being special.

II. Generative Semantics Assumptions

- The general Chomskyan generative tradition retained a residue of deep structure interpretation (and generative semantics):
  - The projection principle
  - UAH (from RG) → UTAH and contemporary offshoots
  - l-syntax, Ramchand, notion of syntactic derivation from an interpreted (first phase) syntax

- An alternative, purely LF interpretive semantics, has been explored at NYU:
  - Myler on predicate possession
  - Wood on Icelandic “reflexive” constructions
  - Kastner/AlKaabi on Semitic “pattern” morphology
  - Oseki on Japanese transitivity alternations
  - Nie on transitivity in Austronesian voice

Two Strongest Generative Semantics claims

- Identity of meaning cross-linguistically demands identity of syntactic structure
  - E.g., whatever means, “John has a pizza” in a given language must share the syntactic structure with that English sentence.
- No ambiguity of syntactic structure
  - So, if it looks like a simple transitive structure in a language is interpreted in a number of different ways, there must be hidden syntactic structure that distinguishes/disambiguates the structures.

Ambiguity/Multiple syntactic expressions

- Japanese "lexical" causatives
  - Taroo-ga musuko-o sin-ase-ta
  - [voiceP Taroo-ga [vP[DP musuko-o] sin-ase]]-ta.
  - [voiceP Taroo-NOM [vP[DP son-ACC] die-CAUS]]-PAST
  - (i) 'Taro caused his son to die.'
  - (ii) 'Taro's son died on him.'

Same ambiguity for English "have" causatives

- English:
  - I had my car crash [to collect the insurance/on me]

Different syntactic expressions of same meaning

- See Myler on predicate possession and related meanings associated with “have” in English.
- See, e.g., Levin and Krejci on weather expressions.

What is then the connection between "lexical" meaning and syntactic structure?

- Universal interpretations of syntactic structure
  - E.g., i* and external arguments of pP, DP, AP, vP
  - "results" in the complement domain of v
  - Etc.
- Universal conceptionalization of events, entities, properties, relations
- Semantic typology of roots?

Crucial ingredient: contextual allosemy

- Heads such as v and i* trigger canonical interpretations.
- However, in context, languages can demand (or allow) the null interpretation of these heads, in specific local domains.
- So, for example, there is more (uninterpreted) syntactic structure in the English adversity causative (I had my car die on me) than in the Japanese equivalent, specifically an additional v node supporting the auxiliary verb “have,” which provides zero meaning here, following Myler.
- Languages, like Japanese, with overt expressions of voice can yield structures with multiple zero-interpreted voice heads, while languages, like English, with extensive exploitation of auxiliaries and semi-auxiliaries, can yield structures with zero-interpreted v heads.

Contribution of “lexical” properties of roots

- Roots locally constrain/demand interpretations
- Roots locally constrain/demand morphophonology
  - E.g., inherently reflexive verbs
  - E.g., verbs that only appear with “causative” morphology (see in particular Semitic; also Japanese examples above)
  - Deponent verbs

Interpretive semantics

- Roots locally determine special interpretations at PF and LF and can make special demands.
- Why do roots adjoin to v, rather than head rootP complements to v?: The complement domain of v isn't the right place for an element that will make special demands of v for phonology and semantics, since the complement domain is interpreted on merger of the phase head v (see Marantz in the Halle Festschrift).

III. Unergative predicates

- If the same meanings can be expressed by different syntactic structures in different languages…
- And if "unergativity" is particularly ambiguous, given the ambiguity of external arguments across various stative and eventive predicates and the various constructions that derive unergatives ("anti-passive," "differential object marking," "ACC drop,"…)
- Then a study of "unergative predicates" connected to basic meanings of verbs might explore cross-linguistic variety in syntactic expression of arguably semantically identical verbs.
- For syntacticians, similar to the mileage we get from exploring the differential syntactic expressions of psychological predicates cross-linguistically.

Georgian Unergatives
Nash (2017)

i) **ob-unergatives.** The largest and the most productive group of unergatives carry **–ob-** TS in the present and the past imperfective. This class expresses behaviour denoted by a noun, even a proper name, or an adjective, that serve as a verbal root. In this respect, **ob-** unergatives can be called denominal or deadjectival behaviour verbs.

muša-ob-s	*to be/act as a **worker***
xulign-ob-s	*to be/act as a **hooligan**,*
naz-ob-s	*to be/act as **graceful**,*
xmaur-ob-s	*to act noisily, to make **noise***
sadil-ob-s	*to dine, to have **dinner***
k'ac-ob-s	*to act as a **man***
p'ut'in-ob-s	*to behave as **Putin***

ii) **eb-unergatives.** Most verbs in this class denote sound/light-emission (**brial-eb-s** *sparkle*) and sound/light-imitation (**k'isk'is-eb-s** *merrily laugh*). These sound/light activities can be understood as mini-events which involve a repetitive flow of energy but do not induce cumulativity. A subpart of the **eb-**unergatives contains a reduplicated root that denotes a repetition of onomatopoeia.

xitxit-eb-s	*chuckle, giggle*
tik'tik'-eb-s	*babble, prattle*
kotkot-eb-s	*bustle*
gizgiz-eb-s	*blaze*
k'isk'is-eb-s	*merrily laugh*
rak'rak'-eb-s	*ripple*
k'ašk'aš-eb-s	*glitter*

In English, “act like X” require complements

- *He Obama’d.
- He Obama’d throughout the meeting/his way through the meeting/ down the street.

English unergatives involving manipulation of one’s self (moving oneself, using oneself to act like another, etc.) are also “reflexive” as noted by Jackendoff (agentive “roll down the hill” involves two theta roles on subject, in violation of theta criterion).

As explained in Irwin’s talk, the “extra” theta role for the external argument is an external argument of a lower predicate (e.g. “down the hill”) “passed up” the structure in the presence of an expletive lower voice − whose spec is filled in some languages by an overt reflexive, e.g., -st in Icelandic, perhaps i- in Georgian).

Property B: unergatives contain a reflexive-mediopassive prefix *i-* in perfective/bounded/completed tenses (e.g. aorist and future) but not in imperfective tenses (e.g. present and past imperfect).

(11)a. tagv-ma prangul-ad i-lap'arak'-a
mouse-ERG French-ADV RMP-speak-AOR3sg
'The mouse spoke in French (for some interval of time in the past)'

b. tagv-i prangul-ad i-lap'arak'-eb-s
mouse-NOM French-ADV RMP-speak-TS-3sg
'The mouse will speak in French'

c. tagv-i prangul-ad lap'arak'-ob-s
mouse-NOM French-ADV speak-TS-3sg
'The mouse speaks in French'

Body parts, perhaps similar restriction in English

- John rolled *(down the hill)
- John was/is rolling (down the hill)
- John will roll *(down the hill)

In Georgian, the requirement to relate the subject to another part of the structure plays out syntactically as a reflexive marker − there's no overt extra predicate. In English, the requirement plays out parallel to Icelandic "figure reflexives," involving the external argument of a lower predicate, which must be overt − at least in "bounded" tenses….

To summarize

- Syntax of unergatives relates to the role of transitivity in syntax, as more or less accurately described in Relational Grammar.
- Once we abandon the last traces of Generative Semantics, we can track how languages use the same syntactic structures to express a variety of semantic structures, and how the same "predicates" semantically may map onto different syntactic structures cross-linguistically.
- As with psychological predicates, the semantics of unergative predicates underdetermine their syntactic realizations, making unergatives a nice research target for investigating the syntax/semantics interface, as we've seen at this workshop.