

# Factors governing split intransitivity

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# 1. Introduction to split intransitivity

# Split intransitivity

- Phenomena where intransitive verbs are split into two (or more) classes

# Unaccusativity

- E.g. **auxiliary selection**
- Periphrastic perfect in many European languages:
  - “unaccusatives”: auxiliary BE  
e.g. German *Er **ist** gegangen* “He has gone”
  - “unergatives”: auxiliary HAVE  
e.g. German *Er **hat** gearbeitet* “He has worked”

# Unaccusativity

- The composition of the BE class and the HAVE class varies between languages (Sorace 2000)

e.g. German *laufen* “run” takes BE

but French *courir* “run” takes HAVE

# Unaccusativity

- Other diagnostics pick out similar splits between classes of intransitives in various languages
- English agentive *-er*:
  - OK with unergatives:  
*worker, swimmer, talker*
  - Not OK with unaccusatives:  
*\*arriver, \*dier, \*belonger*

# Split-S

- **Split-S** languages have a split between intransitive verbs manifest in case (or agreement)

# Split-S

- E.g. Central Pomo (Mithun 1991:518-9)

– Agentive:

*ʔa·*      *q<sup>h</sup>adé·č'*

1SG.AGT fight

“I fight”

– Patientive:

*ʔo·*      *ló·ya*

1SG.PAT fell

“I fell”



# Split-S

- Factors governing the split-S split vary between languages

## 2. Factors governing split intransitivity

# Factors

- Legendre (2007a,b), following Sorace (2000), identifies a number of features governing **auxiliary selection**
- Dowty (1991) postulates a number of properties contributing to **thematic role assignment**
- The literature identifies a number of factors governing the **case splits** in split-S languages (see i.a. Mithun 1991, Arkadiev 2008, Creissels 2008)

# Factors

*Legendre*

±Motion

±Telic

±Change

±State

±Volition

±Affected<sup>1</sup>

*Dowty*

Movement

Change

Volition

Affectedness

Causation

*Split-S*

Telicity

Event/state

Volition

Affect

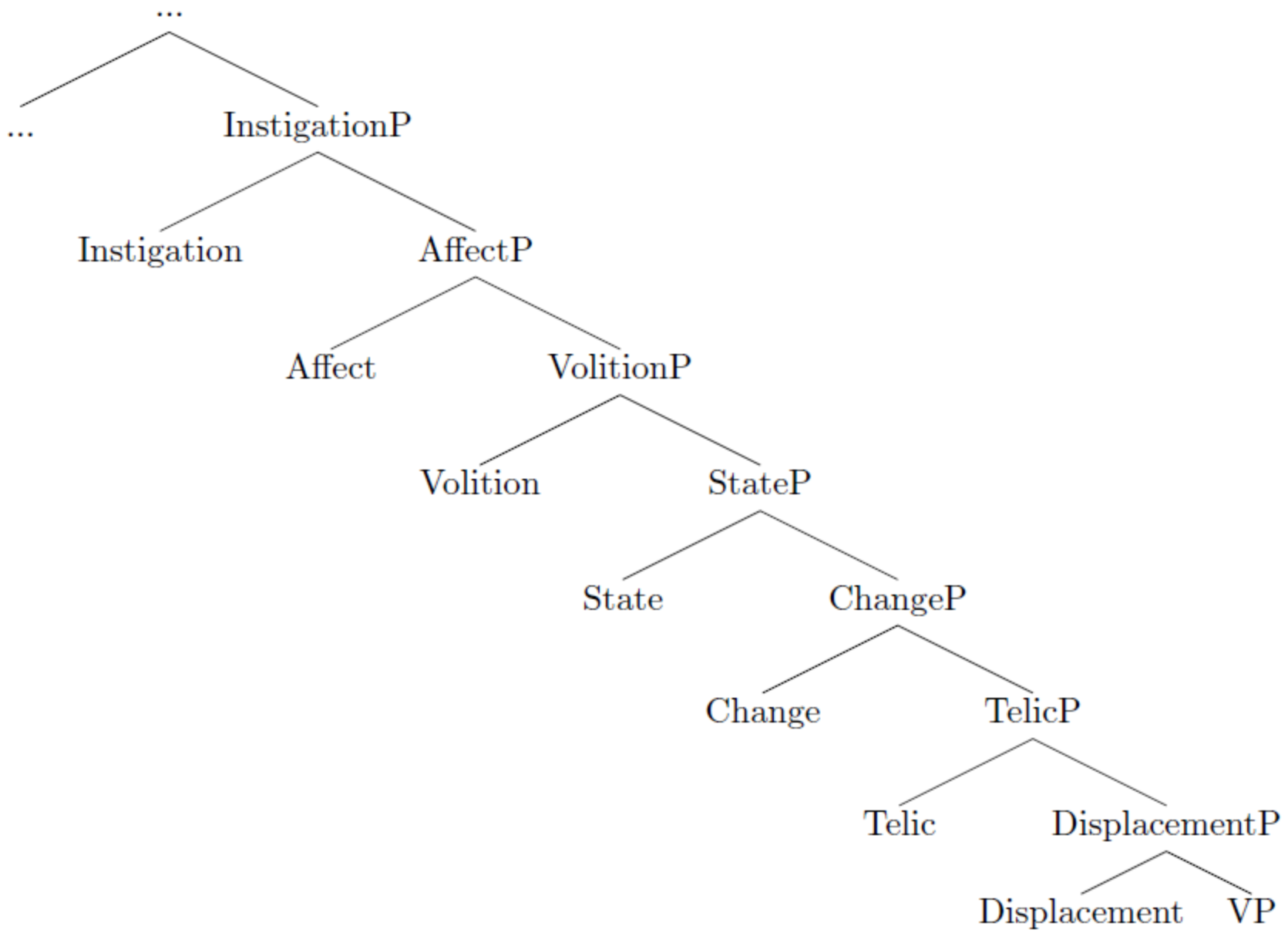
Instigation

# A functional hierarchy

- These properties can be represented as heads in a **functional hierarchy**
- In an approach similar to that of Ramchand (2008), I assume that arguments gain their **thematic roles** based on which combination of positions they move through

# A functional hierarchy

- **Split-S case**, which is related to thematic roles, is assigned by different combinations of one or more of these heads in different languages.



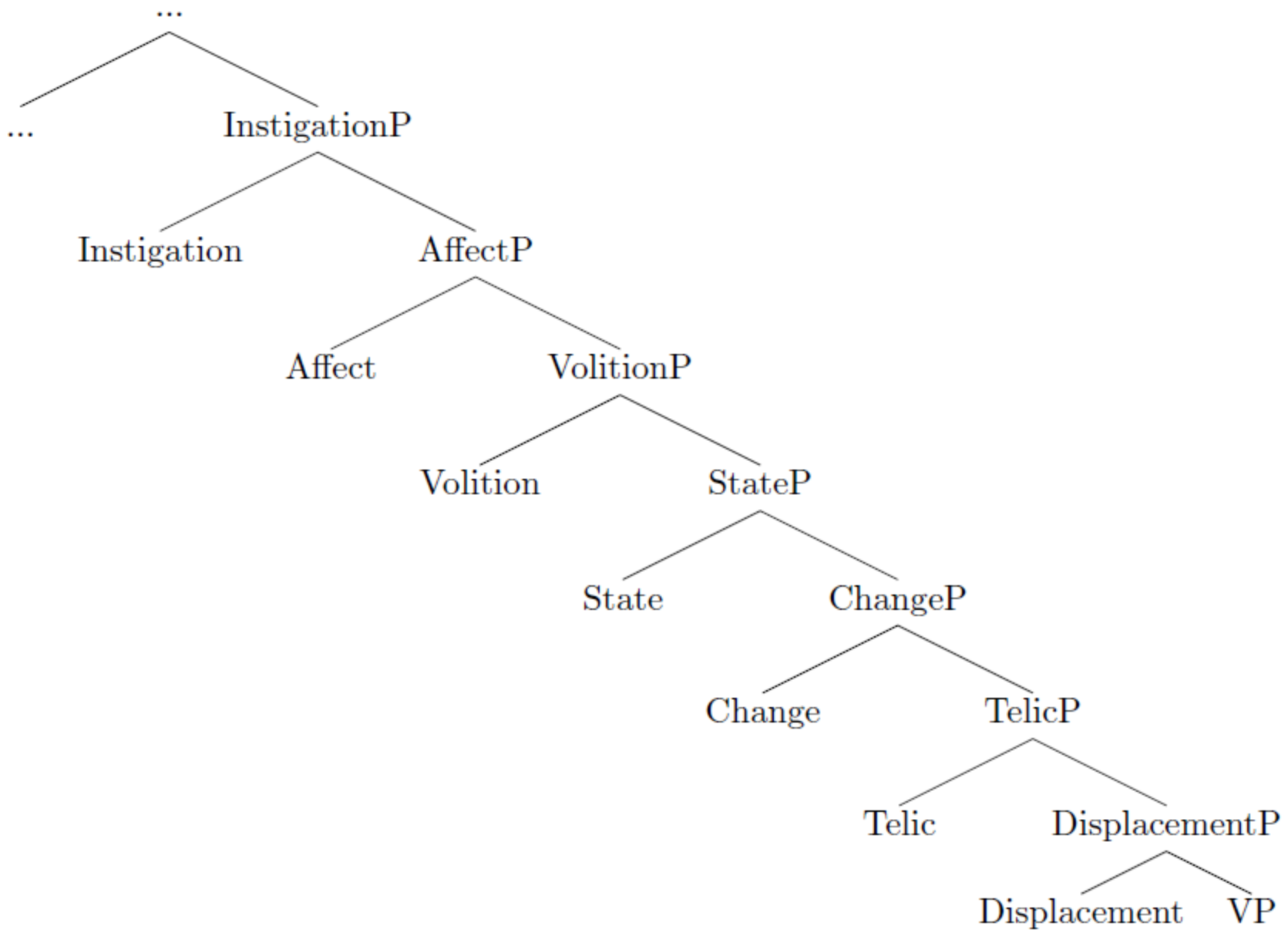
# A parameter hierarchy

- **Parameter hierarchies** (see e.g. Roberts & Holmberg 2010) represent the syntactic properties of languages – as encoded by formal features on heads – as an ordered series of options



# A parameter hierarchy

- Following the work of Sorace (2000) and Legendre (2007a,b), we can make the following statement:
- *A head in the thematic functional hierarchy may be associated with auxiliary BE [the marked option] only if all heads lower than it are also.*



# A parameter hierarchy

- Different features associated with different verb classes:
  - [+Displacement]: *arrive, go* etc.
  - [+Change]: *die, grow, disappear* etc.
  - [+State]: *last, exist* etc.
  - [-State, -Volitional]: *cough, tremble* etc.
  - [-State, +Volitional]: *play, work, run* etc.

# A parameter hierarchy

- French: BE basically restricted to +Displacement and (some) +Telic, +Change verbs
- Dutch: BE with +Telic, +Change and +Displacement verbs
- Italian: BE with –Affecting, –Volitional, +State, +Telic, +Change, +Displacement

# A parameter hierarchy

- Thus we can recast the functional hierarchy as a **parameter hierarchy for auxiliary selection**

# A parameter hierarchy

**P1:** Is [+Displacement] Displacement associated with auxiliary BE?

**N**

**Y > P2:** Is [+Telic] Telic associated with BE?

**N**

**Y > P3:** Is [+Change] Change associated with BE?

**N**

**Y > P4**

# A parameter hierarchy

> **P4:** Is [+State] State associated with BE?

**N**

**Y** > **P5:** Is [-Volition] Volition associated with BE?

**N**

**Y** > **P6:** Is [-Affect] Affect associated with BE?

**N**

**Y**

# A parameter hierarchy

- This hierarchy essentially formalises Sorace's (2000) Auxiliary Selection Hierarchy



# A parameter hierarchy

- Similar parameter hierarchies may apply to other unaccusative behaviours which also seem to interact with the thematic functional hierarchy in various ways

# 3. Acquisition and diachrony

# Markedness

- The presence of a formal feature is **marked** relative to the absence of that feature
- Language change (including acquisition errors), *if it occurs*, will tend to follow the path *more marked > less marked* (Roberts 2007)
- But more marked systems tend to be more *salient* to learners and hence more accurately acquired and resistant to change

# Markedness

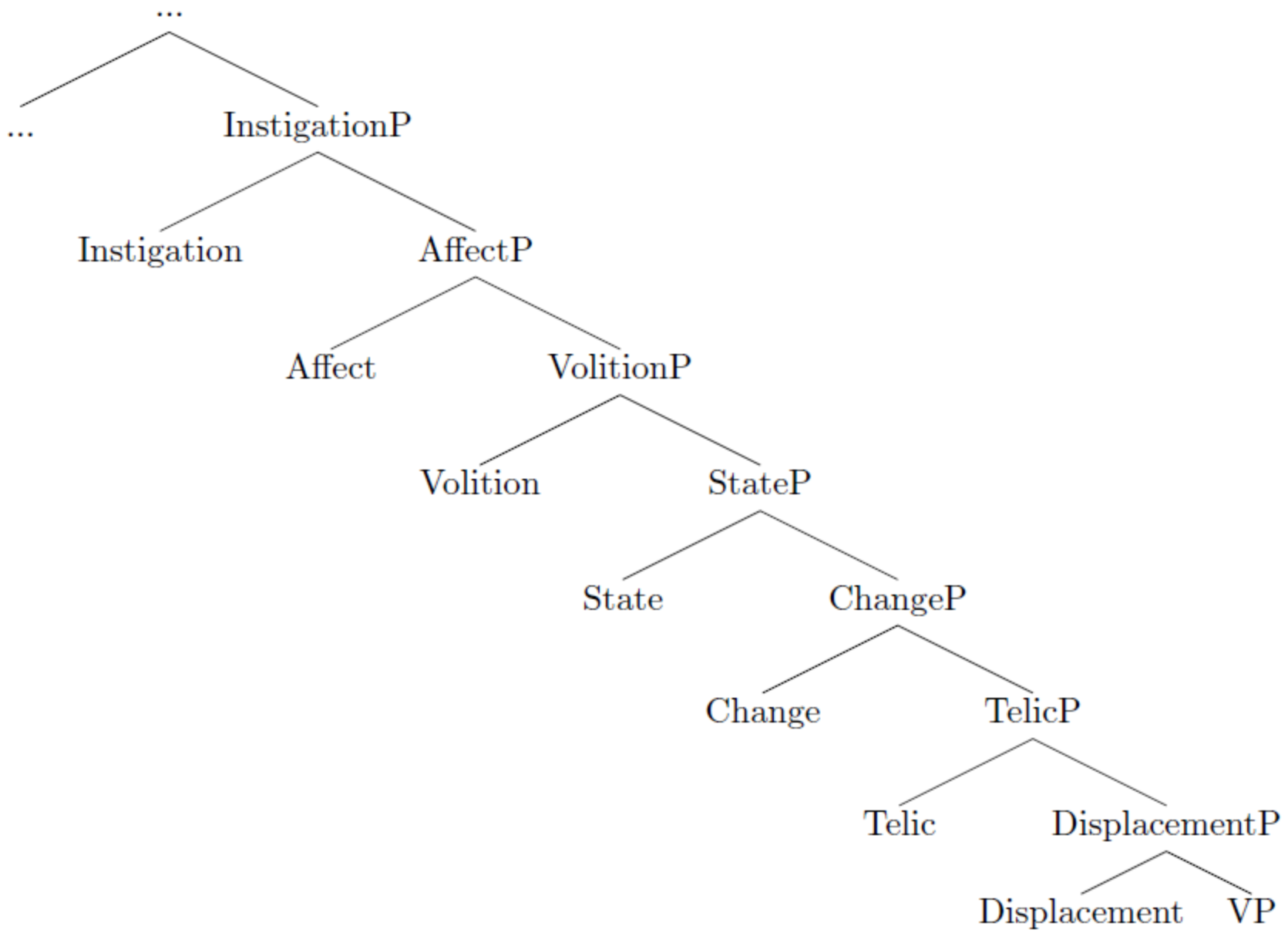
- A learner's default is *not* to posit a marked feature, so we may see early stages where a feature present in the target language is absent in the learner's output

# Markedness

- Options lower down the parameter hierarchy for unaccusativity are more marked than those higher up: they involve the association of BE with more heads

# Markedness

- Therefore we expect changes/child language errors affecting auxiliary selection to involve the restriction of BE to fewer heads (those toward the bottom of the functional hierarchy)
- Where multiple stages are apparent, we expect these to correspond to the different heads in order



# First language acquisition

- Fairly limited FLA research into unaccusativity
- Own analysis of a German-speaking child (Leo) from CHILDES data suggest close to 100% accuracy in auxiliary selection from the earliest period



# FLA of auxiliary selection

- **Leo:** frequency of correct auxiliary use at different ages (*correct use / total number of periphrastic perfect constructions*)

| <b>2;00</b> | <b>2;03</b> | <b>2;06</b> | <b>2;11</b> | <b>3;11</b> | <b>4;11</b> |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 0/0         | 7/7         | 23/25       | 45/45       | 71/72       | 41/41       |

- Only 3 errors in 190 constructions – all HAVE for BE

# FLA of auxiliary selection

- Snyder et al. (1995): Italian children as young as 2 get auxiliary selection right in 97-100% of cases
- But cf. van Hout et al. (1992): overextension of HAVE to unaccusatives does occur in child French
  - but errors only in that direction: no overextension of BE

# FLA of auxiliary selection

- **Directionality** of errors is as predicted: restriction of BE to fewer thematic heads toward the bottom of the functional hierarchy
- French has fewer BE verbs than German or Italian: less marked system with lower **salience** of variation may be harder to acquire without error (as predicted)

# FLA of split-S case

- In split-S languages the **agentive** case generally seems to be more marked than the **patientive**
- E.g. it is morphologically more salient:
  - Basque: agentive *-k*, patientive *-∅*
  - Georgian: agentive *-ma*, patientive *-i*  
OR agentive *-m*, patientive *-∅*

# Georgian

- Imedadze & Tuite (1992:88-93): once Georgian children start using the agentive case, they do so largely without error:
  - they use it only in those aspects where it is expected;
  - they use it with the correct class of intransitive verbs.

# Georgian

- Cf. Imedadze (1997:145): there is an earlier stage where children use patientive forms where adults would employ agentives

# Basque

- Ezeizabarrena (2012:315): no reported overextension of the Basque agentive in the acquisition literature
- But some children inconsistent in their use of agentive marking, sometimes omitting it

# FLA of split-S case

- Agentive case is a marked case:
  - initial stage where it is not posited
  - quite **salient**; as predicted children seem to be quite good at accurately restricting the possible contexts of its use
- **Directionality** of errors is as predicted: unmarked forms in the place of marked ones



# Second language acquisition

- More unaccusativity research, but questions:
  - to what extent are the learning patterns the same as in FLA?
  - what exactly is the role of the L1?

# Second language acquisition

- Oshita (2001): evidence that L2 learners (of English, Chinese, Japanese):
  - at first make no distinction between classes of intransitive verbs
  - subsequently posit an “unaccusative” class, although they may not correctly identify which constructions characterise it

# Second language acquisition

- Montrul (2005) largely finds similar for English-speaking learners of Spanish
  - although even low-proficiency learners make a distinction between unergatives and unaccusatives as regards word order (they are more accepting of VS order with unaccusatives)

# Second language acquisition

- Division of intransitives into two classes suggests one is associated with a marked feature [F]
- These results suggest an initial stage where learners do not posit [F], as predicted
- Subsequently they do posit [F], though they still have some way to go to arrive at the native-like system

# Second language acquisition

- More salient behaviours (e.g. variation in word order) may be acquired quicker

# Second language acquisition

- Sorace (1993): French speakers find it easier to learn auxiliary selection in Italian than vice versa
- French employs BE more restrictedly than Italian does
- Italian system more marked/salient so more easily acquired?

# Change in auxiliary selection

- Romance: general trend toward HAVE in favour of BE

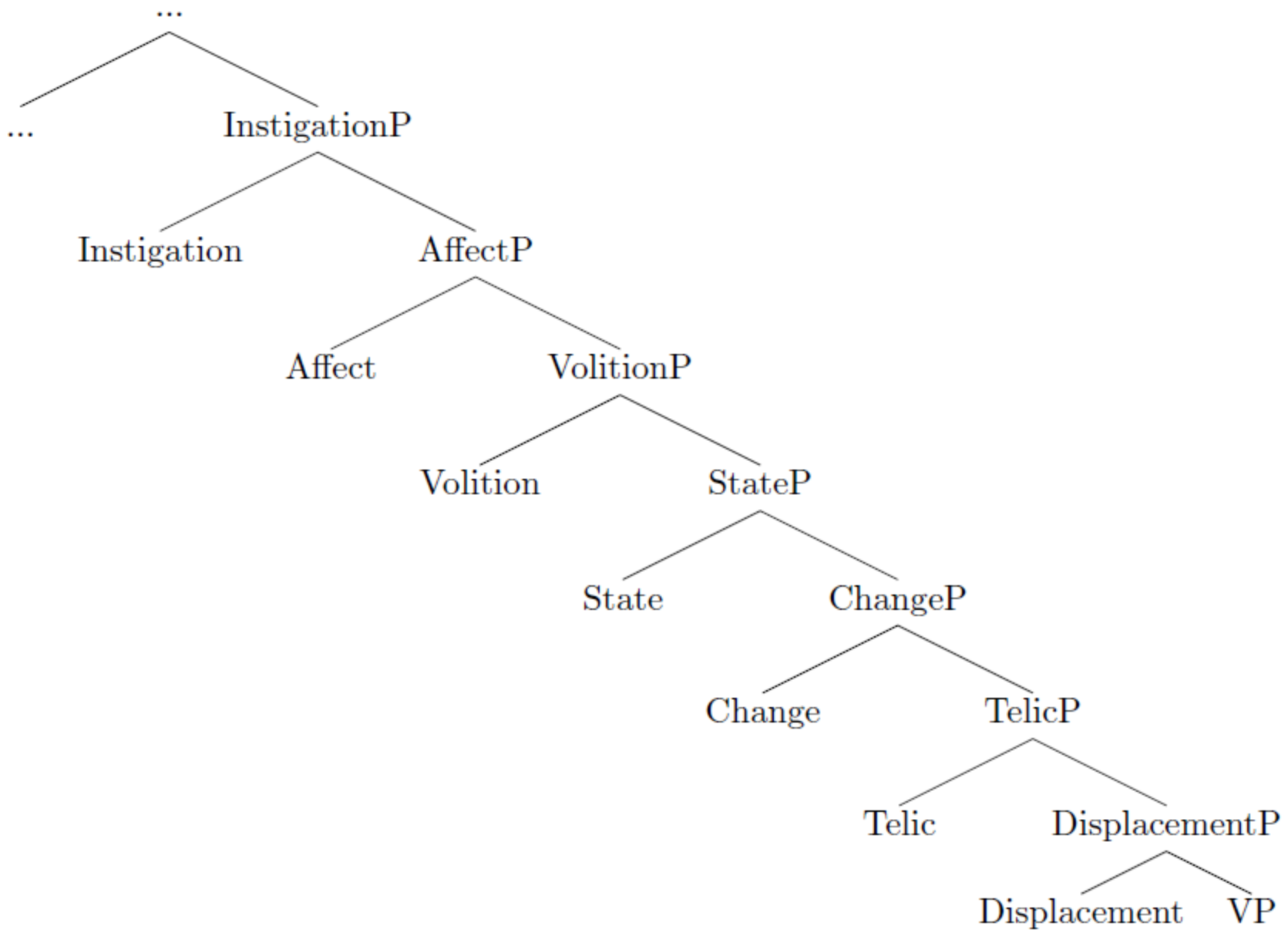
# French

- Old French used auxiliary BE much more widely than today:
  - e.g. *La vie de saint Alexis* (11th cent.):
    - ies fuiit* “has fled”
    - est müez* “has changed”
    - 'st ampairét* “has grown bad”
  - Cf. Modern French *a fui, a mué, a empiré*



# French

- Today: only +Displacement and a few +Telic, +Change verbs take BE
  - e.g. *il est allé* “he has gone”, *elle est morte* “she has died”
- Canadian French: BE only with +Displacement verbs (Sorace 1993)
- Overall trend then is to restrict BE further to the bottom end of the functional hierarchy



# Spanish

- Legendre (2007b) classifies data from Aranovich (2003): last attested use of auxiliary BE with verbs in Spanish
- Legendre finds that change in Spanish correlates with Sorace's Auxiliary Selection Hierarchy (of which my functional/parameter hierarchies are a formalisation)
- This is the pathway of change we predict

# English

- Similar pattern to Romance
- Analysis of 1150-1250 and 1350-1420 sections of Helsinki corpus of English texts (319,000 words) finds BE with the following verbs: *go, come, return, enter, pass, fall, turn, depart, fare; become, dry*
- i.e. with +Displacement and some +Change verbs
- Kytö (1997) reports also *grow, wax* (+Change)

# English

- Present-day English basically uses only HAVE
- Complication: Kytö (1997) and Lipson (1999) find +Change verbs *become, grow, wax* were slower in losing BE than +Displacement verbs like *come, fall, arrive*. This is not as predicted.

# English

- BUT *become* and *grow* differ from other unaccusatives in that they take nominal/adjectival complements other than the subject:
  - Lucy became a teacher
  - Harry grew taller
- Might different patterns emerge once these (non-canonically intransitive) uses are excluded?

# English

- *become*, along with *be* and *seem* which also takes complements other than the subject, seems to have exceptional auxiliary selection behaviour more generally
  - (after Sorace 2000:) these verbs do not always pattern with others of the same semantic class, being more likely to take BE
  - so English results perhaps not so surprising after all

# English

- Pathway of change again more-or-less as predicted
- Complications not necessarily insurmountable



# Conclusion

- The acquisitional and diachronic data provide some supporting evidence for the theoretical approaches proposed

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