THE UNIVERSITY *of* EDINBURGH
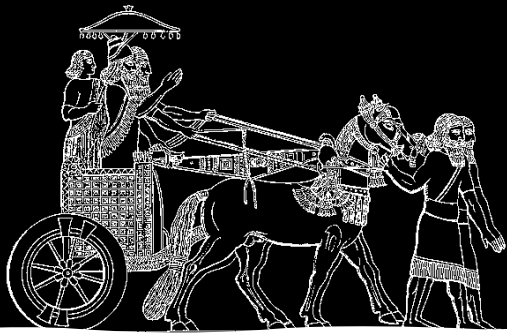School of Philosophy, Psychology
and Language Sciences

ConTemplating the argument structure of Akkadian verbal templates

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Roadmap

The template patterns and their alternations

Conclusions & Outlook

Different types of causation

Semitic templatic morphology

Disambiguating root classes: Unaccusativity tests

Involving aspect

Semitic templatic morphology

$$\sqrt{\text{š γ q}} + \text{Template}$$

Template	Function		Form	Meaning	
XaYāZu	infinitive	⇨	šarāqu	'to steal'	} verbs
naXYuZu	passive infinitive	⇨	našruqu	'to be abducted'	
XaYYaZu	participle.M	⇨	šarrāqu	'thief'	} nouns
XaYYaZītu	participle.F	⇨	šarrāqītu	'female thief'	
XaYZu	verbal adjective	⇨	šarqu	'stolen'	} adjectives
XaYYiZu	participial adj.	⇨	šarriqu	'thieving'	

The template patterns

Base	Doubling	Causative
G	D	Š
simple	intensive	causative

In most Semitic languages three general template 'patterns' are differentiated:

➻ A base pattern, characterised by 'minimal'/unmarked morphology,

➻ A doubling pattern, characterised by a geminated second root radical, and

➻ A 'causative' pattern, characterised by a H/S affix, in Akkadian a *š-*, prefixed to the root.

	Base pattern	Doubling pattern	'Causative' pattern
infinitive	XaY$_{\bar{a}}$Z-u	XuYYuZ-u	šu-XYuZ-u
perfective	i-XYuZ	u-XaYYiZ	u-ša-XYiZ
imperfective	i-XaYYaZ	u-XaYYaZ	u-ša-XYaZ
resultative	XaYiZ	XuYYuZ	šu-XYuZ

The template patterns

		G	D	Š
		/	factitive ⬅	causative
			'intensive'	
Class	Root	G	D	Š
Unaccusative	√mqt	fall, collapse (intr.)	collapse (tr.)	cause to fall
	√wsm	be(come) fitting	make fitting	cause to be(come) fitting

The template patterns

		G	D	Š
		/	factitive	causative
			'intensive' ←	
Class	Root	G	D	Š
Unergative	√hbb	murmur, chirp	hiss	make so. gurgle
	√?lk	go, walk	/	cause to go, walk
	√d?l	roam, run around	treat with indifference	make so. run around

The template patterns

		G	D	Š
		/	factitive	causative
			'intensive'	
Class	Root	G	D	Š
Active-transitive	√prs	cut off	chop off	cause to cut off
	√ṣbt	seize	seize	cause to seize

The template patterns

		G	D	Š
		/	factitive ←	causative
			'intensive'	
Class	Root	G	D	Š
Non-active transitive	√lmd	learn, understand	inform	cause to learn
	√wld	bear, give birth	beget	cause to give birth, breed

The template patterns: Summary

- Three template patterns
  - A base pattern that allows every transitivity, lexical aspect, and some voice alternations
  - A doubling pattern that has two main functions: Factitive & intensive
    - A causative pattern that functions as a causative

1. How can we account for the factitive & intensive functions in the D stem? How do we know which roots derive which functions?
2. What is the difference between D causatives and Š causatives?

Disambiguating root classes

The question of which root derives which pattern-function has received some scholarly attention in the past
- Goetze (1942), Rundgren (1959), Kouwenberg (1997, 2010)

Kouwenberg (1997):
- Valency-preserving D stems (intensive)
  - Transitive
  - Intransitive
- Valency-extending (factitive)
  - Transitive
  - Intransitive

Verbs with AGENT subjects

Verbs without AGENT subjects

- Agentive-transitive
- Unergatives

- EXPERIENCER-subject verbs
- Unaccusatives

Disambiguating root classes

Belletti & Rizzi (1988), Anagnostopoulou (1999), Kratzer (1996), Kastner (2020)
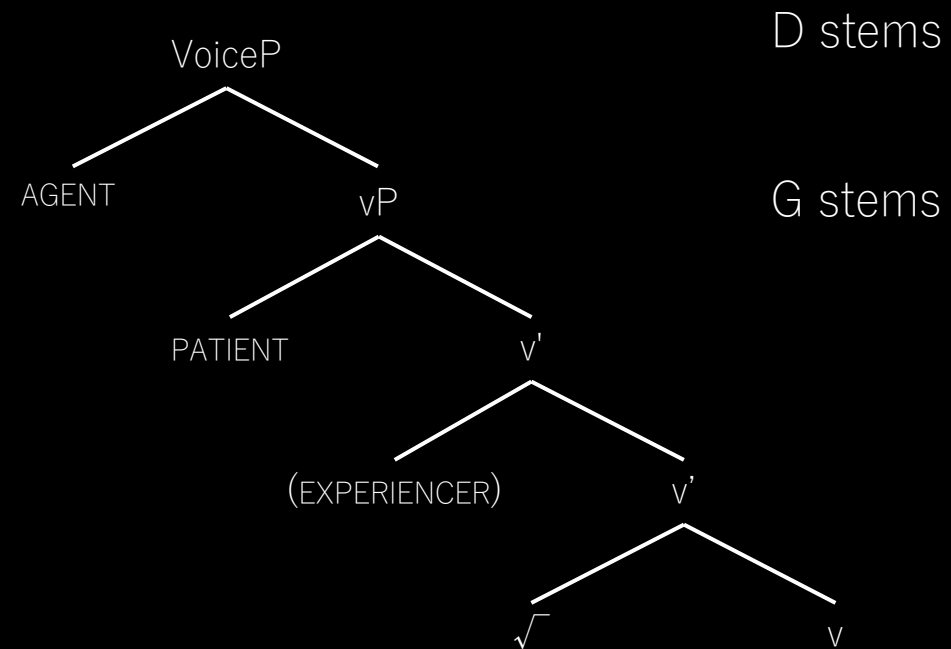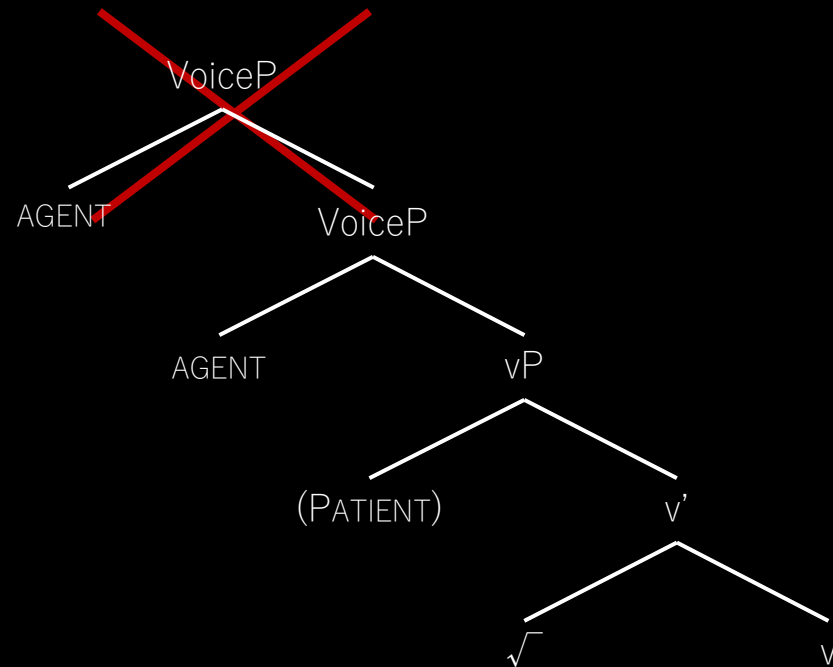
- Agentive-transitive
- Unergatives

- EXPERIENCER-subject verbs
- Unaccusatives

G stems
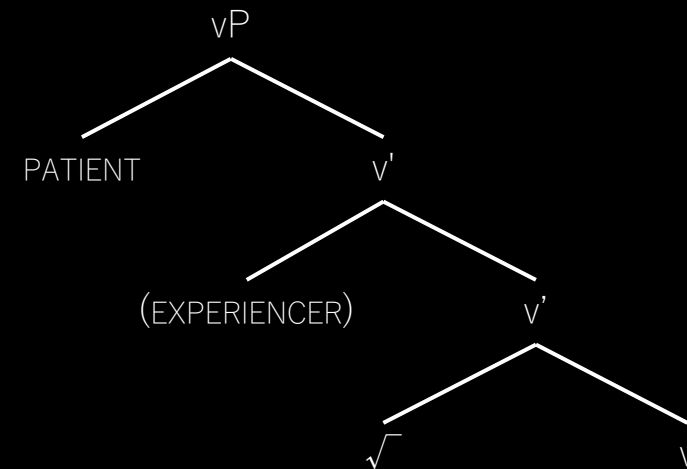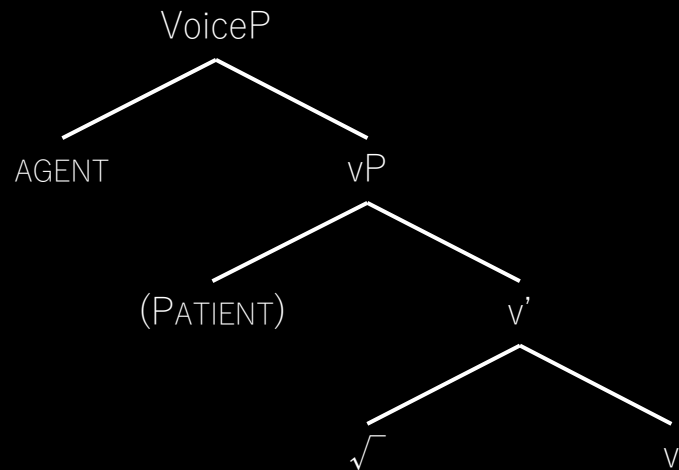
Disambiguating root classes

Belletti & Rizzi (1988), Anagnostopoulou ((1999), Kratzer (1996), Kastner (2020)
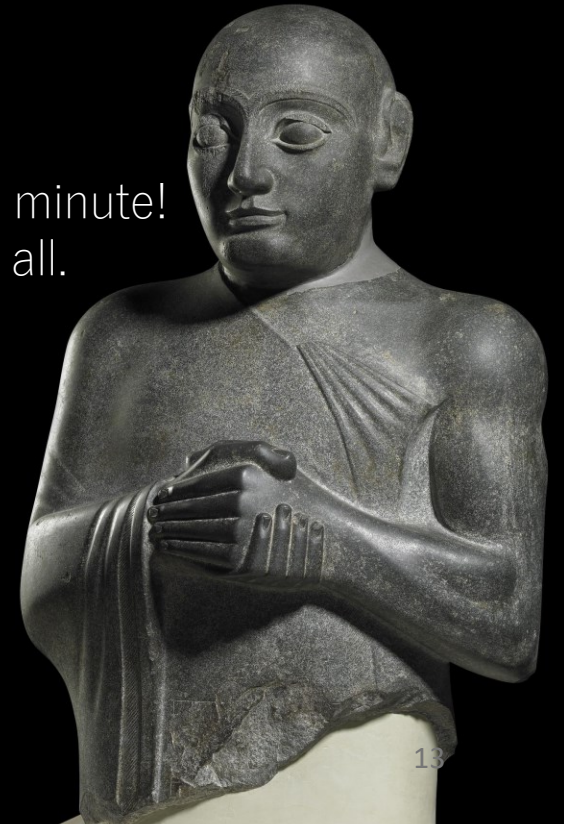
Disambiguating root classes

- Agentive-transitive
- Unergatives

→ Intensive

- Experiencer-subject verbs
- Unaccusatives

→ Factitive

But wait a minute!
That's not all.

So far, this appears to be a syntactic restriction.

Disambiguating root classes

Kamil (Accepted, a)

- The assumption thus far: Unaccusatives form the causative-inchoative alternation with the D stem
- Indeed, this is the case for verbs of change-of-state (following Levin 1993)
    - They only ever alternate with D or with a D & Š
    - Never only with a Š

(10)		G	Transitive D	Transitive Š
a.	hp?	break (intr.)	break (tr.)	/
b.	npš	expand, widen (intr.)	expand, widen (tr.)	/
c.	šhh	disintegrate, fall out	waste, make fall out	/
d.	?bl	dry (intr.)	dry (tr.)	cause to dry
e.	rpš	expand, widen (intr.)	expand, widen (tr.)	cause to expand, widen
f.	rm?	be(come) loose	loosen	cause to be(come) loose

Disambiguating root classes

- Some verb classes form the alternation exclusively with the Š stem
  - Verbs of appearance/disappearance/occurrence, verbs of existence

(11) $\sqrt{\ }$m't 'die'
        $\sqrt{\ }$mk' 'go missing/disappear'
        $\sqrt{\ }$šl' 'submerge, immerse os. in'

- It gets even more complicated once we look at unergatives …

Disambiguating root classes

(12)   Verbs of emission (unergatives)

		G	Transitive D	Transitive Š
a.	√ršk	'drip'	'drop'?	/
b.	√ršš	'glow'	'heat up'	/
c.	√ṣrr	'drip, flow'	'pour out'	/
d.	√brq	'flash'	/	'cause lightning to strike'
e.	√brr	'flicker'	/	'cause to flicker'
f.	√ṣrḫ	'flare up, twinkle'	/	'cause to flare up'
g.	√šgm	'thunder, roar'	/	'make resound'
h.	√ḫlʾ	'shine'	'make bright'	'illuminate'
i.	√ntk	'drip'	'drop'	'let drip'
j.	√nwr	'shine'	'make bright, light fire'	'make shine, light fire'
k.	√qtr	'smoke (intr.)'	'smoke (tr.)'	'cause to smoke'

Disambiguating root classes: Tests

- The G–D–Š alternations fall under the causative-inchoative alternation.
  - Schäfer (2009), Haspelmath (1993), Zúñiga & Kittilä (2019), Bahrt (2021), Kamil (Accepted)

- Some unaccusatives show:
  - Different root types (event types) require different causative alternants
  - Two different types of causatives
  - Some roots may use both causative alternants
  - …   presumably one could spot a difference?

- The disambiguation of verb classes in the sense of Levin (1993) can only take us this far
  - There must be something else, happening in the root

Different types of causation

(13)   *ana* *šūpuš*   *ellip-āt-i*   *qereb*   *qīš-āt-i*   *iṣṣ-ē*   *rabût-e*
DAT   making   ship-PL-OBL   near.CSTR   forest-PL-OBL   tree-PL.OBL   great-PL.OBL

uqqir-ū   *ina* *napḫar*   *māt-āt-i=šunu*
3.D.√wqr. 'rare'.PFTV-PL.M in   entirety.CSTR   land-PL-OBL=their
"For the manufacture of ships, they made the great trees rare in all of their lands" (OIP 2 118:10)

(14)   *mê*   *balaṭ*   *napišt-i=šunu*   *a-kla*   *maštīt-u*
water.OBL   living.CSTR   life-OBL=their   1.SG-√kl'. 'confine'.PFTV   drink-NOM

u-ša-qir   *ana* *pī=šun*
1.SG-CAUS-√wqr. 'rare'.PFTV DAT   mouth.PL=their
"I held back the water necessary for their living, I made the drink rare for their mouths"
(Streck Asb. 74 ix 34)

Different types of causation

Goetze (1942):
- Š verbs "cause someone to act in the way which the basic verb indicates" (*o.c.* 4b)
- D verbs "make a person or a thing what the adjective indicates" (*o.c.* 6b) or "put a person or a thing in the state which the stative describes" (*o.c.* 6a)

Kouwenberg (1997):
- Action verbs take Š causatives, add causer, direct causation
- Process verbs take D causatives, add agent, like "transitive", not direct causation

Different types of causation

My take!

D causative
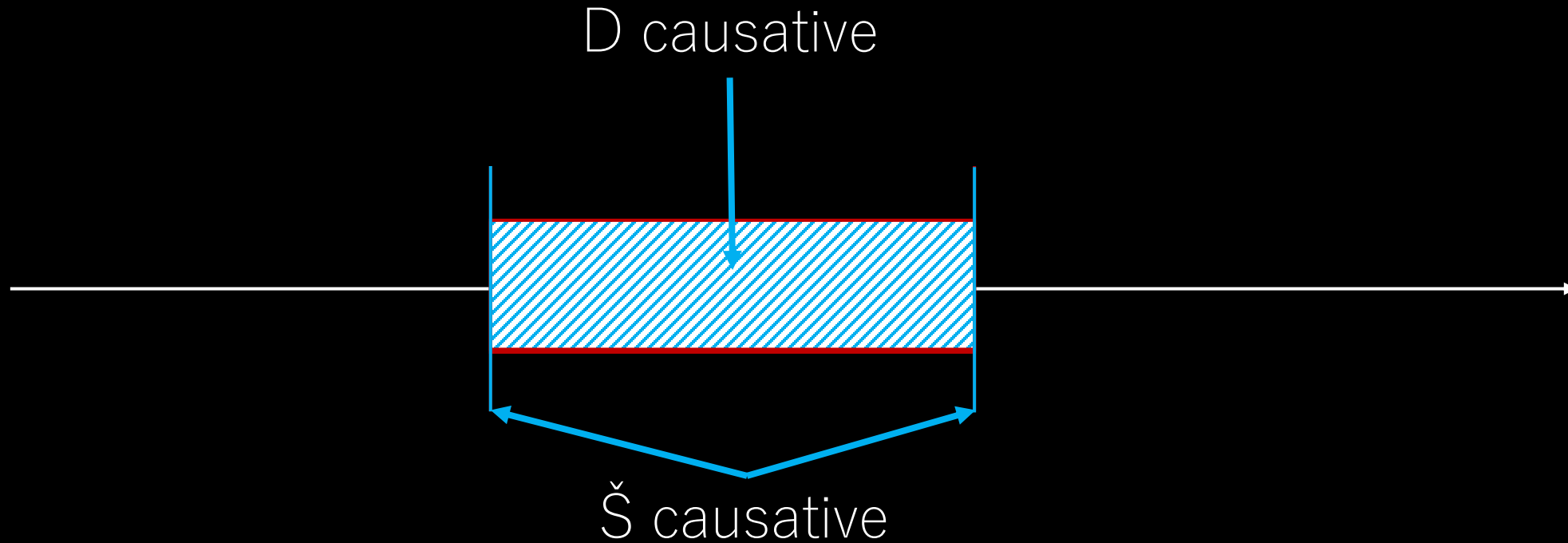
Š causative

Different types of causation

Kamil (In preparation):

- Two types of causation
    - D verbs: Direct, involved/durative, agentive causation
    - Š verbs: Indirect, punctual, causative causation

- The internal decomposition of the root can be a clue about its propensity to be causativised by either D or Š
    - Root-encoded argument & event structure
        - Beavers et al. (2021)
    - Internally (D) vs. externally (Š) caused change?
        - Bentley (2024)

Involving aspect

Kamil (In preparation):
- Aspectual differences are properties of roots/event types
  - "Aspectual verbs" (Levin 1993): *last, endure*, etc.
  - The D—Š causatives show us that some roots are inherently (non-)durative

- The types of causation themselves also have aspectual differences
  - D verbs are "imperfective", ongoing causation & change-of-state
  - Š verbs are "perfective", punctual causation & change-of-state
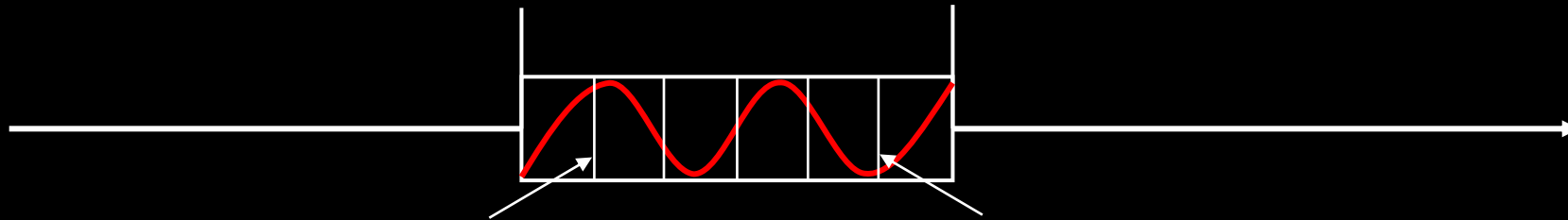
- So, let us look at the D stem more closely ⋯

Involving aspect

Inglese & Mattiola (2020), Krifka (1998), Schultze-Berndt (2012), Tovena (2011)

→ imperfective vs. perfective aspect

→ atelic vs. telic events

These points are subintervals of one event.

Aspectual focus on the duration/eventuation of an event
→ Associated with **durativity**, **continuity**, **pluractionality**

Intention (for communication)

→ Process vs. result focus

Conclusions

We have three template patterns:
- A base stem
  - Syntactic projection of the root
- A doubling stem
  - [+AGENT]
  - Process-focus: ongoing change-of-state, direct & ongoing causation
  - G verbs, which already have an [+AGENT], still derive the process-focus
- A causative stem
  - [+CAUSER]
  - Result-focus: punctual change-of-state, indirect & punctual causation

...
- Akkadian is a fully aspectual and heavily context-reliant language
  - Pragmatics matter! -> Intention

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Thank you for your attention!

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Appendix: Unaccusativity tests in Akkadian

Levin & Rappaport-Hovav (1995, chap. 2) introduce the resultative construction as an unaccusativity test:

- Unaccusatives may form the resultative construction
  - *The bottle broke open.* (Levin & Rappaport-Hovav 1995: 39)
- Unergatives may not
  - *We yelled hoarse. (Levin & Rappaport-Hovav: 1995: 36)
- Syntactic restriction: the base verb needs to have a direct object, which can then be promoted to be predicated by the resultative construction

Appendix: Unaccusativity tests in Akkadian

- A conjugation in Akkadian, called the 'Stative' denotes a resultative state, i.e., a state that follows a (dynamic) change-of-state event
  - Kamil (Accepted, b)

- Statives pattern with the syntactic restriction of the resultative construction in English: unaccusatives form Statives, unergatives do not
  - In the rare cases where unergatives do form Statives, they come out as durative, not resultative

Appendix: Unaccusativity tests in Akkadian

- Further evidence comes from, EXPERIENCER-subject verbs
  - The Stative is often claimed to be derived from the verbal adjective (VA), the deradical adjective
  - VAs will *always* predicate a PATIENT/THEME
  - The Stative mostly pattern with the VA, except for EXPERIENCER-subject verbs: their Stative predicates the EXPERIENCER-subject
  - Evidence from Greek & Romance suggests that EXPERIENCER-subjects behave more like internal arguments, rather than external
  - Assuming that to be the case here, too, the Stative then again just follows the DOR and predicates the internal argument