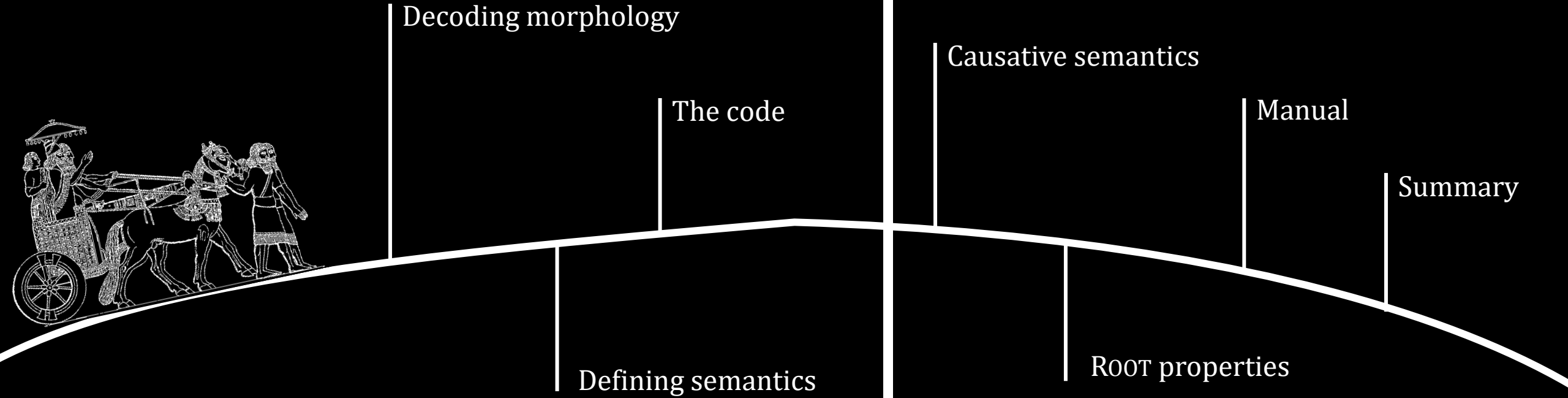# Zwischen Syntax, Semantik und Morphologie: Verbale Templates im Akkadischen

35. Deutscher Orientalistentag, Erlangen
11.09.2025

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Roadmap

Decoding morphology

The code

Defining semantics

Causative semantics

Manual

Summary

ROOT properties

Decoding morphology

Akkadian builds its lexical words (i.e., nouns, adjectives, verbs) by combining lexical ROOTS with so-called *templates*.

The *template* is itself not a single morpheme, but is made up of multiple little morphemes.

Morpheme: the smallest meaning-carrying unit in language.

Selected bibliography: Arad (2005), Arbaoui (2010), Kastner (2020), Kamil (2025)

Person

Number

Gender

Causation

Aspect

Argument structure

Mood

Voice

u-šā-bil-ū-nim
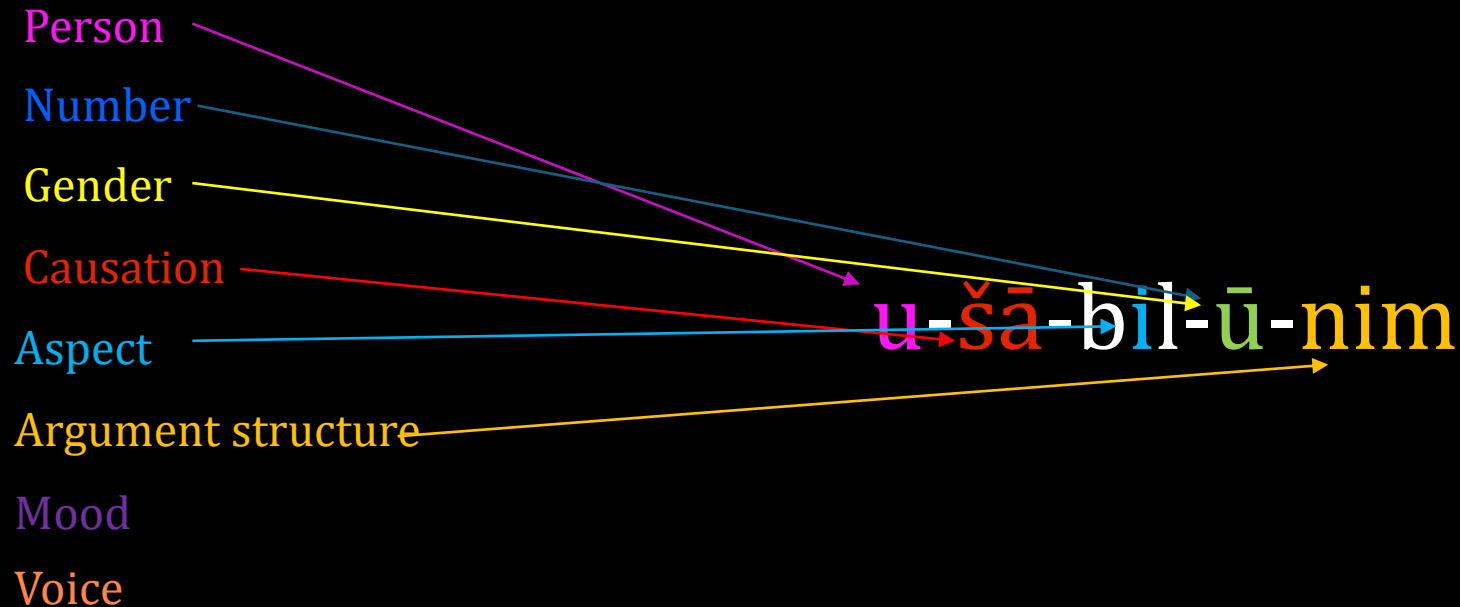
Decoding morphology

Terminology: _template_ vs. _pattern_

Template: morphonological template, inflected for TAM, pers/num/gen

Pattern: template pattern with recurring morphological and semantic characteristics (G, D, Š)

Our focus: the pattern!

The patterns known to us:

G	No morphology	$i\text{-}XYV_RZ$
D	Doubled middle radical	$u\text{-}Xa\textcolor{red}{YY}iZ$
Š	š(a) prefixed to the ROOT	$u\text{-}\textcolor{red}{\text{ša}}\text{-}XYiZ$

Causatives

N	N prefixed to the ROOT	$i\text{-}\textcolor{red}{X}\text{-}XaYV_RZ$
(t(an))	t(an) infixed between first two ROOT/derivational consonants	$i\text{-}X\textrm{<}\textcolor{red}{\text{ta}}\textrm{>}YV_RZ$

Anticausatives

Defining semantics

Selected bibliography: Haspelmath 1993, Schäfer (2009), Alexiadou, Anagnostopoulou & Schäfer (2015), Zúñiga & Kittilä (2019), Inglese (2022), Kamil (2025, accepted)

Causatives

G   no semantics

D   factitive, intensive

Š   causative

1. When does a verb derive factitive, when intensive meanings?
   (i.e., one form, two meanings)
2. What is the difference between factitive and causative?
   (i.e., one meaning, two forms?)

The causative alternation

(1) The vase broke.
(2) The boys broke the vase.

The verb in (1) is the noncausal alternant, the verb in (2) is the causal alternant.

(3) Das Schiff versinkt.
(4) Die Piraten versenken das Schiff.

The verb in (3) is a noncausal alternant, the verb in (4) is a causative alternant.

The Code

- D and Š are both causatives, i.e., forms that denote causal events and are marked as such
    - D is an atelic (imperfective) causative
    - Š is a telic (perfective) causative

- Causal events are naturally bi-eventive (Davidson 1967; Dowty 1979; Levin & Rappaport Hovav 1995; i.a.). This means that they consist of two sub-events:
    - A causation event
    - A change-of-state (CoS) event

- Causation events can be formalised as primitive predicates (Rappaport Hovav & Levin 1998)
    - Direct causation: DO
    - Indirect causation: CAUSE

- Feature summary of D and Š:
    - D: [-telic]; DO
   - Š: [+telic]; CAUSE

The Code

- ROOTS also have internal properties that can be deconstructed
  - Telicity, internal primitive predicate, event type, etc.
  - These properties can be tested for using a set of grammatical environment tests

- Rules for causative derivation
  - Telicity-rule:
    When it comes to the telicity feature, ROOT and causative **must overlap**.

  - Primitive predicate rule:
    When it comes the primitive predicate, ROOT and causative **must not overlap**.

How do we determine the properties of ROOTS and patterns?

Causative semantics

Causative events

Every causative event is made up of two **subevents**: an event of causation and an event of change-of-state (CoS).
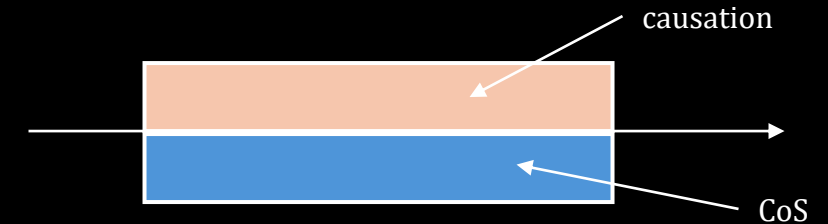

causation

CoS
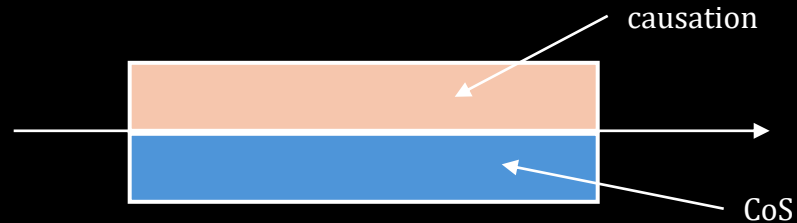
Example: "I broke the vase."
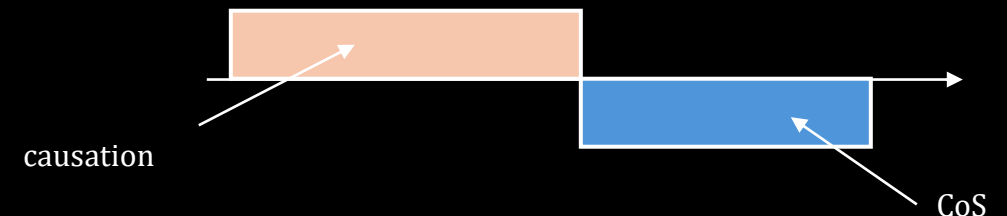-> causation: I DO *break*
-> CoS: vase *break*.

Event encoding

Do   [-telic] $A \cap P$

causation

CoS

CAUSE   [+telic] $A < P$

causation

CoS

Causative semantics

Telicity

Telicity is the property of event culmination, i.e., completion. If an event is completed, it is telic. If an event is ongoing, it is atelic. Predicates can be naturally telic or atelic.

Telicity can be tested for, for instance, with adverbs. In-adverbs are compatible with telic verbs, for-adverbs are compatible with atelic verbs.

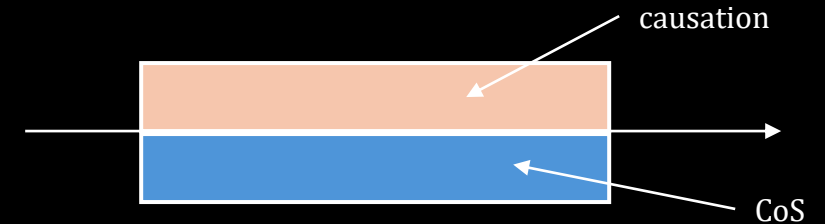(5) She passed the exam in/*for one hour.
(6) He survived for/*in two days.

D causatives pass the tests for [-telic].
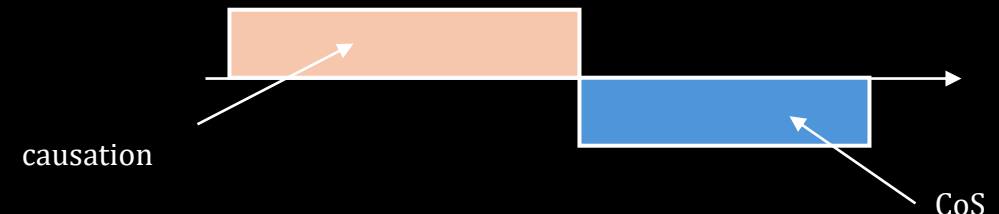Š causatives pass the tests for [+telic}.

Event encoding

D0   [-telic]

causation

CoS

CAUSE   [+telic]

causation

CoS

Causative semantics

Remember: morphemes are defined as the smallest meaning-carrying unit in language.

In other words, a morpheme inherently must carry meaning or function.

Do   u-Xa**YY**iZ

u-**ša**-XYiZ   Cause

Event encoding

In formal semantics, we use a set of symbols and signs to formalise the logic of language.

Do and Cause are called primitive predicates.

Causative semantics

- In/for modification test:
  - Telic predicates can be modified by in-adverbials, not by for-adverbials
    - *She passed the exam in/*for one hour.*
  - Atelic predicates can be modified by for-adverbials, not by in-adverbials
    - *He survived for/*in two days.*

	G	D	Š	Total
ina n ūmī(m)	5	/	1	6
adi n ūmī(m)	3	/	1	4
n ūmā(m)	1	/	1	2
ana n ūmī(m)	20	1	1	22
kala ūmi(m)	11	/	1	12
n ūmī(m)	17	8	/	25
Total	57	9	5	71
percent of total	80.28%	12.68%	7.04%	

(1) *ina 3-ti ūm-ē*   *ana*   *šēp*   *Aššur*   *bēl-i=ya*   *lu*   **u-še-kniš**

√knš 'submit'

in 3 day-PL.OBL   DAT   foot.PL   DN   lord-OBL=my   PREC   1.SG-CAUS-submit.PFV

"(All of Urartu) in three days I made (them) submit at the feet of my lord Aššur" (RIAo Shalmaneser I 1:40f, MA)

Root properties

But how do we tell the properties of ROOTS?

Three tests!
1. Stative
2. Verbal Adjective
3. Perfective/imperfective (i.e., iprus/iparras)

! These tests must only be performed on the G stem. The G stem can be seen as the direct 'projection' of a ROOT.

ROOT properties

But how do we tell the properties of ROOTS?

Three tests!
1. Stative

   ROOTS that regularly derive resultative Statives, encode an internal argument (object).
   ROOTS that do not regularly derive Statives and whose Statives are not resultative, do not encode an internal argument.

   Such ROOTS that do not encode an internal argument, encode a DO predicate.
   -> Unergatives (walk, jump, cry, bark, etc.).

   A DO predicate designates an agentive event. That means it is performed by an Agent. Transitive ROOTS may regularly derive Statives (through the object) and also encode a DO predicate if they denote an agentive event.

Root properties

But how do we tell the properties of ROOTS?

Three tests!
2. Verbal Adjective

Verbal adjectives behave similarly to Statives: only ROOTS with internal arguments regularly derive VAs.
But the VA test can refine the categorisation of intransitives:

Some VAs entail a CoS
maqit bēl mešr-im=ma "(Even) the wealthy is fallen" (Lambert BWL 80:187)

Other VAs do not
iṣ-am warq-am=ma l=i-kkis-ū "They should cut down green (~ fresh) wood" (LIH 72:22)

VAs entailing a CoS hint at a ROOT encoding an EVENT. VAs not entailing a CoS hint at a ROOT encoding a STATE/PROPERTY.

ROOT properties

But how do we tell the properties of ROOTS?

Three tests!

3. Perfective/imperfective (i.e., iprus/iparras)

ROOTS that derive sound perfectives/imperfectives are not marked for telicity, i.e. [±telic].
alp-u igisê ekall-im … i-k<ta>bit-Ø=ma "The ox, the gift of the palace, has become fat." (ARM 2 82:29-30)
pî šarr-im eli māt-i=šu i-kabbit-Ø "The king's order will weigh heavily (lit. become heavy) on his land" (YOS 10 22 iv 10)

ROOTS that derive durative perfectives are marked for [-telic].
Nusku ša ta-dlip-Ø=u mušīt-u "You, Nusku, who stayed awake all night" (KAR 58 r. 35)

ROOTS that derive punctual imperfectives are marked for [+telic].
ša elat ina ūm-u i-baṭṭil-Ø=u "He who stops working for over one day" (YOS 6 4:9)

ROOTS and causatives

	ROOT type	Semantic denotation	Telicity	Causatives
unaccusatives	PC ROOTS	$\lambda P.\lambda x.P(x)$	[±telic]	D & Š
	Eventive unaccusative ROOTS	$\lambda x.\lambda e.\text{EVENT}(e) \wedge \text{Patient}(x,e)$	[±telic]	D & Š
	Emission ROOTS A	$\lambda P.\lambda x \wedge \text{Theme}(x,e)$	[-telic]	D & Š
	Psych ROOTS	$\lambda x.\lambda e.\text{STATE}(e) \wedge \text{Experiencer}(x,e)$	[±telic]	D & Š
	Labile motion ROOTS	$\lambda e.\text{DO}(\text{EVENT})(e)$ $OR\ \lambda x.\lambda e.\text{EVENT}(e) \wedge \text{Patient/Theme}(x, e)$	[±telic]	D & Š
	Durative ROOTS	$\lambda x \lambda e.\text{EVENT}(e) \wedge \text{Theme}(x,e)$	[-telic]	D & Š
	Inchoative ROOTS	$\lambda x.\lambda e.\text{EVENT}(e) \wedge \text{Patient}(x,e)$	[+telic]	Š
unergatives	Existence ROOTS	$\lambda x.\lambda e.\text{EVENT}(e) \wedge \text{Theme}(x,e)$	[-telic]	Š
	Emission ROOTS B	$\lambda x.\lambda e.\text{EVENT}(e) \wedge \text{Theme}(x,e)$	[+telic]	Š
	Unergative ROOTS	$\lambda e.\text{DO}(\text{EVENT})(e)$	[±telic]	Š
transitives	Agent-transitive ROOTS	$\lambda x.\lambda e.\text{DO}(\text{EVENT})(e) \wedge \text{Patient}(x,e)$	[±telic]	Š
	Labile ROOTS	$\lambda x.\lambda e.\text{DO?}(\text{EVENT})(e) \wedge \text{Patient}(x,e)$	[±telic]	D & Š
	Experiencer-transitive ROOTS	$\lambda x.\lambda e.\text{STATE}(e) \wedge \text{Experiencer}(x,e)$	[±telic]	D & Š

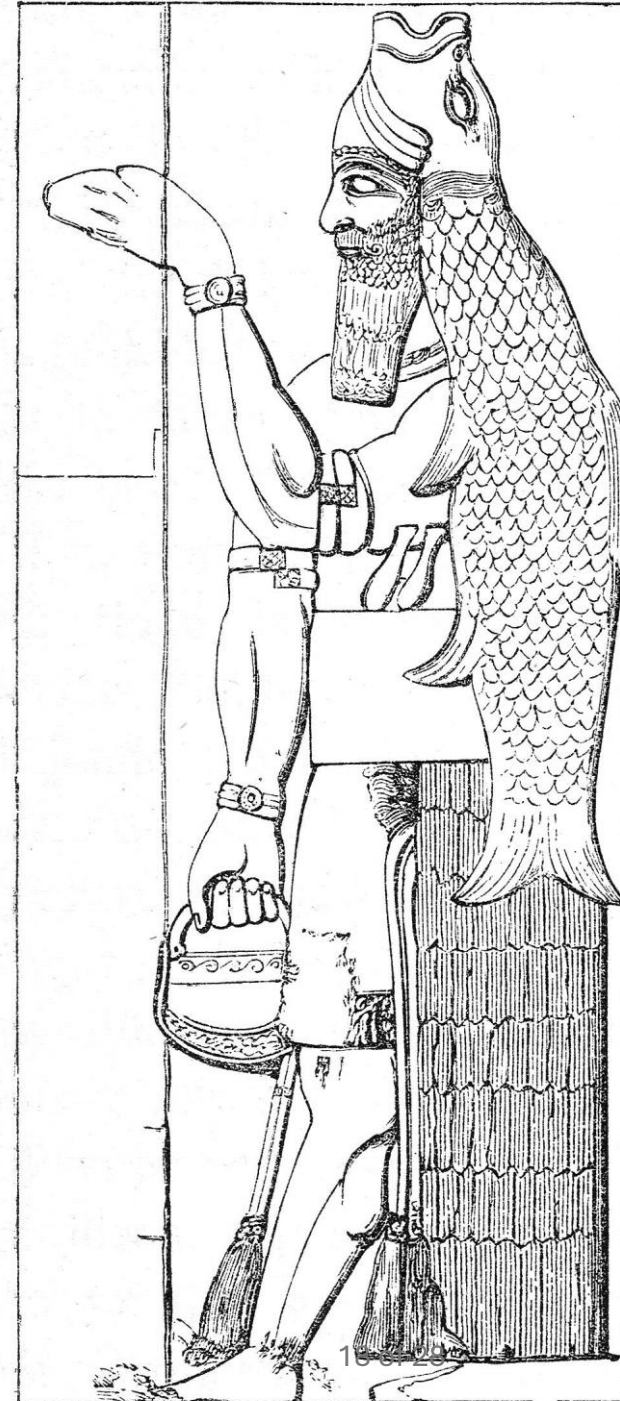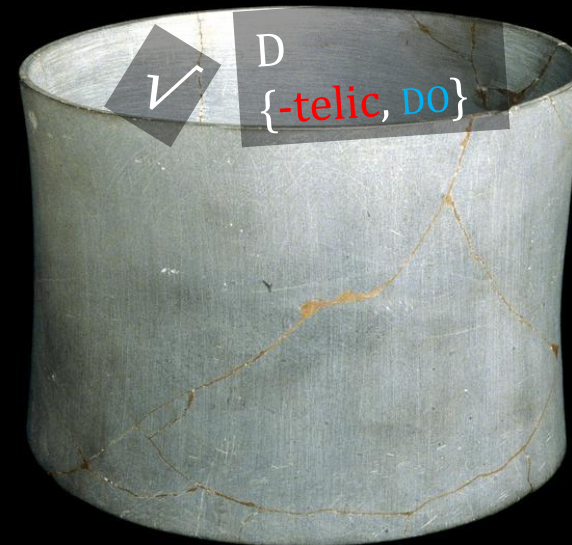Roots that derive no D causative, derive a D intensive!

Manual

So, we understand now that D and Š causatives have different connotations. We can thus say that factitive D and causative Š verbs are not two different ways of saying the same.

We also know that roots and causatives both have very clearly defined semantic properties.

How do these properties behave when combined?
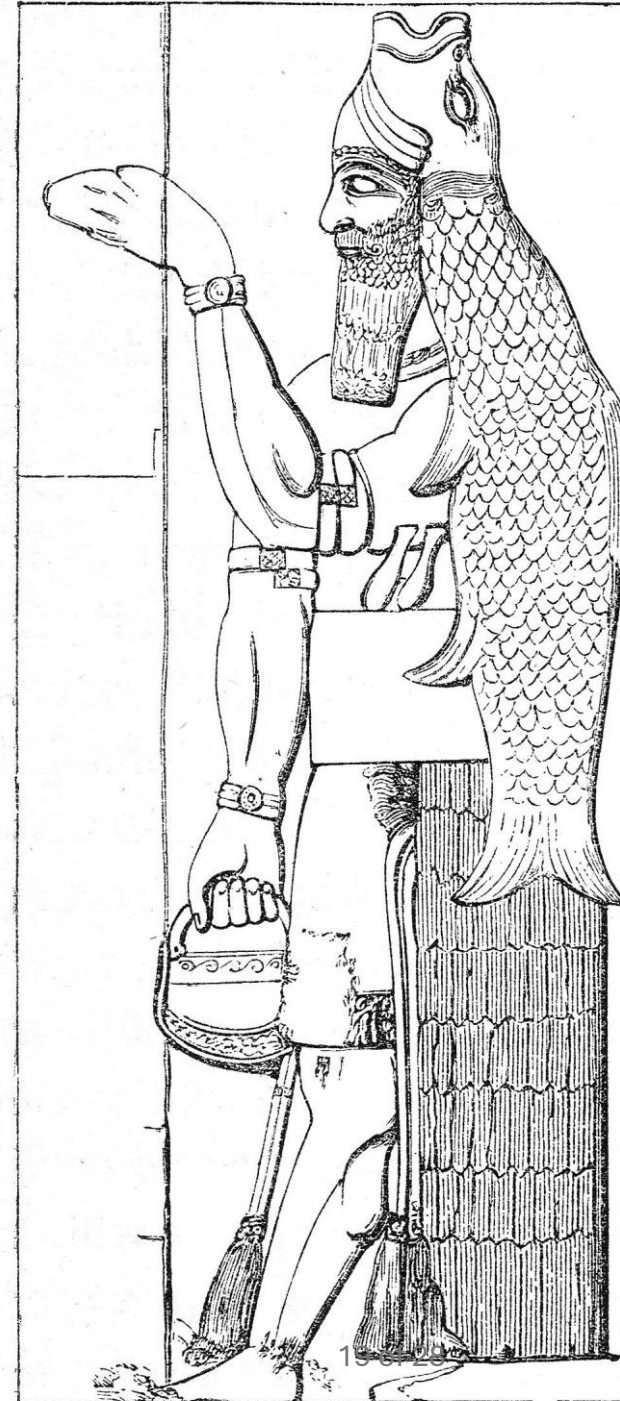
Factitive!
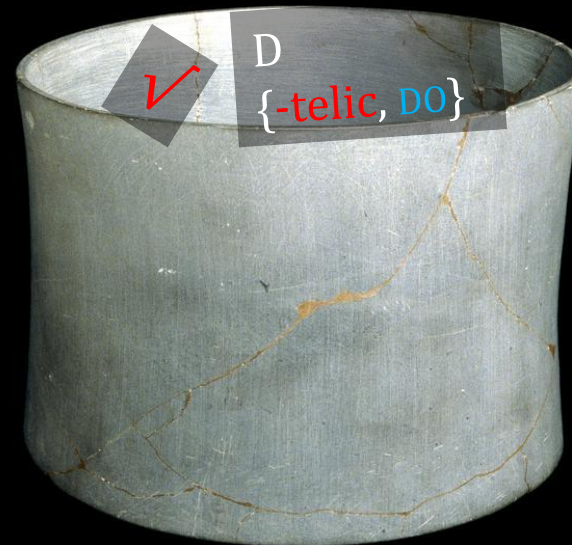
$\sqrt{}$ D
{-telic, DO}

18 of 28

Manual

So, we understand now that D and Š causatives have different connotations. We can thus say that factitive D and causative Š verbs are not two different ways of saying the same.

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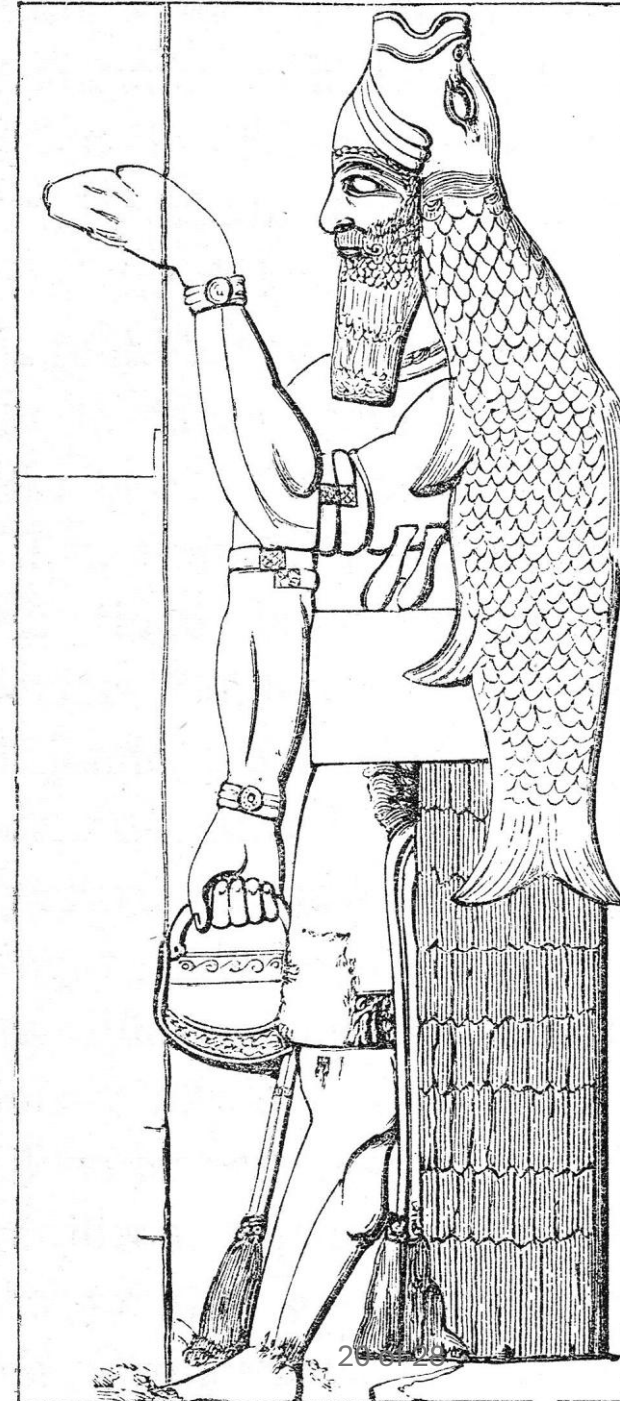
Factitive!

√ D
{-telic, DO}

Manual

So, we understand now that D and Š causatives have different connotations. We can thus say that factitive D and causative Š verbs are not two different ways of saying the same.

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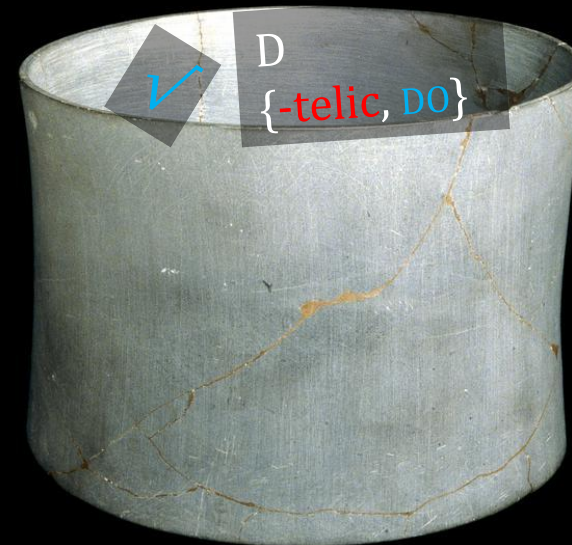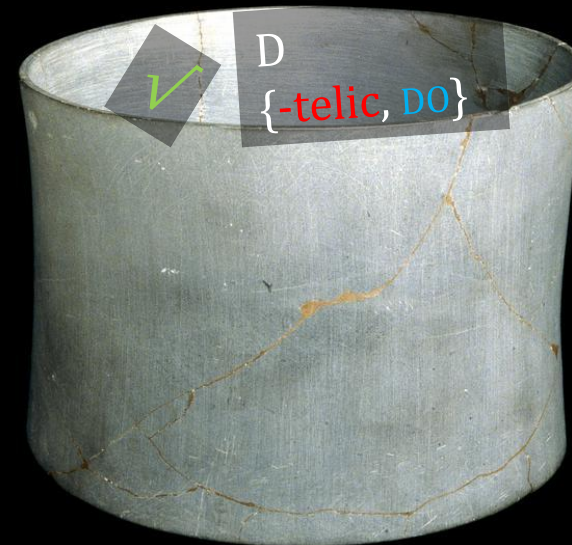
Intensive!

D
{-telic, DO}

Manual

So, we understand now that D and Š causatives have different connotations. We can thus say that factitive D and causative Š verbs are not two different ways of saying the same.
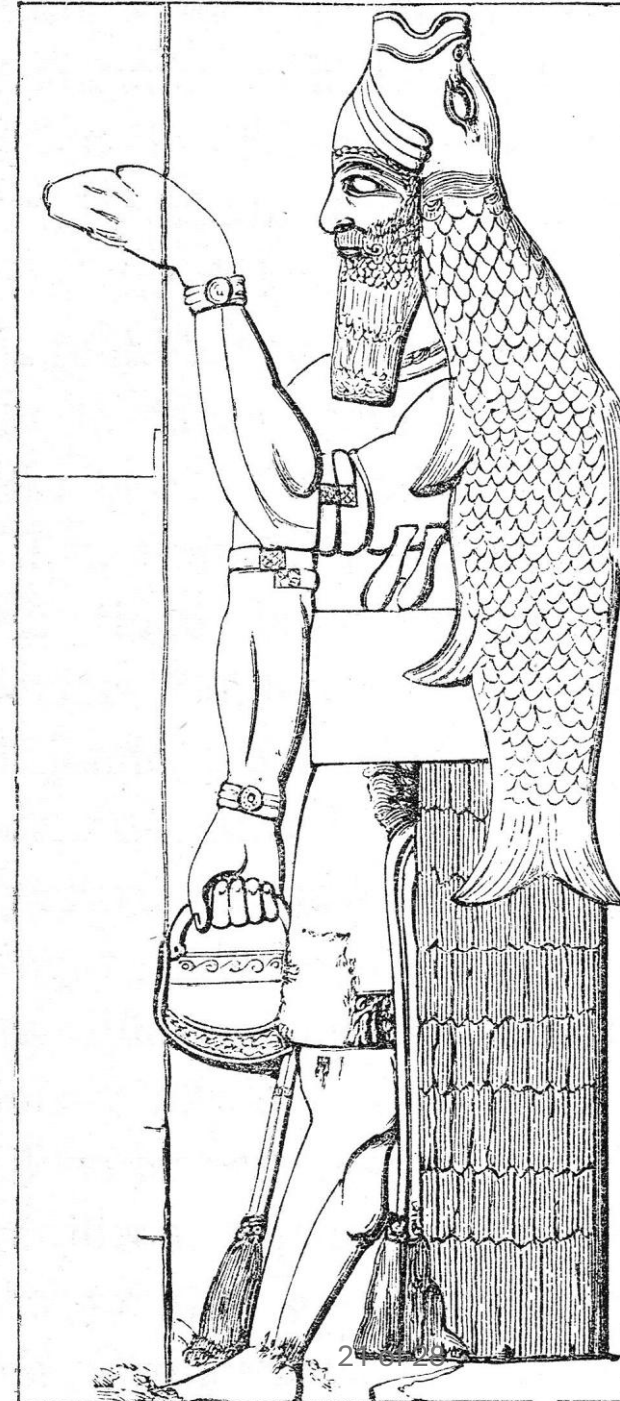
We also know that roots and causatives both have very clearly defined semantic properties.

How do these properties behave when combined?

[+telic]

Intensive!

D
√ {-telic, DO}

Manual

Telicity	Root Primitive predicate	Template pattern	Outcome
[±telic]		D	Factitive
[-telic]		D	Factitive
[+telic]		D	Intensive
[±telic]	DO	D	Intensive
[±telic]		Š	Causative
[-telic]		Š	/
[+telic]		Š	Causative
[±telic]	DO	Š	Causative

Conclusions

1. When does a verb derive factitive, when intensive meanings?
   (i.e., one form, two meanings)
   - ➢ Depends on the properties of the ROOTS and their interactions with the properties of D and Š!
2. What is the difference between factitive and causative?
   (i.e., one meaning, two forms?)
   - ➢ Aspectual difference: D causatives (factitives) denote a causation event that is ongoing and does not entail culmination. Š causatives denote a causation event that is completed or punctual and entails culmination.

What this means for Semitic studies:

I argue that lexicalised remnants of this system are also found in MH (√šlm 'complete').

Possible "original system".

To be researched in other languages … (I'm on it!)

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Image credits:

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Danke für Ihre Aufmerksamkeit!

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