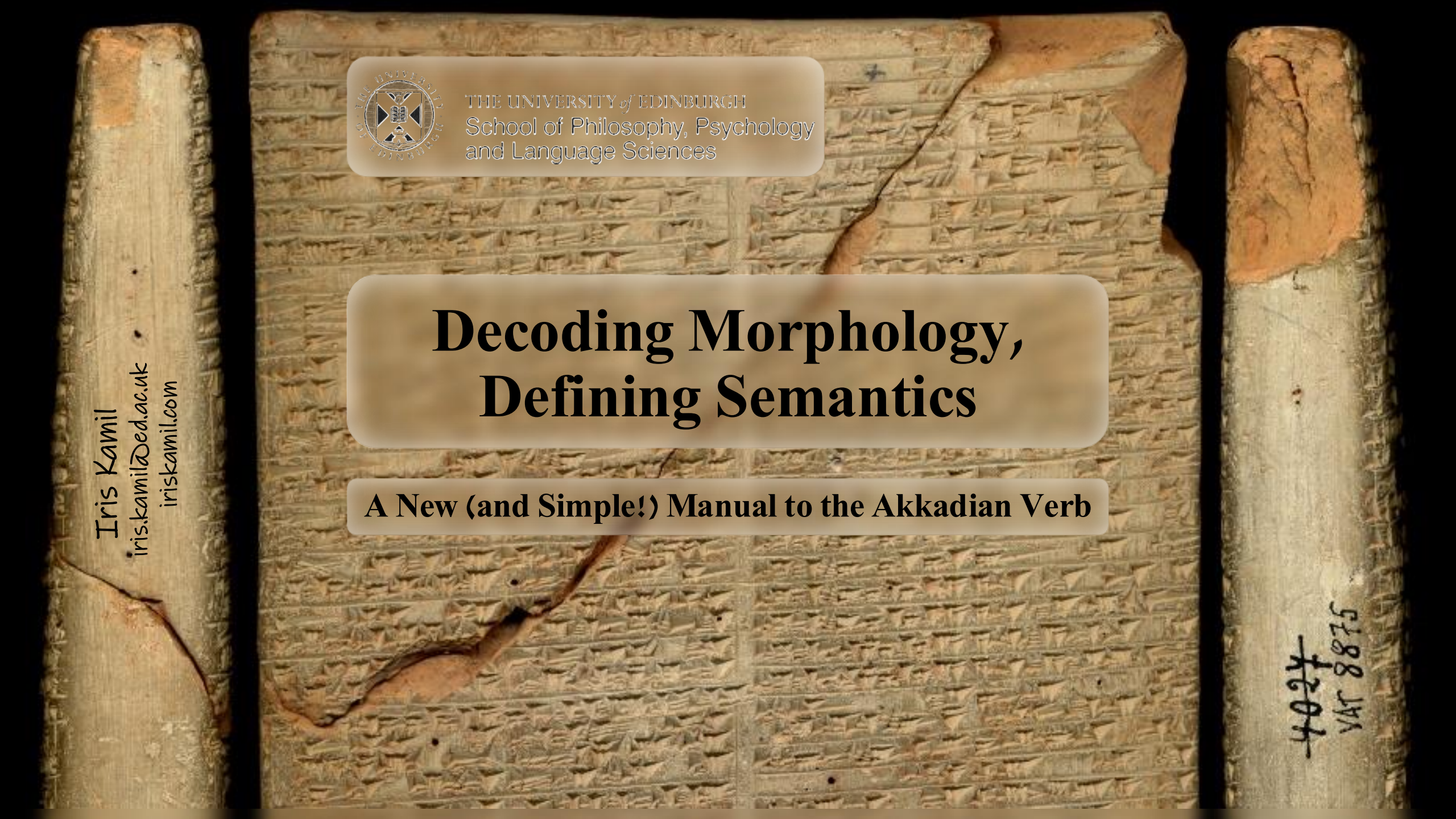

THE UNIVERSITY of EDINBURGH
School of Philosophy, Psychology and Language Sciences

Decoding Morphology, Defining Semantics

A New (and Simple!) Manual to the Akkadian Verb

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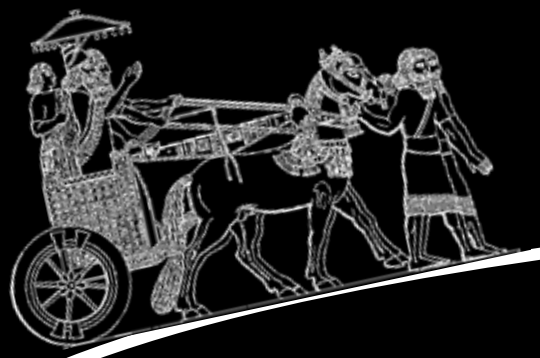
Roadmap



Decoding morphology

Defining semantics

Manual

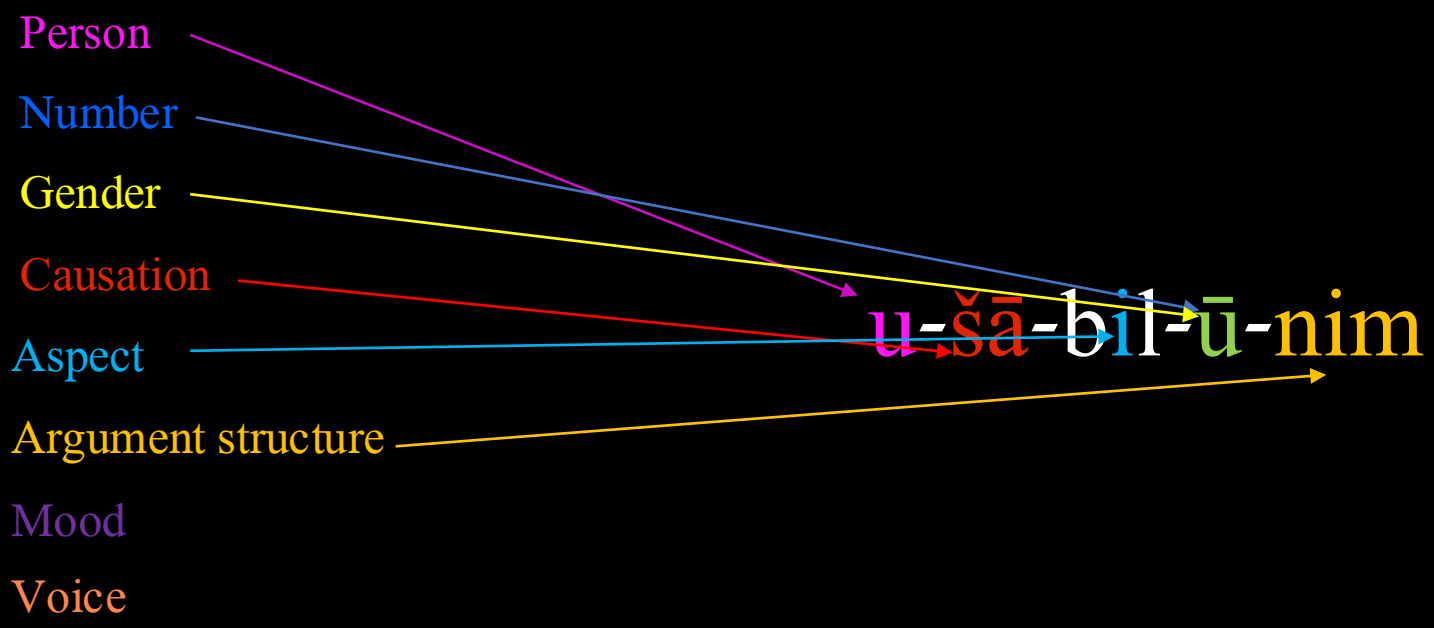
Summary

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.



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)

The patterns known to us:

G	No morphology	i-XYV$_R$Z	
D	Doubled middle radical	u-XaYYiZ	Causatives
Š	Š(a) prefixed to the root	u-ša-XYiZ	Causatives
N	N prefixed to the root	i-X-XaYV$_R$Z	Anticausatives
(t(an))	t(an) infixed between first two root/derivational consonants	i-X<ta>YV$_R$Z	Anticausatives

Our focus: the pattern!

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.

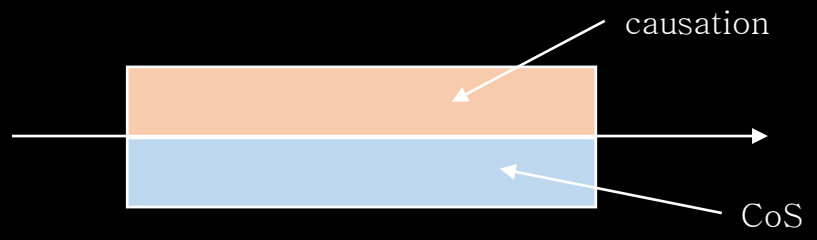
(3) Das Schiff versinkt.
(4) Die Piraten versenken das Schiff.

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

Defining semantics

Causative events

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

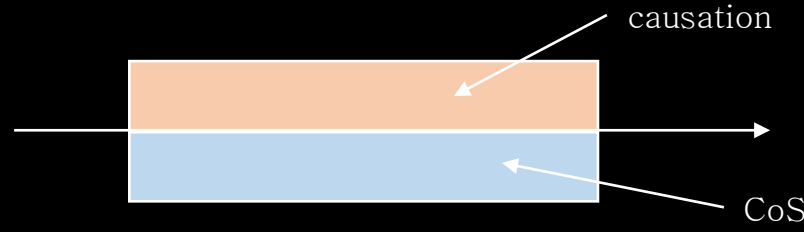


Example: "I broke the vase."
-> causation: I DO *break*
-> CoS: vase *break*.

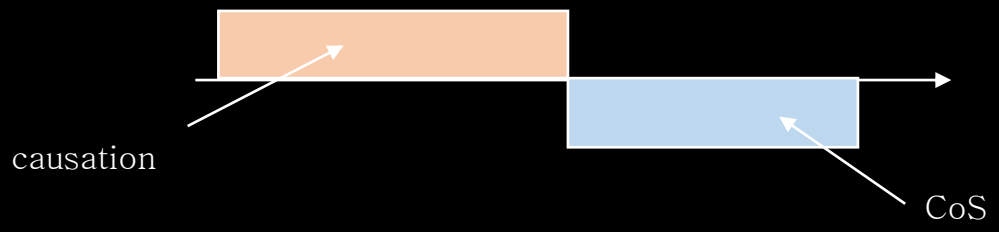
Cross-linguistic parallels: Martin (2015, 2020), Tsujimura (2003), Tatevosov & Ivanov (2009a,b), Travis (2010: p. 213), Jacobs (2011), Demirdache & Martin (2015)

Event encoding

DO [-telic]



CAUSE [+telic]



Defining 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.

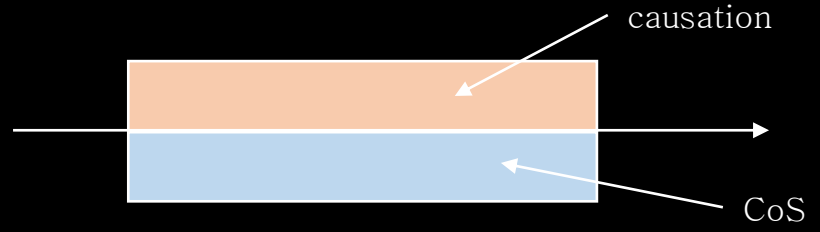
(5) She passed the exam in/*for one hour.
(6) He survived for/*in two days.

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

Selected bibliography: Vendler (1957), Dowty (1979), Verkuyl (1993), Krifka (1998)

Event encoding

DO [-telic]



CAUSE [+telic]

Defining semantics

Event decomposition: Rappaport Hovav & Levin (1998)

DO	u-XaYYiZ
	u-ša-XYiZ CAUSE

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

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

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.

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D causatives encode a causation event that overlaps with the CoS event.
Š causatives encode a causation event that precedes the CoS event.

D causatives do not entail that a causation event was completed.
Š causatives entail that a causation event was completed.

D causatives entail a durative or imperfective causation event.
Š causatives entail a punctual or perfective causation event.

D causatives encode a [-telic] feature and a DO predicate.
Š causatives encode a [+telic] feature and a CAUSE predicate.

When it comes to ROOT and pattern combination telicity features must overlap.
When it comes to ROOT and pattern combinations, primitive predicates must not overlap.

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(7) *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* *naphar* *māt-āt-i=šunu*
3.D.√wqr.‘rare’.PFV-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)

(8) *mê* *balaṭ* *napišt-i=šunu* *a-kla* *maštīt-u*
water.OBL living.CSTR life-OBL=their 1.SG-√klʾ. ‘confine’.PFV drink-NOM

u-ša-qir *ana* *pī=šun*
1.SG-CAUS-√wqr. ‘rare’.PFV 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)

Manual

(9) *ūm-ī=ya* ***tu-rrik-Ø***
day-PL.OBL=my 2-D.√ʔrk.‘long’.PFV-SG.M
“You (Sîn) have given me long life” (AnSt 8 50 *ii* 35)
“You (Sîn) have made my days long” (AnSt 8 50 *ii* 35)

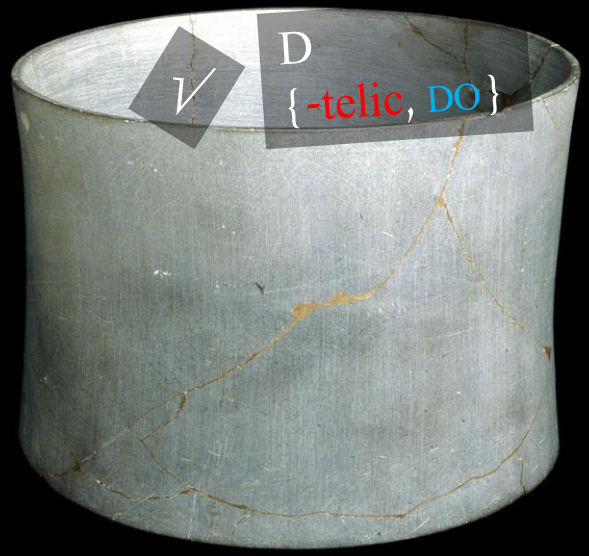
(10) *Bēl u Nabû il-ān-i kali=šunu ūm-ē ša šarr-i bēl-i=ya*
DN and DN god-PL.OBL all=their day-PL.OBL rel king-obl lord-obl=my
u-š-erik-ū
3-caus-√ʔrk.‘long’.PFV-SG.M
“*Bēl* and Nabû (and) all the gods have prolonged the days of my king, my lord” (ABL 437 rev. 11)
“*Bēl* and Nabû (and) all the gods have caused the days of my king to become long, my lord” (ABL 437 rev. 11)

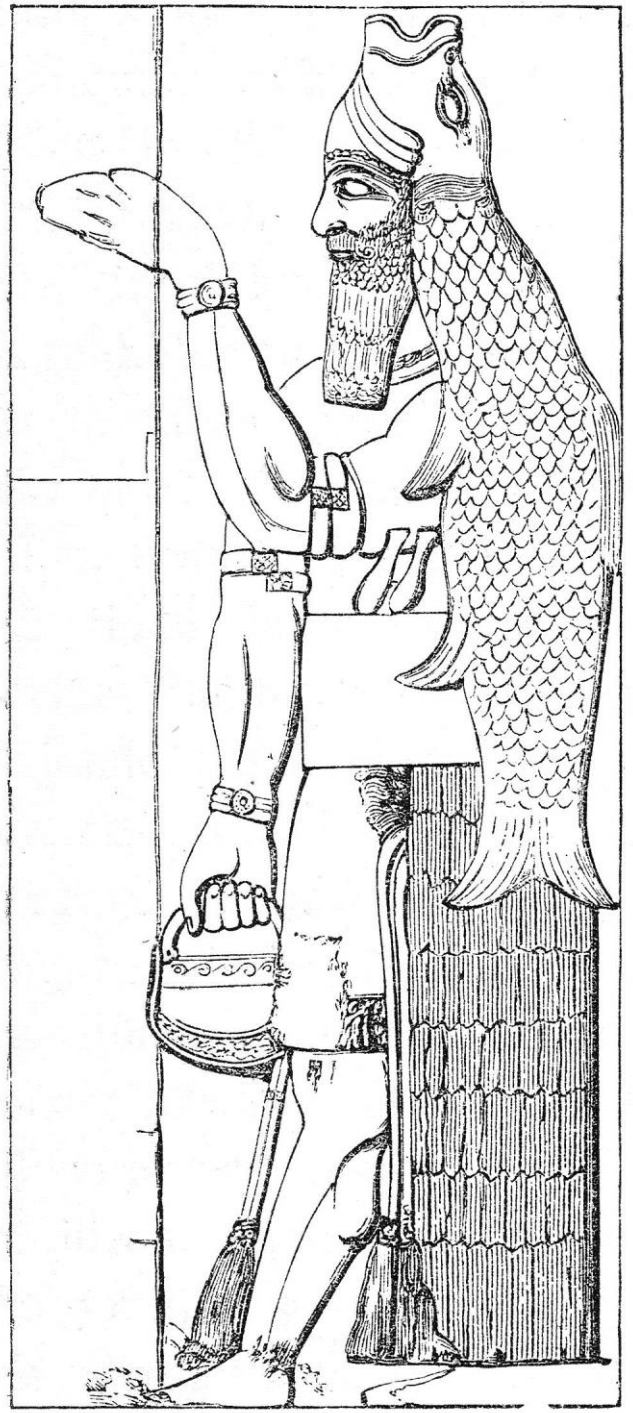
Manual

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

But what about the D stem having two functions?

Factitive!





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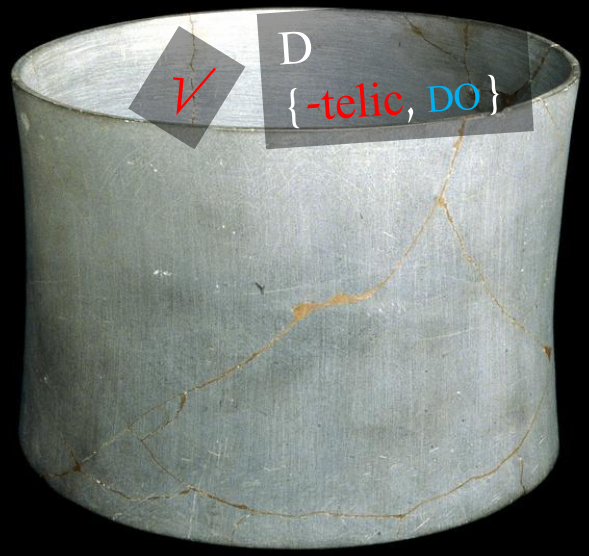

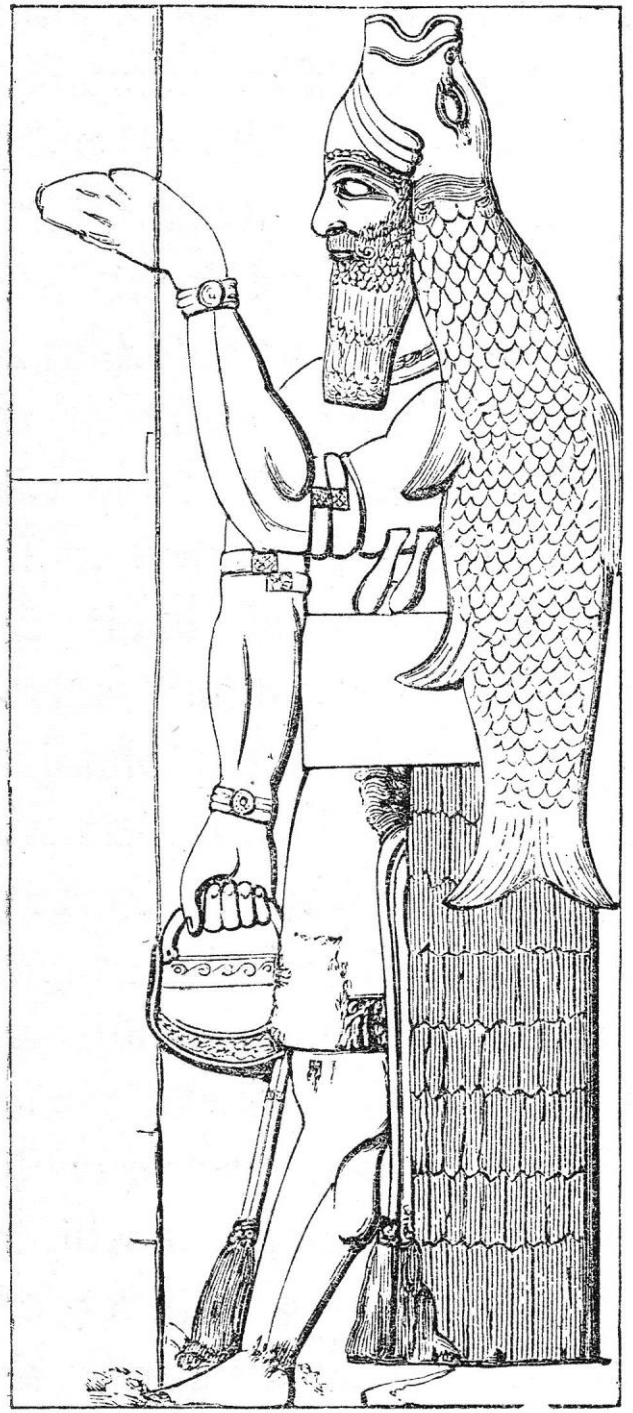

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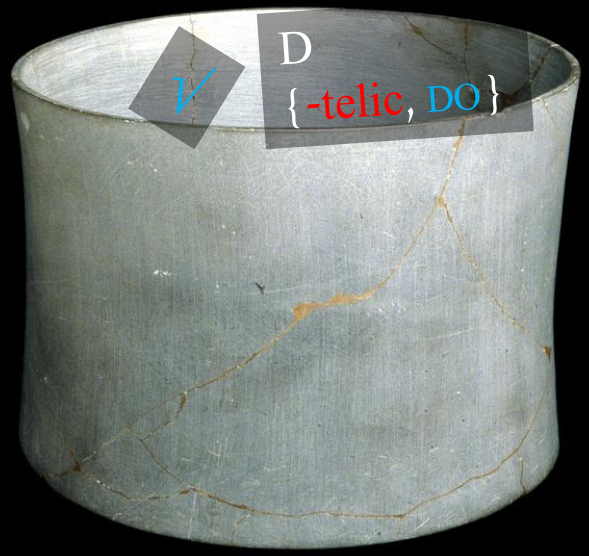
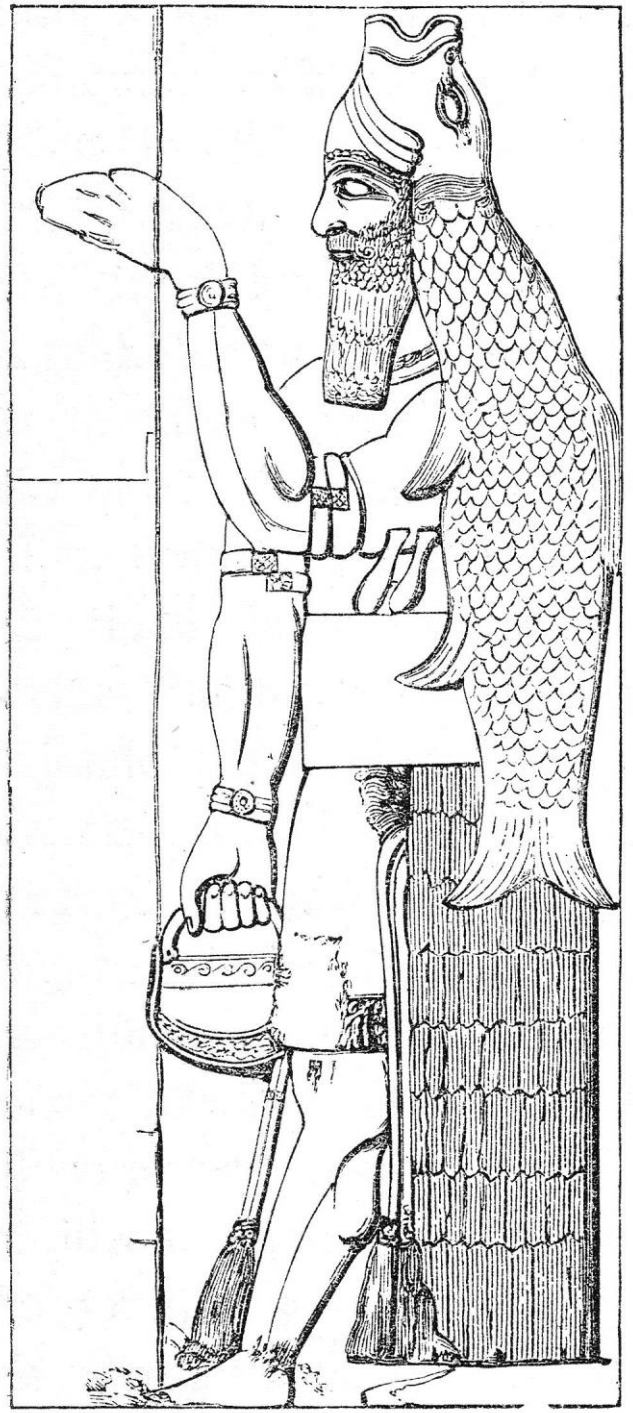
But what about the D stem having two functions?

Intensive!





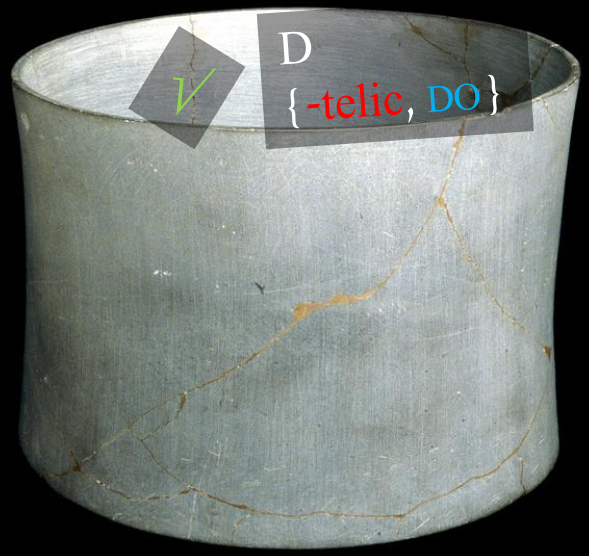
Manual

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

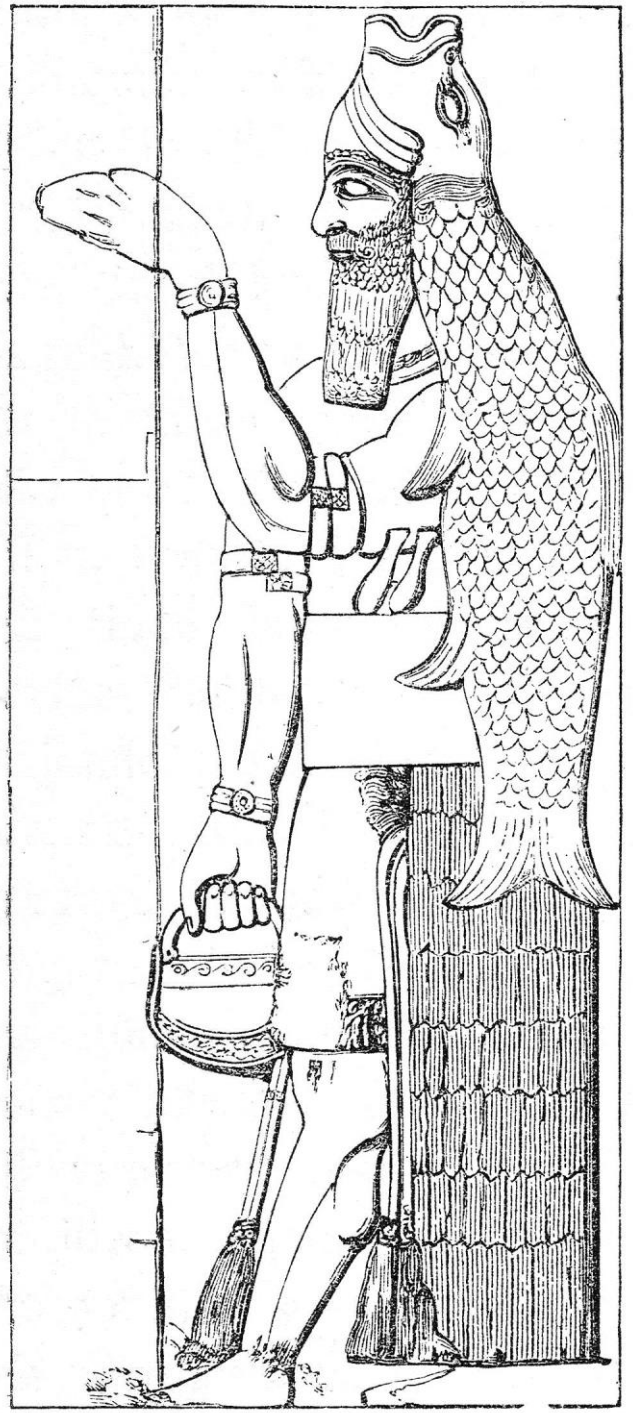
But what about the D stem having two functions?

Intensive!

[+telic]



Just as D and Š morphemes carry telicity and primitive predicate specification, so do ROOTS!



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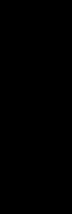
Root		Template pattern	Outcome
Telicity	**Primitive predicate**		
[±telic]		D	Factitive
[-telic]		D	Factitive
[+telic]		D	Intensive
[±telic]	DO	D	Intensive
[±telic]		Š	Causative
[-telic]		Š	/
[+telic]		Š	Causative
[±telic]	DO	Š	Causative

Manual



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

But how do we tell the properties of ROOTS?

Three tests!

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

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Selected bibliography: Levin & Rappaport Hovav (1995), Kamil (2025, forthcoming)

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.

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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 meš̆r-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.

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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 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)

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	ROOT type	Semantic denotation	Telicity	Causative
Unaccusatives	PC ROOTS	λP.λx.P(x)	[±telic]	D & Š
	Eventive unaccusative ROOTS	λe.EVENT(e) ∧ λx.λe.Patient(x,e)	[±telic]	D & Š
	Emission ROOTS A	λ.P ∧ λx.λe.Theme(x,e)	[-telic]	D & Š
	Psych ROOTS	λe.STATE(e) ∧ λx.λe.Experiencer(x,e)	[±telic]	D & Š
	Labile motion ROOTS	λe.DO?(EVENT)(e), iff ¬DO, ∧ λx.λe.Patient/Theme(x,e)	[±telic]	D & Š
	Durative ROOTS	λe.EVENT(e) ∧ λx.λe.Theme(x,e)	[-telic]	D & Š
Unergatives	Inchoative ROOTS	λe.EVENT(e) ∧ λx.λe.Patient(x,e)	[+telic]	Š
	Existence ROOTS	λe.EVENT(e) ∧ λx.λe.Theme(x,e)	[-telic]	Š
	Emission ROOTS B	λe.EVENT(e) ∧ λx.λe.Theme(x,e)	[+telic]	Š
	Unergative ROOTS	λe.DO(EVENT)(e)	[±telic]	Š
Transitives	Agent-transitive ROOTS	λe.DO(EVENT)(e) ∧ λx.λe.Patient(x,e)	[±telic]	Š
	Labile ROOTS	λe.DO?(EVENT)(e) ∧ λx.λe.Patient(x,e)	[±telic]	D & Š
	Experiencer-transitive ROOTS	λe.STATE(e) ∧ λx.λe.Experiencer(x,e)	[±telic]	D & Š

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

Conclusion

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 Assyriology:

- Improved and more precise translation. These causation differences can be represented in modern translations!
- Improved and simplified didactics: it is easier to learn and teach Akkadian when we have more clearly formulated rules

Bibliography

Image credits:

H.F. Lutz, University of California Publications in Semitic Philology 9/7 (1930), Rittig, 97.
https://cdli.earth/dl/photo/P282494.jpg
https://media.britishmuseum.org/media/Repository/Documents/2014_10/1_6/768348ed_0e31_4ea1_98ed_a3b7006d2115/mid_00032552_001.jpg
https://en.wikipedia.org/wiki/A%C5%A1ipu#/media/File:Illustrerad_Verldshistoria_band_I_Ill_032.jpg

Bibliography

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach* (Oxford Studies in Theoretical Linguistics 55). Oxford: Oxford University Press.

Demirdache, Hamida & Fabienne Martin. 2015. Agent control over non culminating events. In *Verb Classes and Aspect*, 185–217. John Benjamins Publishing Company.

Dowty, David R. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ* (Studies in Linguistics and Philosophy 7). Dordrecht: Springer. https://doi.org/10.1007/978-94-009-9473-7.

Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations. In Bernard Comrie & Maria Polinsky (eds.), *Causatives and Transitivity* (Studies in Language Companion Series 23), 87–121. Amsterdam & Philadelphia: John Benjamins. https://doi-org/10.1075/slcs.23.05has.

Inglese, Guglielmo. 2022. Cross-linguistic sources of anticausative markers. *Linguistic Typology at the Crossroads* 2(2). 127–186. https://doi.org/10.6092/issn.2785-0943/14224.

Jacobs, Peter William. 2011. *Control in Skwxwú7mesh*. University of British Columbia Vancouver PhD Thesis.

Kamil, Iris. 2025. *Intention, Aspect, and Argument Structure. The Morphosyntax and Morphosemantics of the Akkadian Verb*. University of Edinburgh PhD Thesis.

Krifka, Manfred. 1998. The Origins of Telicity. In Susan Rothstein (ed.), *Events and Grammar*, 197–236. Dordrecht: Kluwer Academic Publishers.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface* (Linguistic Inquiry Monographs 26). Cambridge, MA: MIT press.

Bibliography

Martin, Fabienne. 2015. Explaining the link between agentivity and non-culminating causation. *Semantics and Linguistic Theory* 25. 246–266. https://doi.org/10.3765/salt.v25i0.3060.

Martin, Fabienne. 2020. Aspectual Differences Between Agentive and Non-agentive Uses of Causative Predicates. In Elitzur Bar-Asher Siegal & Nora Boneh (eds.), *Perspectives on Causation* (Jerusalem Studies in Philosophy and History of Science), 257–294. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-34308-8_8.

Rappaport Hovav, Malka & Beth Levin. 1998. Building verb meanings. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: Lexical and compositional factors* (Lecture Notes 83), 97–134. Stanford: CSLI Publications.

Schäfer, Florian. 2009. The causative alternation. *Language and Linguistics Compass* 3(2). 641–681. https://doi.org/10.1111/j.1749-818X.2009.00127.x.

Tanza-Kamil, Iris. Forthcoming. The causal-noncausal alternation in Akkadian – Inherited and innovated strategies. In Guglielmo Inglese, Giulia Mazzola & Eugenio Goria (eds.), *Diachronic and typological perspectives on anticausativization* (Typological Studies in Language). Amsterdam & Philadelphia: John Benjamins.

Tatevosov, Sergei & Mikhail Ivanov. 2009a. Event structure of non-culminating accomplishments. In Lotte Hogeweg, Andrej L. Malchukov & Helen Hoop (eds.), *Cross-linguistic semantics of tense, aspect, and modality* (Linguistik Aktuell 148), 83–130. Amsterdam & Philadelphia: John Benjamins. https://doi.org/10.1075/la.148.05tat.

Tatevosov, Sergei & Mikhail Ivanov. 2009b. Causativization and aspectual composition. *MIT Working Papers in Linguistics* 58. 380–394.

Travis, Lisa deMena. 2010. *Inner Aspect* (Studies in Natural Language and Linguistic Theory 80). Dordrecht: Springer Netherlands. http://doi.org/10.1007/978-90-481-8550-4.

Bibliography

Tsujimura, Natsuko. 2003. Event cancellation and telicity. *Japanese/Korean Linguistics* 12. 388–399.

Vendler, Zeno. 1957. Verbs and Times. *The Philosophical Review*. JSTOR 66(2). 143–160. https://doi.org/10.2307/2182371.

Verkuyl, Henk J. 1993. *A Theory of Aspectuality: The Interaction between Temporal and Atemporal Structure* (Cambridge Studies in Linguistics 64). Cambridge: Cambridge University Press.

Zúñiga, Fernando & Seppo Kittilä. 2019. *Grammatical voice*. Cambridge: Cambridge University Press.

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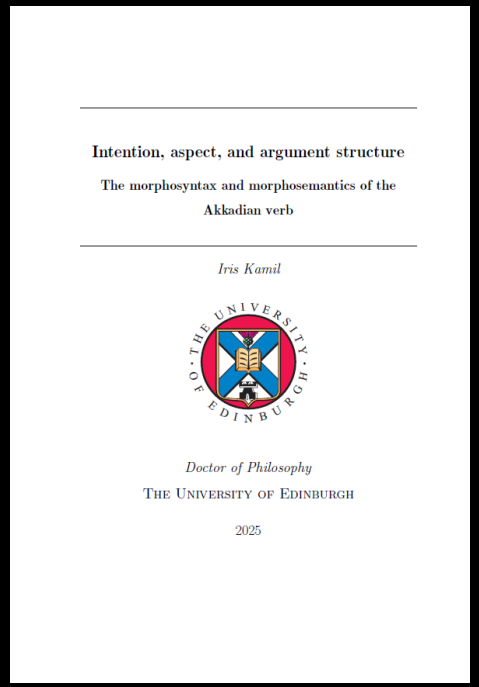

Intention, aspect, and argument structure

The morphosyntax and morphosemantics of the Akkadian verb

Iris Kamil

Doctor of Philosophy
The University of Edinburgh
2025

Thank you for your attention!