Multi-predicate Constructions in Nuuchahnulth

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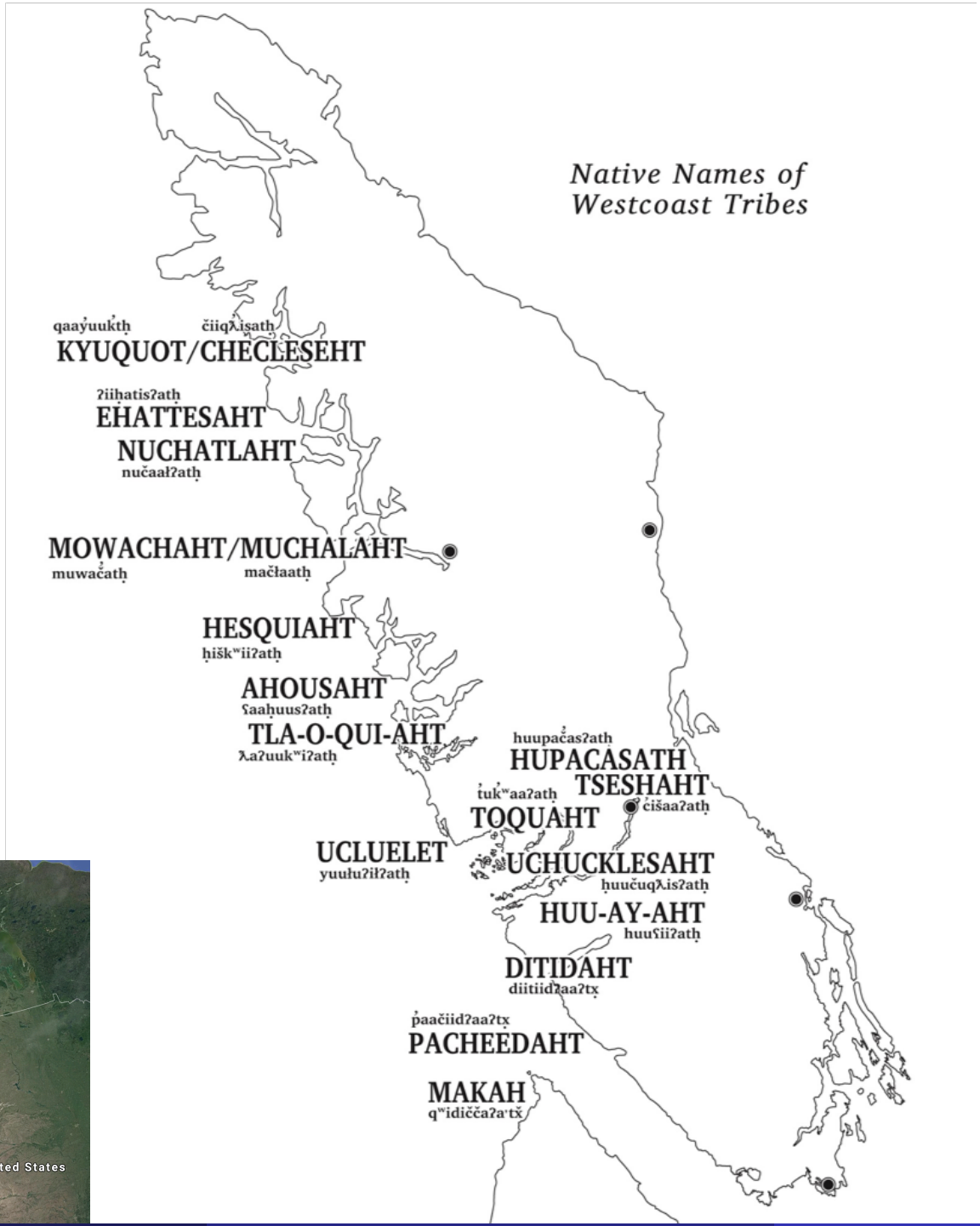
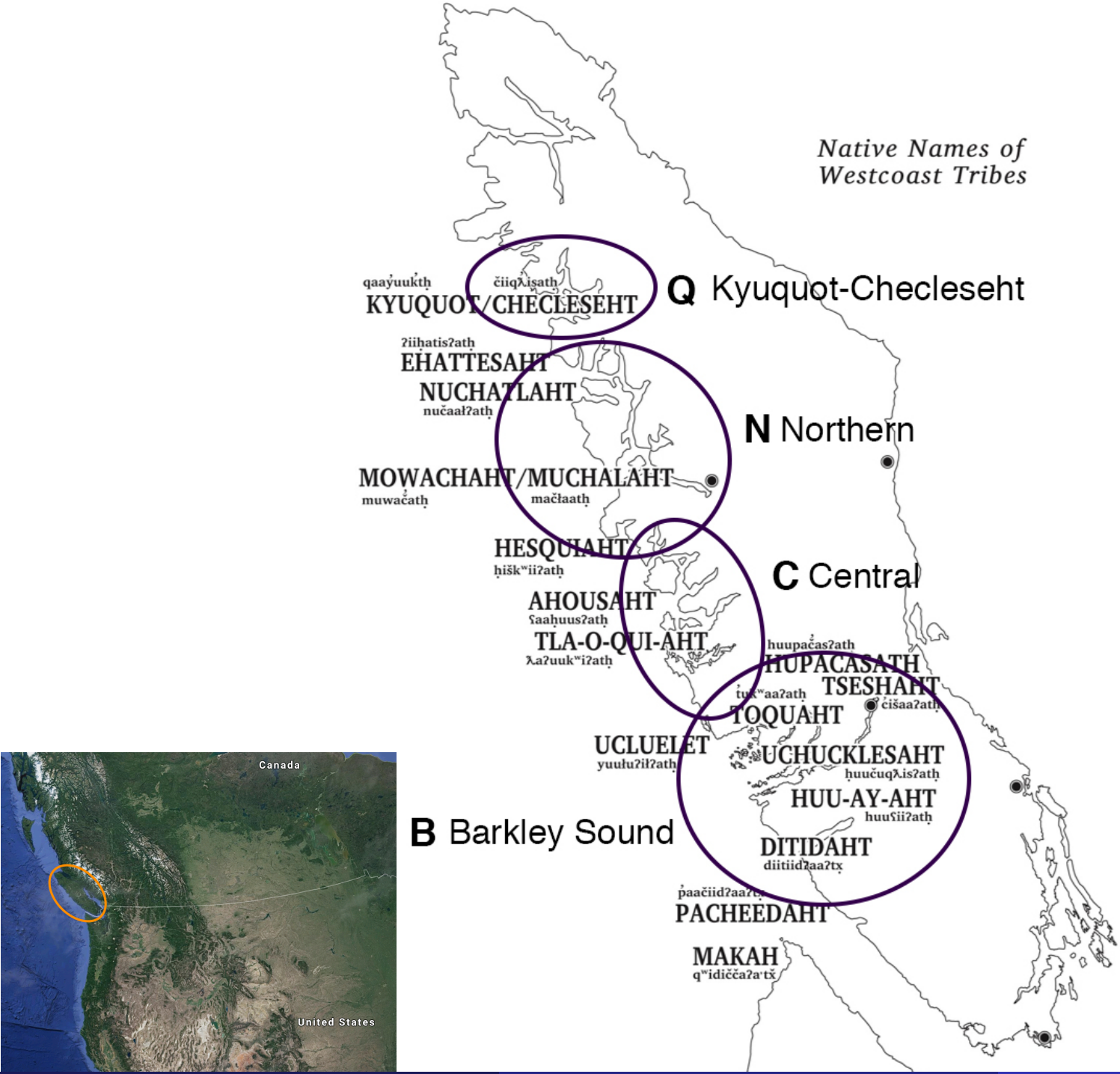
Introduction: Language Background

- Nuuchahnulth (ISO 639-3 nuk, formerly Nootka) is a Wakashan language from the South Wakashan branch.
- Native speakers are older, at least in part due to Canada's historic residential school policy.
- Dialect continuum spoken among thirteen tribes along the west coast of Vancouver Island
- Following Werle (2013), I break into four broad dialect groups.


Native Names of
Westcoast Tribes
qaay̓uuk̓ṭḥ
čiiqƛ̓iṣaṭḥ
KYUQUOT/CHECLESEHT
ʔiiḥatisʔaṭḥ
EHATTESAHT
NUCHATLAHT
nučaałʔaṭḥ
MOWACHAHT/MUCHALAHT
muwaċaṭḥ
mačɬaaṭḥ
HESQUIAHT
ḥišk̓ʷiiʔaṭḥ
AHOUSAHT
ʕaaḥuusʔaṭḥ
TLA-O-QUI-AHT
ƛaʔuuk̓ʷiʔaṭḥ
huupačasʔath
HUPACASATH
TSESHAHT
t̓uk̓ʷaaʔaṭḥ
č̓išaaʔaṭḥ
TOQUAHT
UCLUELET
yuułuʔiɬʔaṭḥ
UCHUCKLESAHT
ḥuučuqƛ̓isʔaṭḥ
HUU-AY-AHT
huuʕiiʔaṭḥ
DITIDAHT
diitiid̓aaʔtx̌
p̓aačiidʔaaʔtx̌
PACHEEDAHT
MAKAH
q̓ʷidiččaʔaˑtx̌
Canada
United States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B Barkley Sound
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PACHEEDAHT
MAKAH
q̓ʷidiččaʔaˑtx̌
Canada
United States

Introduction: Linguistic Background

- Linguistic work dates to Sapir (1911)
- Largest published texts in the Barkley Sound dialect (Sapir and Swadesh, 1939, 1955)
- Recent syntactic work focused on the suffix ordering:
  - Waldie (2004): Suffix verbs (HPSG + linearization)
  - Wojdak (2005): Suffix verbs (Minimalism)
  - Woo (2007): Adposition-like suffixes and argument-marking
- Little analysis of the boundaries of clauses, clause/verb adjoining or coordination (Jacobsen, 1993)

Methodology

- Field work with speakers: describing images, question-answering, English translation, rephrasing, forced choice, linguist-constructed examples
- Corpus study: Nootka Texts, community-produced texts, texts from other linguists, texts I collected from consultants
- Analysis was done in an implemented DELPH-IN grammar, built using the HPSG formalism

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Clause: Terms and definitions

Semantics

- **Relation:** An atomic unit that represents semantic meaning, e.g. LIVE, YELLOW, SUBMARINE
- **Argument:** An element that is involved in a relation. Minimally they come in the flavors of an *event* or an *individual*, e.g., SEE(e, x, y)

Syntax

- **Predicate:** The unit in the syntax which provides the main semantic relation *and event* of a clause, whose semantic arguments are filled through syntactic relations like subject and object
- **Participant:** A unit in the syntax which serves as a subject or object in relation to a predicate

Clause: Terms and definitions

English:

(1) [The dog]$_{\text{participant}}$ [barks]$_{\text{predicate}}$

Clause: Terms and definitions

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$\textsc{bark}(e, x)$, $\textsc{dog}(x)$

Clause: Terms and definitions

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(1) [The dog]$_{\text{participant}}$ [barks]$_{\text{predicate}}$

BARK(e, x), DOG(x)

(2) [The grass]$_{\text{participant}}$ [appears]$_{\text{predicate}}$ [green]$_{\text{participant}}$

Clause: Terms and definitions

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BARK(e, x), DOG(x)

(2) [The grass]$_{\text{participant}}$ [appears]$_{\text{predicate}}$ [green]$_{\text{participant}}$

APPEAR(e, x, y), GRASS(x), GREEN(y)

Clause: Terms and definitions

Nuuchahnulth:

(3) [ḥaacsiičiƛ]$_{pred}$ʔiš [hałmiiḥa quuʔas]$_{part}$

[ḥaacsa-iˑčiƛ]$_{pred}$=ʔiˑš [hałmiiḥa quuʔas]$_{part}$

[see.CV-IN]$_{pred}$=STRG.3SG [drowning person]$_{part}$

Verb

`He sees a drowning person.' (**N**, Fidelia Haiyupis)

Clause: Terms and definitions

Nuuchahnulth:

(3) [ḥaacsiičiƛ̓]$_{pred}$ʔiš [hałmiiḥa quuʔas]$_{part}$

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Verb

(4) [qʷaćał]$_{pred}$ʔiš [ḥaakʷaaƛ̓]$_{part}$ʔi

[qʷaćał]$_{pred}$=ʔiˑš [ḥaakʷaaƛ̓]$_{part}$=ʔiˑ

[beautiful]$_{pred}$=STRG.3 [young.girl]$_{part}$=ART

`The young girl is beautiful.' (**C**, *tupaat* Julia Lucas)

Adjective

Clause: Terms and definitions

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Adjective

(5) [pisatuwił]$_{pred}$ma ʔaanaḥi

[pisatuwił]$_{pred}$=maˑ ʔaanaḥi

[gym]$_{pred}$=REAL.3 only

`It's only a gym.' (**B**, Marjorie Touchie)

Noun

Clause: Terms and definitions

(6) [ʔuḥ]ʔiiš [ʕiḥak]$_{\text{pred}}$ [kamatquk]$_{\text{part}}$ʔi

[ʔuḥ]=ʔiˑš [ʕiḥak]$_{\text{pred}}$ [kamatq-uk]$_{\text{part}}$=ʔiˑ

[be]=STRG.3 [cry.DR]$_{\text{pred}}$ [run-DR]$_{\text{part}}$=ART

`The running one is crying.' (C, *tupaat* Julia Lucas)

Verb

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(6) [ʔuḥ]ʔiiš [ʕiḥak]$_{pred}$ [kamatquk]$_{part}$ʔi

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Verb

(7) [wiƛ̓]iičʔaał [ƛ̓iixc̓us]$_{pred}$ [ƛaƛuu]$_{part}$ʔi

[wik]=!iˑč=ʔaał [ƛ̓iixc̓us]$_{pred}$ [ƛaƛuu]=$_{part}$ʔiˑ

[NEG]=CMMD.2PL=HABIT [laugh.at.DR]$_{pred}$ [other.PL]$_{part}$=ART

`Don't laugh at others.' (C, *tupaat* Julia Lucas)

Adjective

Clause: Terms and definitions

(6) [ʔuḥ]ʔiiš [ʕiḥak]$_{pred}$ [kamatquk]$_{part}$ʔi

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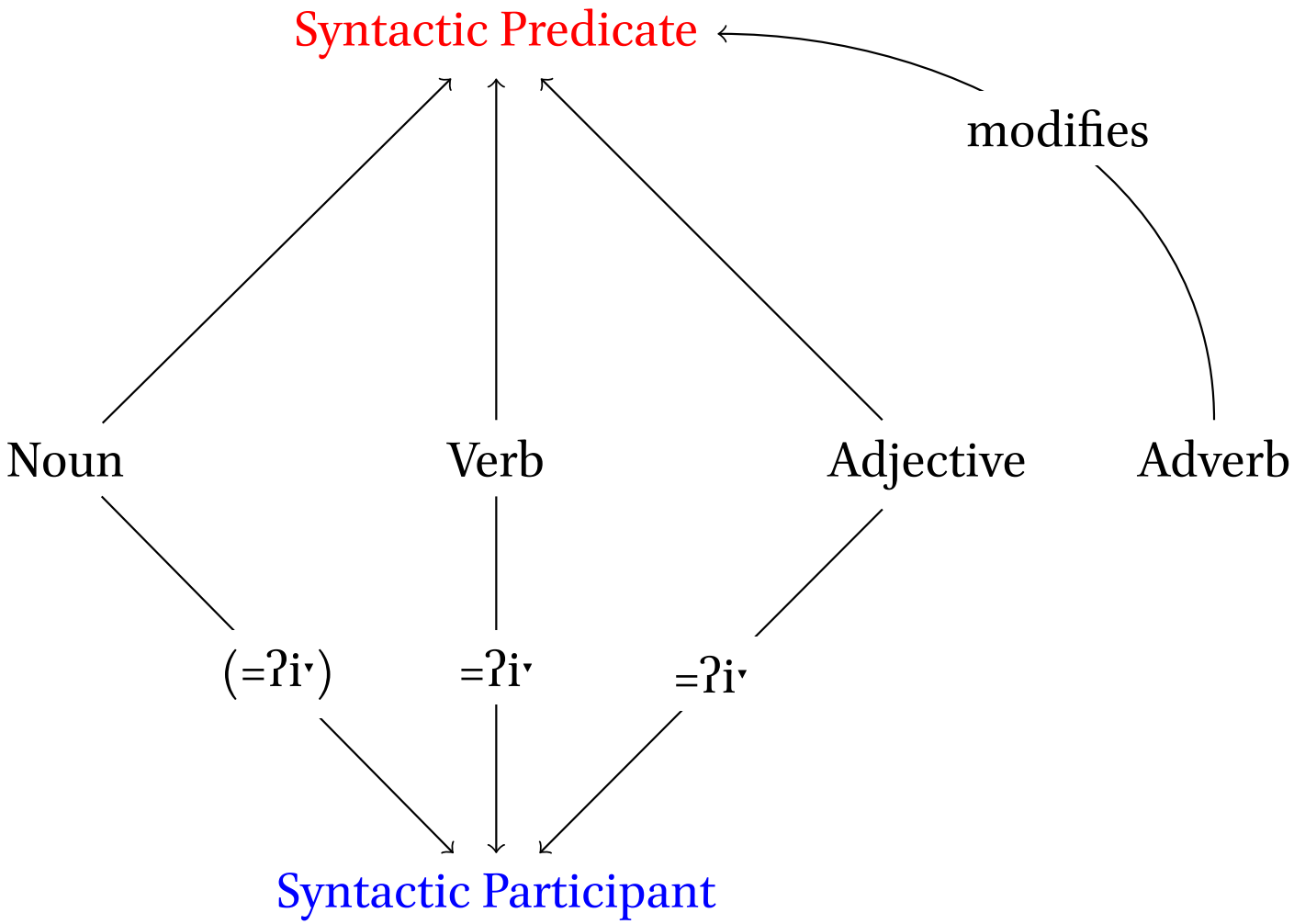

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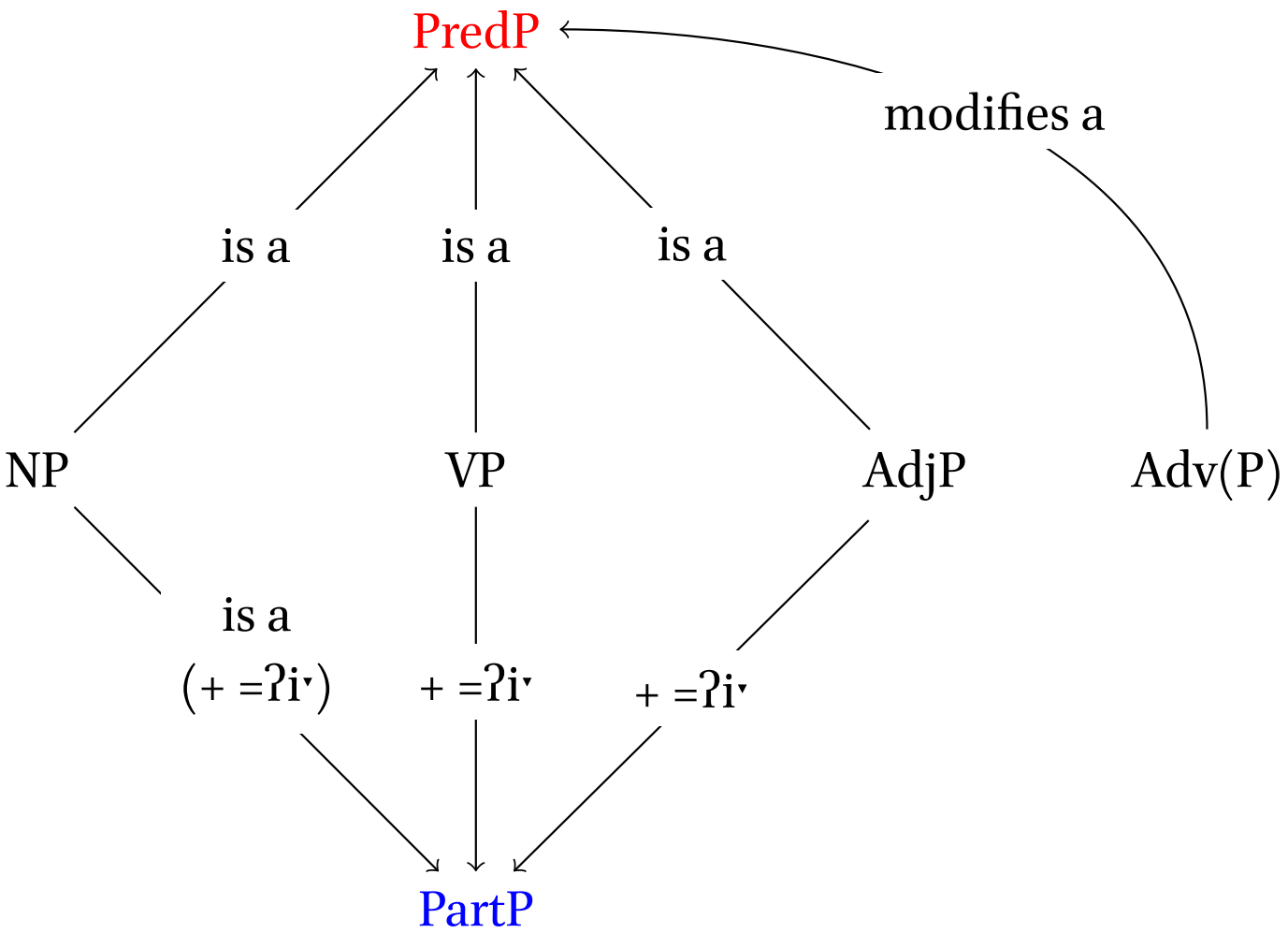

Clause: Second position enclitics

Each clause a second position enclitic complex which falls on the first word, including on preceding modifiers (adverbs) and coordinators.

(8) ẏuuqʷaaʔaqƛs ṅaačuk.

ẏuuqʷaa=!aqƛ=s ṅaačuk
also=FUT=1SG look.for.DR

`I will also look for it.' (C, *tupaat* Julia Lucas)

(9) ʔaḥʔaaʔaƛna huʔacačiƛ ʔaḥkuu.

ʔaḥʔaaʔaƛ=naˑ huʔa-ca-čiƛ ʔaḥkuu
and.then=STRG.1PL back-go-PF D1

`And then we came back here.' (C, *tupaat* Julia Lucas)

Clause: Second position enclitics

Table 1: Template for clausal enclitics

morph	=ʔaaqƛ̓	=!ap	=!aƛ̓	=!at	=uk =ʔak	=(m)it	=ʔiˑš =maˑ =ḥaˑ =∅ ...	=ʔaała	=ʔał	=ƛ̓aˑ
meaning	FUT	CAUS	NOW	PASS	POSS	PST	subject-mood portmanteaus	HABIT	PL	also

Clause: Second position suffixes

- Transitive verbal suffixes appear in second position with respect to their object.

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(10) nuuknaaks.

nuuk-naʷk=s
song-have=STRG.1SG

`I have a song/songs.' (**N**, *yuułnaak* Simon Lucas)

(11) ʔaƛanaks nuuk.

ʔaƛa-naʷk=s nuuk
two-have=STRG.1SG song

`I have two songs.' (**N**, *yuułnaak* Simon Lucas)

(12) ʔunaaks ċiiqʲyak.

ʔu-naʷk=s ċiiq-ʲyak
x-have=STRG.1SG chant-for

`I have a chant.' (**N**, *yuułnaak* Simon Lucas)

Clause: Second position suffixes

- Some of these suffixes take predicate complements

(13) sukʷiƛmaḥsaniš.

su-kʷiƛ-maḥsa=niˑš

hold-PF-want.to=STRG.1PL

`We want to take (her).' (**N**, *yuułnaak* Simon Lucas)

(14) ʔaanimaḥsas waa ʔin ...

ʔaani-maḥsa=s	waa	ʔin	...
only-want.to=REAL.1SG	say	COMP	...

`I only want to say that ...' (**N**, *yuułnaak* Simon Lucas)

HPSG Analysis

- HPSG is a lexicalist framework that represents grammatical rules through unification of constraints
- There is no movement: ordering accounted for by altering constraint properties
- Analysis was implemented computationally

HPSG Analysis: Clause

Predicate vs Participant:

- A HEAD feature PRD: + | –
- Keeps track of semantic eventiveness
- Nouns, adjectives, verbs are PRD +

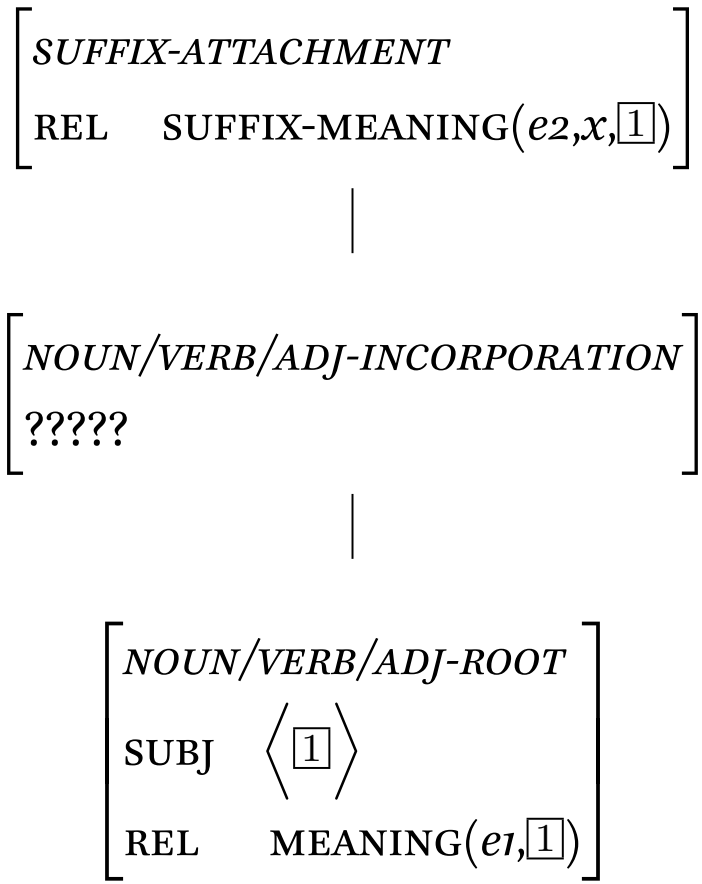
Clausal enclitics:

- Head of the sentence
- Select for a predicate complement and inherit its subject and complements
- Add subject information and other inflectional material

HPSG Analysis: Suffix verbs

I treat suffix verbs as incorporation which occurs in two steps:

1. A rule that prepares a root for incorporation
2. A rule that attaches the contentful suffix



HPSG Implementation: Parsing Results

- Hand-crafted set of "basic" clausal phenomena
- Coverage: 84.4%
- Overgeneration: 1.3%

	Total	Parsed	Unparsed	Avg # of parses
Grammatical sentences	167	141	26	1.12
Ungrammatical sentences	79	1	78	2

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Serial Verb Constructions: Terms and Definitions

- Generally difficult to define what counts as a serial verb construction (SVC) cross-linguistically (Aikhenvald and Dixon, 2006)
- Easier to make a definition applicable to a specific language

Serial Verb Constructions: Terms and Definitions

- Generally difficult to define what counts as a serial verb construction (SVC) cross-linguistically (Aikhenvald and Dixon, 2006)
- Easier to make a definition applicable to a specific language
- My functional definition:

(15) Any clause containing two or more verbs without an overt coordinator and where the verbs share the semantic interpretation of the second position clausal inflection is a serial verb construction.

- A clause is bounded by the scope of the second position enclitics

Serial Verb Constructions: Type I

Type I: Simultaneity

- Actions must occur at the same time
- Often but not always include a verb of motion
- No ordering restrictions

(16) ʔuucuʔukẃiɬasaḥ yaacuk ċuumaʕas.

ʔuucuʔuk-ẃiɬas=(m)aˑḥ yaacuk ċuumaʕas
go.to.DR-going.to=REAL.1SG walk.DR Port.Alberni

`I'm going to walk to Port Alberni.' (**B**, Bob Mundy)

(17) ʔanasɬintwaʔš ɬawiɬšƛ.

ʔana-siɬa=int=waˑʔš ɬawiɬ-šiƛ
only-do=PST=HRSY.3 lie.down-PF

`He just laid down.' (**Q**, Sophie Billy)

Serial Verb Constructions: Type I

- A verb can be separated from its object by the intervening VP.

(16) ʔuucuʔukẃiɬasaḥ yaacuk ċuumaʕas.

ʔuucuʔuk-ẃiɬas=(m)aʷḥ yaacuk ċuumaʕas

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`I'm going to walk to Port Alberni.' (**B**, Bob Mundy)

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(16) ʔuucuʔukẃiɬasaḥ yaacuk ćuumaʕas.

ʔuucuʔuk-ẃiɬas=(m)aʷḥ yaacuk ćuumaʕas

go.to.DR-going.to=REAL.1SG walk.DR Port.Alberni

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- Speakers seemed to prefer verbs to match in perfectiveness, but elicitation results were mixed
- I turned to corpus study

Serial Verb Constructions: Type I

Table 2: Type I SVCs and Perfectivity

		Word count	Type 1 SVCs	Perfectivity mismatches
1910–1914	Nootka Texts	2220	22	1
2010–2019	Barkley speakers	942	10	3
	Central speakers	2456	26	9.5
	Northern speakers	1621	12	3.5
	Kyuquot-Checleseht speakers	6928	36	11

Serial Verb Constructions: Type II

Type II: Location + Action

- Imperfective location must occur first
- Same object separation permissible as in Type I
- No perfectivity matching

(17) mačiiɬʔaƛniš mamuuk.

mačiiɬ=!aƛ=niˑš	mamuuk
inside.DR=NOW=REAL.1PL	work.DR

`I am working inside.' (C, *tupaat* Julia Lucas)

(18) *mamuuḵaƛniš mačiiɬ.

mamuuk=!aƛ=niˑš	mačiiɬ
work.DR-NOW=REAL.1PL	inside.DR

Intended: `I am working inside.' (C, *tupaat* Julia Lucas)

Serial Verb Constructions: Type III

Type III: Adposition-like Verbs + Action

- Woo (2007) defines a set of verbs with adposition-like meanings which adjoin to a main verb in a clause
- Same object separation allowed
- No ordering restriction
- No perfectivity matching

(19) ʔuuʔatupšiƛwaʔiš mamuuk Friendship Center.

ʔu-L.ʔatup-šiƛ=waˑʔiš mamuuk Friendship Center
x-do.for-PF=HRSY.3 work.DR Friendship Center

`I hear she started to work for the Friendship Center.' (C, *tupaat* Julia Lucas)

Serial Verb Constructions: Type IV

Type IV: Sequential or Separable Action

- Can be interpreted as sequential “and then”
- No perfectivity matching

(20) sukʷiʔi ƛ̓aššaap

su-kʷiƛ̕=!iˑ ƛ̓aš-saˑp
hold-PF=CMMD.2SG put.away-PF.CAUS
`Take it and put it away.' (C, *tupaat* Julia Lucas)

(21) # ƛ̓aššaaƛ̓i sukʷiƛ̕

ƛ̓aš-saˑp=!iˑ su-kʷiƛ̕
put.away-PF.CAUS=CMMD.2SG hold-PF
`Put it away, then take it.' (C, *tupaat* Julia Lucas)

Serial Verb Constructions: Type IV

- Object separation is ungrammatical

(1) cassaaps ʕiniiƛ č̓axʷaciis.

cas-saʼp=s ʕiniiƛ č̓axʷac-iis
chase-PF.CAUS=STRG.1SG dog bucket-hold.DR

`I chased the dog, (I) carrying the bucket.' (C, *tupaat* Julia Lucas)

(2) *cassaaps č̓axʷaciis ʕiniiƛ.

cas-saʼp=s č̓axʷac-iis ʕiniiƛ
chase-PF.CAUS=STRG.1SG bucket-hold.DR dog

Intended: `Carrying the bucket, I chased the dog.' (C, *tupaat* Julia Lucas)

Serial Verb Constructions: Type Overview

Table 3: Summary of SVC Types

	Description	Perfectivity matching	Verb-object splitting	Ordering restriction
Type I	Simultaneous	(✓)	✓	None
Type II	Location	✗	✓	Location first
Type III	Adposition-like	✗	✓	None
Type IV	Separable / Sequential	✗	✗	Temporal ordering

Serial Verb Constructions: Valence Operations

Some of the clausal enclitics alter valence. What happens under serialization?

morph	=ʔaaqƛ̓	=!ap	=!aƛ̓	=!at	=uk =ʔak	=(m)it	=ʔiˑš =maˑ =ḥaˑ =∅ ...	=ʔaała	=ʔał	=ƛ̓aˑ
meaning	FUT	CAUS	NOW	PASS	POSS	PST	subject-mood portmanteaus	HABIT	PL	also

Serial Verb Constructions: Valence Operations

These enclitics scope narrowly over the individual coordinated verb, while subject-mood scopes over the whole clause.

(22) ʔaḥʔaaʔaƛ̓na ƛ̓ičiƛ̓ ʔucaap ḥaa hupałʔi.

ʔaḥʔaaʔaƛ̓=naˑ	ƛ̓i-čiƛ̓	ʔu-ca=!ap	ḥaa	hupał=ʔiˑ
and.then=NEUT.1PL	shoot-PF	X-go=CAUS	D3	sun.or.moon=ART

`Then we shoot them toward the moon.' (**C**, *tupaat* Julia Lucas)

(23) čimqstuƛ̓itaḥ nanaʔiičiʔat.

čimqstuƛ̓=(m)it=(m)aˑḥ	nanaʔiičiƛ̓=!at
be.happy.PF=PST=REAL.1SG	understand.PF=PASS

`I was happy being understood.' (**B**, Bob Mundy)

HPSG Implemenation: SVCs

Location verbs, adpositive verbs, and other verbs are distinguished from each other.
I track this through a new HEAD property, HTYPE.

$$\left[\text{HEAD.HTYPE} \quad \text{location} \mid \text{adpositive} \mid \text{normal}\right]$$

Every SVC will specify which type of verbs are allowed.

HPSG Implemenation: SVCs

Valence changing needs to occur in two places:

1. With the rest of the enclitics on the first word in the clause
2. On the first word in the VP coordinated in SVCs

I have two versions then of these enclitics which distinguish clause-heading from coordinator.

$$\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{AUX} & + \\ \text{PRD} & + \\ \text{FORM} & \text{finite} \mid \text{nonfinite} \end{bmatrix} \end{bmatrix}$$

HPSG Implemenation: SVCs

- I model serial verbs as coordination, either with the semantics of MEANWHILE or AND
- Coordination strategy is developed off of Drellishak and Bender (2005)
- A supertype defines the leftmost verb as containing the enclitic complex, and identifies its subject, tense, and mood with later coordinated verbs.
- Subtypes specify SVC-specfic restrictions

HPSG Implemenation: SVCs

Specific rules for SVC Type II (locations)

(25)
$$\begin{bmatrix} \textit{SVC2-BOTTOM-COORD-RULE} & \\ \text{SYNSEM.LOCAL} & \begin{bmatrix} \text{COORD-REL.PRED} & \text{MEANWHILE} \\ \text{COORD-STRAT} & \text{“2”} \end{bmatrix} \end{bmatrix}$$

(26)
$$\begin{bmatrix} \textit{SVC2-TOP-COORD-RULE} & \\ \text{SYNSEM.LOCAL} & \begin{bmatrix} \text{COORD-STRAT} & \text{“2”} \\ \text{CAT.HEAD.HTYPE} & \text{location} \end{bmatrix} \end{bmatrix}$$

HPSG Implementation: Parsing Results

- Examples all came from speakers, either in elicitation sessions or in text
- Coverage: 11.3%
- Overgeneration: 16% (4%)

Table 4:

	Total	Parsed	Unparsed	Avg # of parses
Grammatical sentences	284	32	252	5.78
Ungrammatical sentences	25	4 (1)	21 (24)	2.75

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The Linker: Morphological properties

- The morpheme -(*q*)*ḥ*
- Translated as 'meanwhile' in Sapir and Swadesh (1939)
- Wide variety of attachment properties

The Linker: Morphological properties

- Attaches to contentful parts of speech
  - **Verb:** *ciqinḱaƛna ƛiḥaa**qḥ***
    'We talked while driving' (**C**, *tupaat* Julia Lucas)
  - **Adjective:** *ťikʷaamitwaʔiš čims ḥaaʔak**qḥ***
    'The bear was digging and strong' (**C**, *tupaat* Julia Lucas)
  - **Noun:** *ɬuucma**qḥ**itqačaʔaaɬ taakšiƛ ṕiišmita*
    'There was a woman who kept gossiping' (**C**, *tupaat* Julia Lucas)
  - **Adverb:** *ẏuuqʷaa**qḥ**s ʕasqii ʔaanaḥi wik hinʔałšiƛ*
    'I'm also bald but I don't know it.' (**C**, *tupaat* Julia Lucas)
- But not functional parts of speech
  - **Complementizer:** **ʔuuščukʔisit ʔani**qḥ** ʔunaḥʔisitqa*
    Intended: 'It was a little difficult (to do) because it's small.' (**B**, Bob Mundy)
- The linker may either be initial (with the second position enclitics) or later.

Interpretive effects of linker attachment

- Non-verbal elements with a linker attached *must* have a subject interpretation.

(27) ʔuuwaʔaƛ̓ ʔuuš.

ʔu-L.waƛ̓=!aƛ̓ ʔuuš

x-find=NOW some

`He/she found something.' (*? Someone found it) (C, *tupaat* Julia Lucas)

(28) ʔuuwaʔaƛ̓ ʔuušqḥ.

ʔu-L.waƛ̓=!aƛ̓ ʔuuš-qḥ

x-find=NOW some-LINK

`Someone found it.' (*He/she found something) (C, *tupaat* Julia Lucas)

Predicates and the linker

All of these things can be explained by two properties:

1. The linker attaches to predicates
2. Elements coordinated by the linker share a subject (second position enclitics)

When the linker attaches to a non-verbal predicate as in (28), it is interpreted as a predicate (i.e., with a subject) which is shared with the other predicate (typically verb) in the clause.

Predicates and the linker

- *ʔuuwaƛ*: FIND(e, SUBJ:x, OBJ:y)
- *ʔuuš*: SOME(e, SUBJ:x)

Predicates and the linker

- *ʔuuwaƛ*: FIND(e, SUBJ:x, OBJ:y)
- *ʔuuš*: SOME(e, SUBJ:x)

(27)

[ʔuuwaʔaƛ]$_{\text{pred}}$	[ʔuuš]$_{\text{part}}$
find	some

FIND($e1, x, y$) $\wedge$ (**SUBJ**: $\exists x$ SOME($e2, x$) $\vee$ **OBJ**: $\exists y$ SOME($e2, y$))

Predicates and the linker

- *ʔuuwaƛ*: FIND(e, SUBJ:x, OBJ:y)
- *ʔuuš*: SOME(e, SUBJ:x)

(27)

[ʔuuwaʔaƛ]$_{\text{pred}}$	[ʔuuš]$_{\text{part}}$
find	some

$\text{FIND}(e1, x, y) \wedge (\textbf{SUBJ:}\ \exists x\ \text{SOME}(e2, x) \vee \textbf{OBJ:}\ \exists y\ \text{SOME}(e2, y))$

(28)

[ʔuuwaʔaƛ]$_{\text{pred}}$	[ʔuušqḥ]$_{\text{pred}}$
find	some-LINK

$\text{FIND}(e1, x, y) \wedge \text{SOME}(e2, x)$

Predicates and second position

- The linker can also attach to adverbs (non-predicates)
- What's it linking?

Predicates and second position

- The linker can also attach to adverbs (non-predicates)
- What's it linking?
- Two "maximal predicate phrases" (predicate + complements + modifiers)

(29) [ʔeʔimqḥʔaƛquuweʔin hitaḥtačiƛ]$_{pred1}$ [sukʷiʔaƛ puuʔakʔiʔał]$_{pred2}$

[ʔeʔim-(q)ḥ=!aƛ=quu=weˑʔin hitaḥta-čiƛ]$_{pred1}$ [su-kʷiƛ=!aƛ

[first-LINK=NOW=PSSB.3=HRSY.3 go.out.to.sea-PF]$_{pred1}$ [hold-PF=NOW

puu=ʔak=ʔiˑ=ʔał]$_{pred2}$

gun=POSS=ART=PL]$_{pred2}$

`As soon as they left the land, they would take their guns.' (**B**, Sapir and Swadesh 1955, 395)

The linker: Similarities with SVCs

- Like SVCs, a linked predicate can separate verb and object

(30) hiłqḥsʔaał načaał ƛ̓iisuwił.

hił-(q)ḥ=s=ʔaał	načaał	ƛ̓iisuwił
be.at-LINK=STRG.1SG=HABIT	read	school

`I read at school.' (C, *tupaat* Julia Lucas)

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(30) hiłqḥsʔaał načaał ƛ̓iisuwił.

hił-(q)ḥ=s=ʔaał načaał ƛ̓iisuwił

be.at-LINK=STRG.1SG=HABIT read school

`I read at school.' (C, *tupaat* Julia Lucas)

- Like SVCs, passive and causative scope narrowly over the local predicate in linker constructions

(31) [ƛ̓awiičiʔataḥ ƫaṅeʔis]$_{\text{PredP\_1}}$ [hiłḥ maḥƫiiʔakqas]$_{\text{PredP\_2}}$.

[ƛ̓aw-iˑčiƛ̓=!at=(m)aˑḥ ƫaṅa=ʔis]$_{\text{PredP\_1}}$ [hił-(q)ḥ maḥƫii=ʔak=qaˑs]$_{\text{PredP\_2}}$

[near-PF=PASS=REAL.1SG child=DIM]$_{\text{PredP\_1}}$ [be.at-LINK house=POSS=DEFN.1SG]$_{\text{PredP\_2}}$

`A child came up to me at at my house.' (B, Bob Mundy)

HPSG Implementation: Linker

- My analysis for the linker shares the same foundation as second-position suffix verbs.
- The linker is an incorporating suffix and how it behaves depends on how incorporation works (predicate vs adverb).
- I need two versions of the linker:
  1. A version that occurs on the first coordinand.
  2. A version that occurs on the second coordinand.

HPSG Implementation: Parsing Results

- Examples all came from speakers, either in elicitation sessions or in text
- Coverage: 12.4%
- Overgeneration: 7.1% (3.6%)

Table 5:

	Total	Parsed	Unparsed	Avg # of parses
Grammatical sentences	177	22	155	2
Ungrammatical sentences	28	2 (1)	26 (27)	2

Table of Contents

Conclusion

Serial Verb Construction

- Two or more verbs coordinating covertly
- 3-4 types of constructions depending on verbs involved

Linker Construction

- Two or more predicates coordinating overtly
- Belongs to a category of second position suffixes
- Supports interpretation of a broad predicate category

Conclusion

Shared phenomenon:

- Coordination strategies allow for complement-separation
- The syntactic domain of the second position enclitics is not identical
  - Minimally, passive and causative scope at the level of a “maximal predicate phrase” (non-coordinated PredP)
  - Minimally, the subject-mood portmanteaus and tense scope at the level of the clause (includes coordination)

These coordination strategies illuminate the syntactic categories and constituents in the language.

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- My advisor Emily M. Bender and committee member Sharon Hargus, and the supportive faculty at the University of Washington

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Supplemental Slides

1. Future work
2. AVMs for clausal enciltics and suffix verbs
3. AVMs for SVCs
4. AVMs for the linker

Supplemental Slides: Future Work

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  - Finishing and reviewing transcriptions
  - Making transcriptions available to learners and archiving
  - Miniature language lesson sheets

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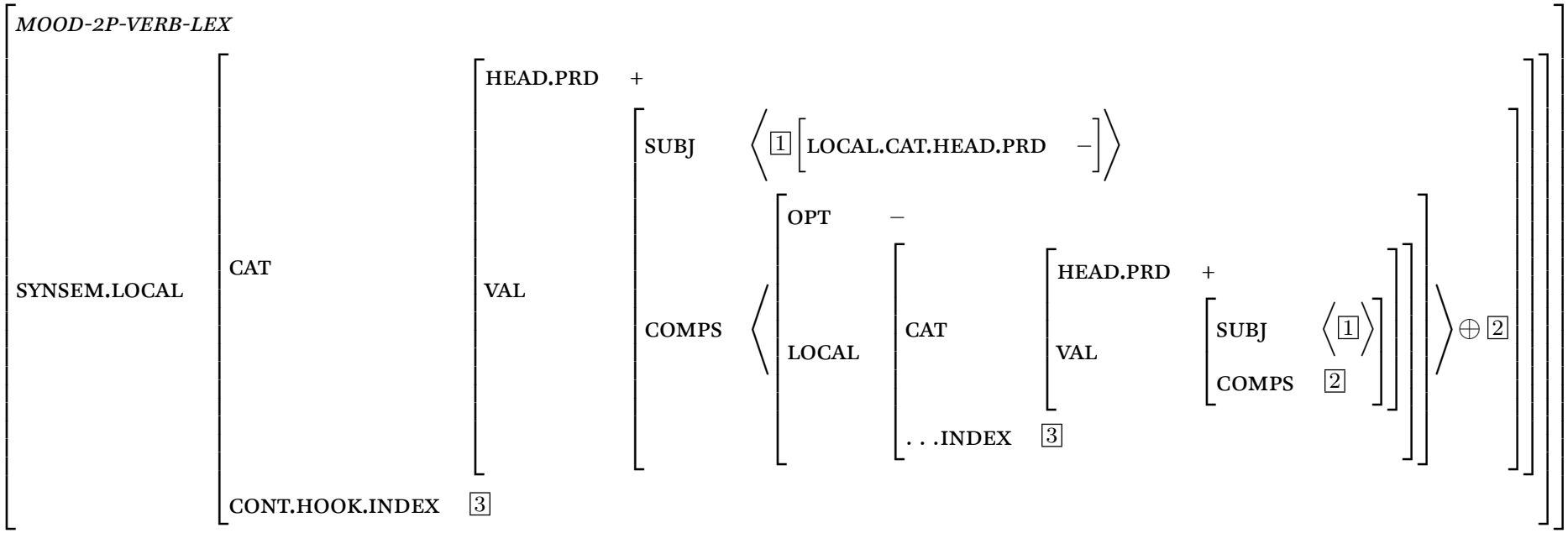
- Typological work
  - Noun and adjective predication (and eventiveness) in other languages
  - Generalizability of serial verb definition and coordination assumptions
  - Comparison of SVC properties with nearby or typologically similar languages

Supplemental Slides: Future Work

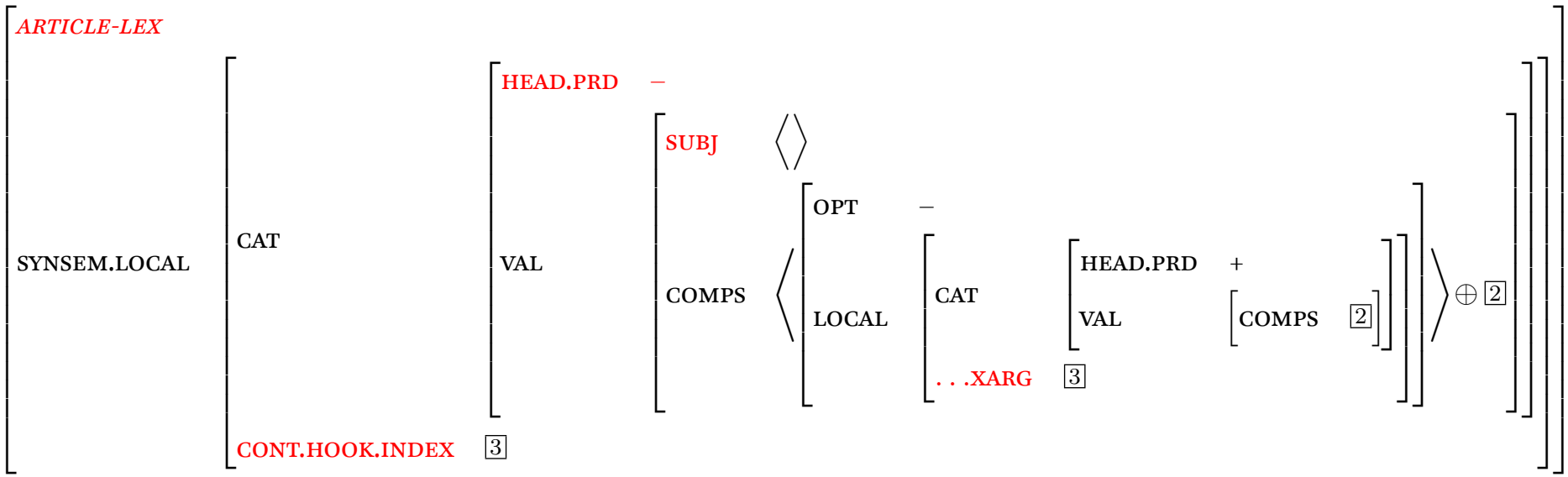
- What are the different syntactic domains of the second position enclitics?
- Clause vs Maximal predicate phrase (?)
- What doubles under quantifier or wh-word fronting?

morph	=ʔaaqƛ	=!ap	=!aƛ	=!at	=uk =ʔak	=(m)it	=ʔiˑš =maˑ =ḥaˑ =∅ ...	=ʔaała	=ʔał	=ƛaˑ
meaning	FUT	CAUS	NOW	PASS	POSS	PST	subject-mood portmanteaus	HABIT	PL	also

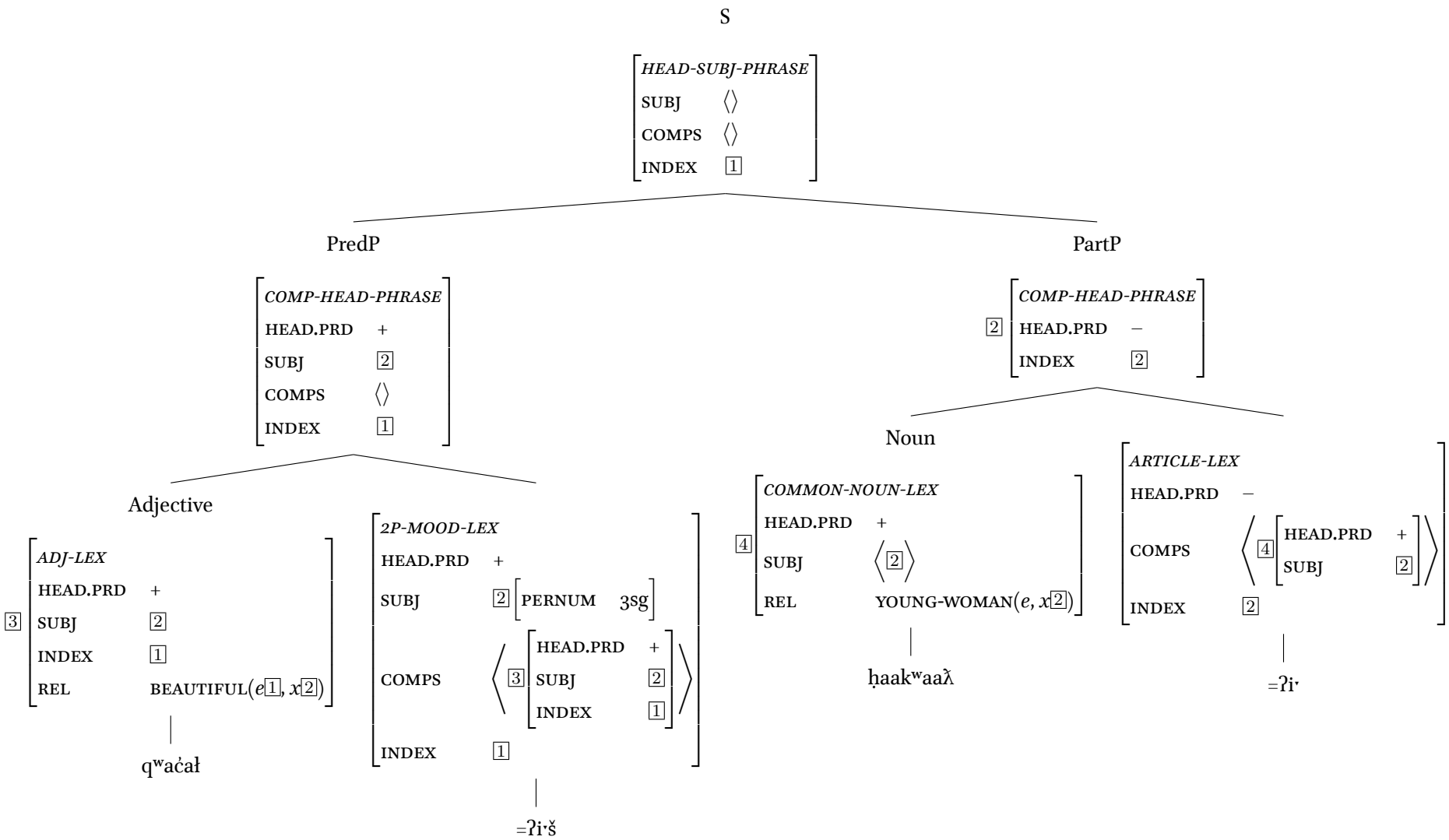
Supplemental: Clausal enclitics: AVM



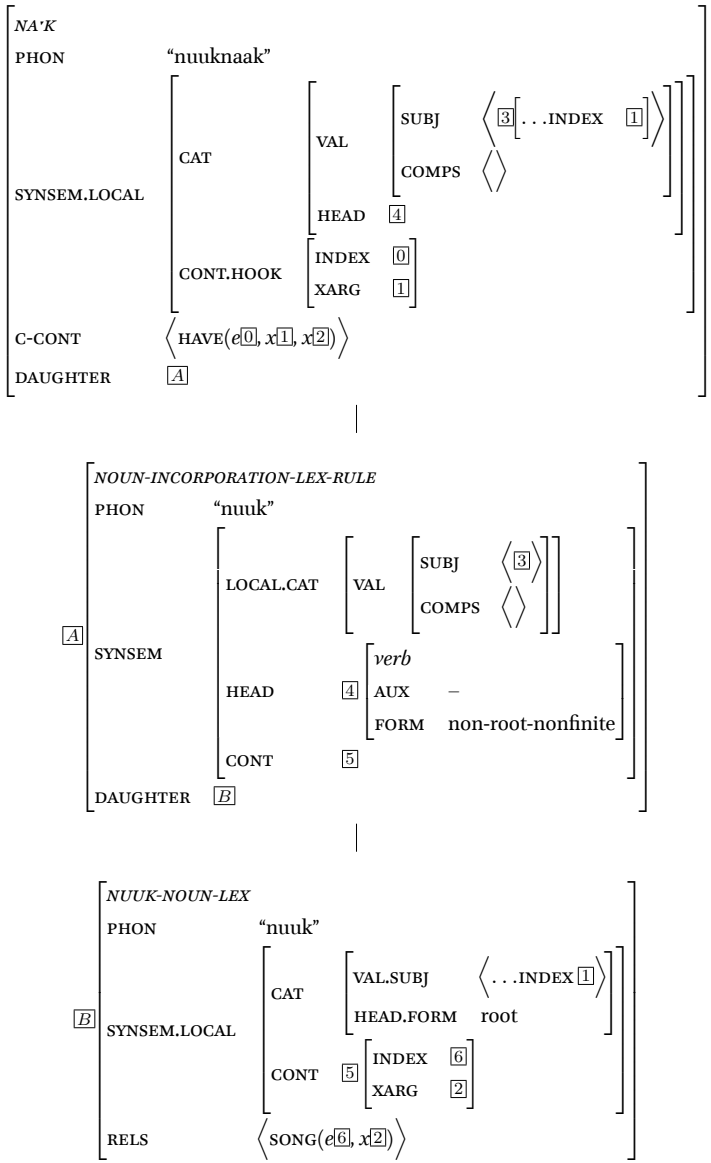
Supplemental: Clausal enclitics



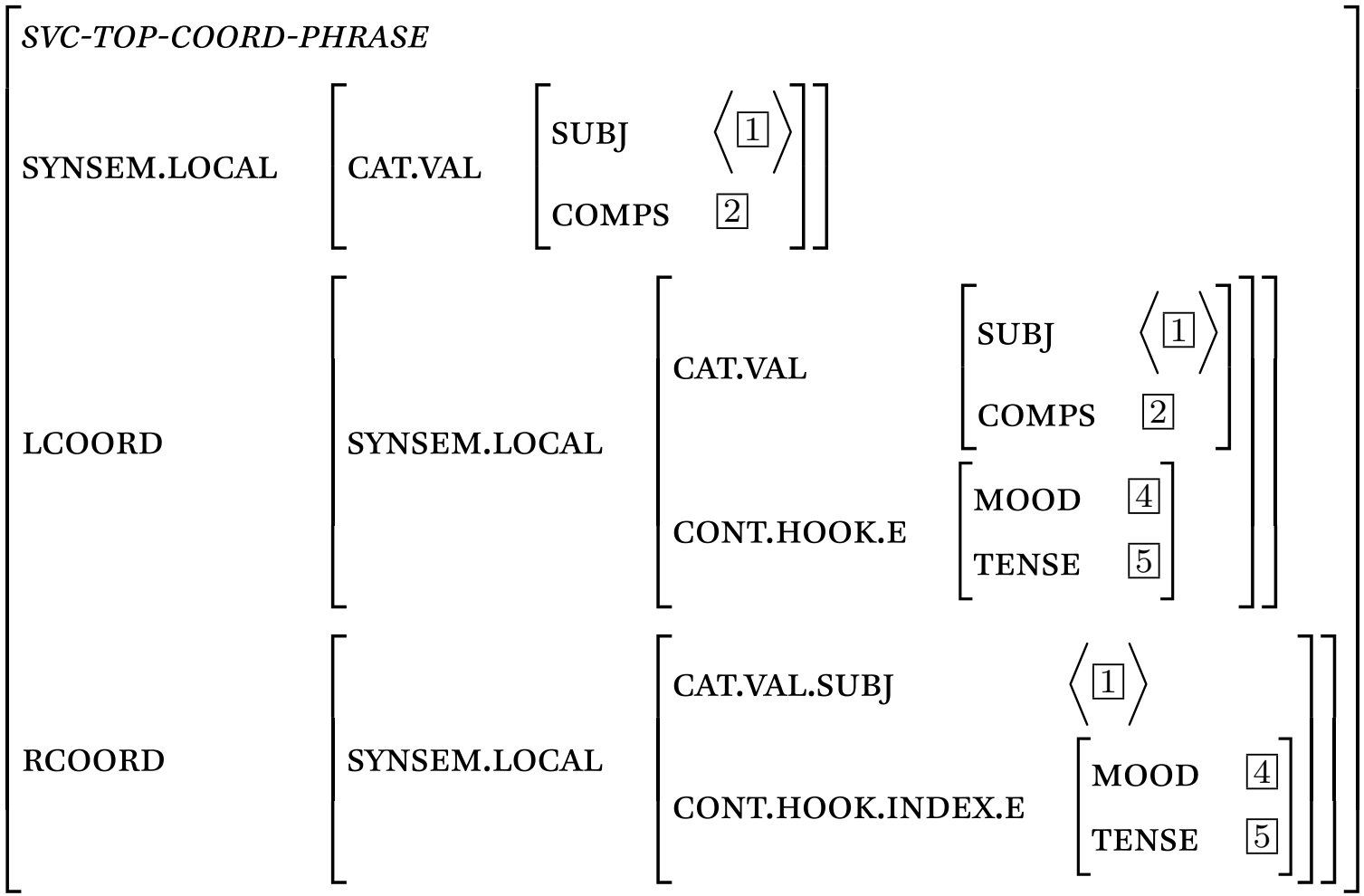
Supplemental: Clausal enclitics: Tree



Supplemental: Suffix verbs



Supplemental: SVC AVMs



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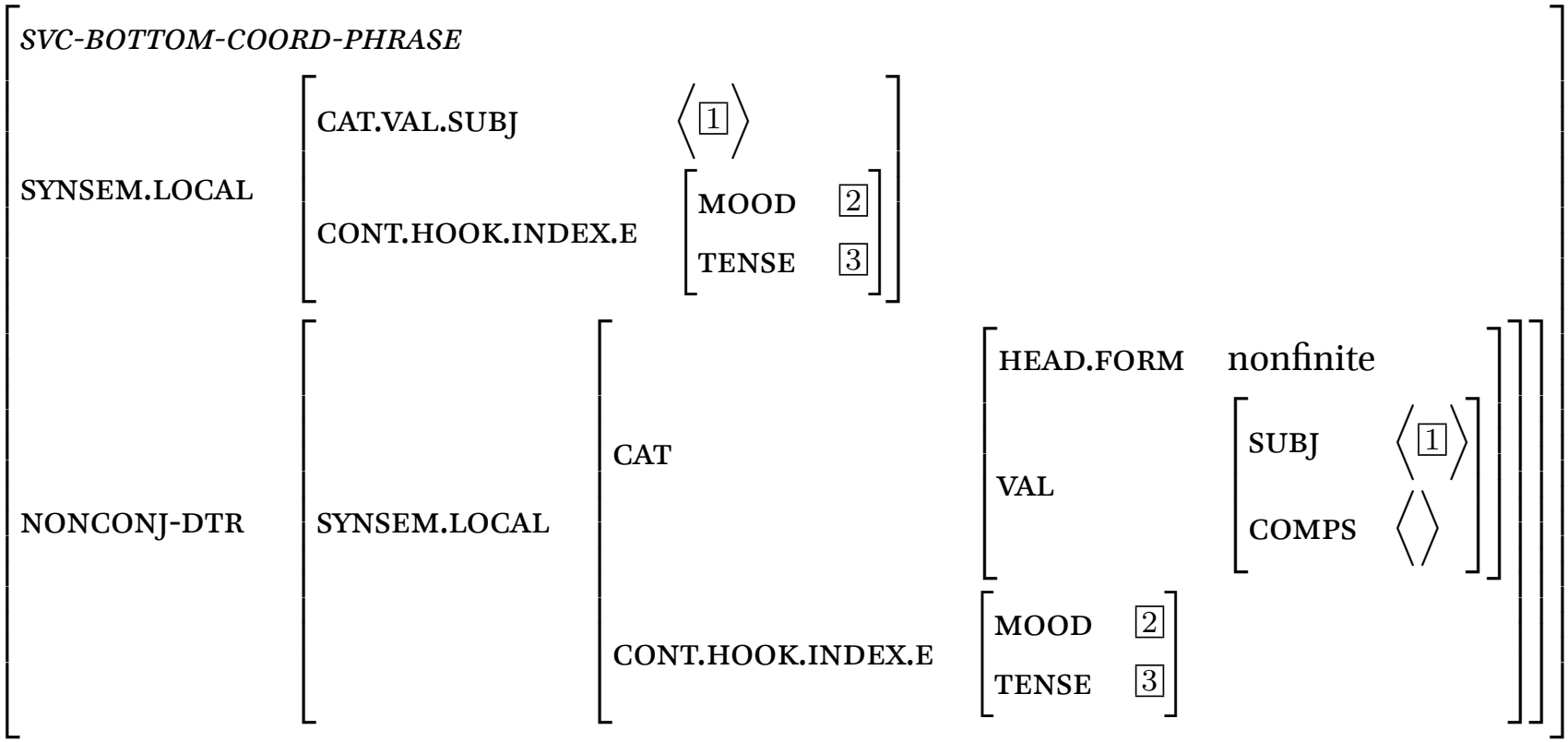
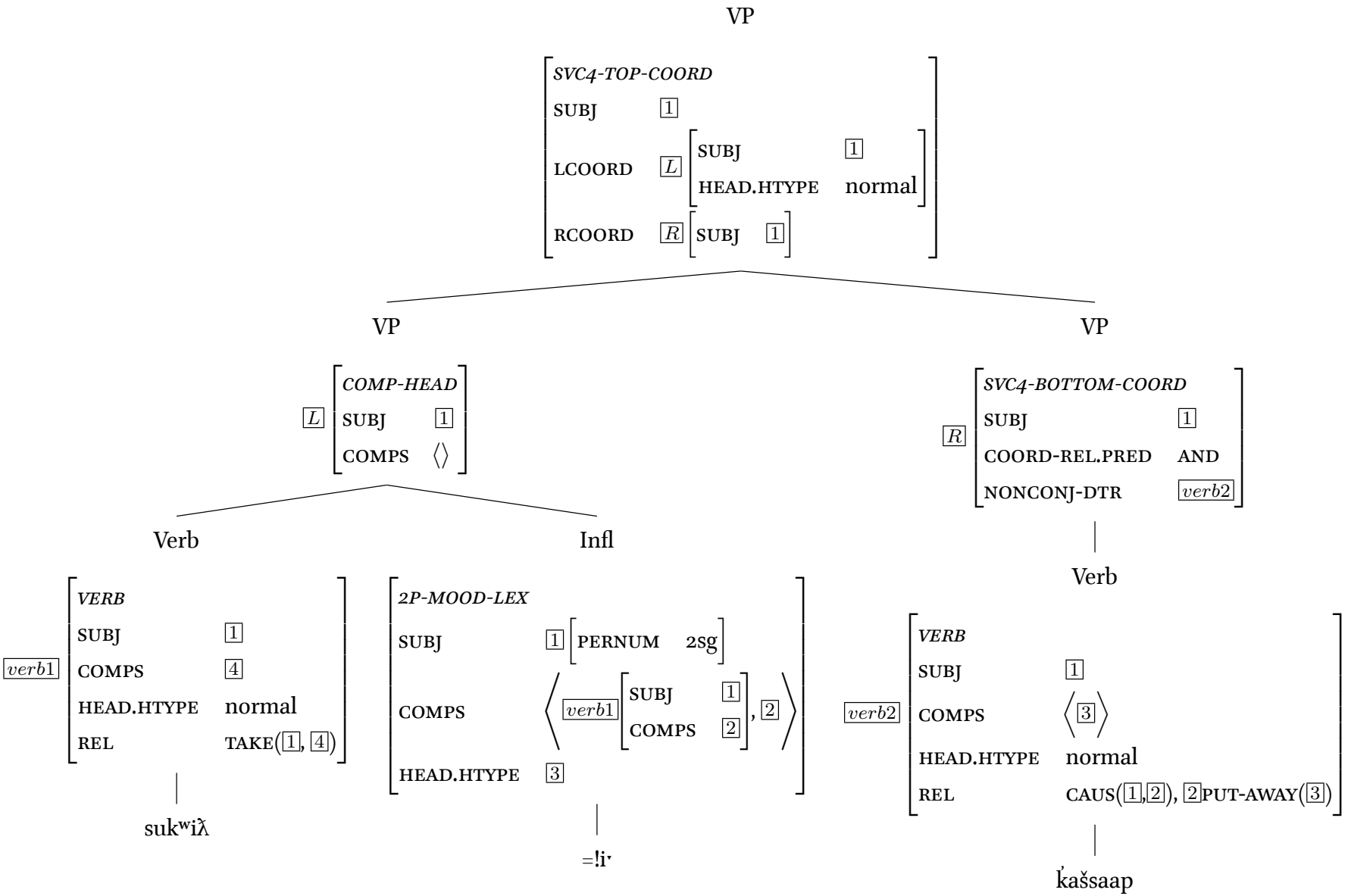


HPSG Implementation: SVCs



HPSG Implementation: Linker