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Synthesis in complementation

Susi Wurmbrand
University of Vienna

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With Magdalena Lohninger and Iva Kovač

Iva Kovač

Magdalena Lohninger

Synthesis approach to complementation

Basic idea

- Complement clauses are not selected (or only in a very limited way), but built freely.
- The combination of matrix predicate and complement clause must be interpretable.
- Motivation: matrix predicate and embedded clause can affect each other (it's not just a one-way relation).
- Partial autonomy of syntax

This talk

- Alternating verbs
- Synthesis case #1: Distribution of finiteness in English
- Understanding complementation: the Implicational complementation hierarchy
- Synthesis case #2: Greek clause introducers
- Synthesis case #3: Voice restructuring
- (If time) A possible universal of complementation: Finiteness in South Slavic

Two ways to…

Forget

I forgot to water the plant.

Foto credit: Leo Wurmbrand

I forgot that I watered the plant.

Tell

I told him to water the plant.

I told him that I watered the plant.

Know

I know that I watered the plant.

I know how to water the plant.

See

I just got back from a two week trip…

I see that he watered the plant.

Not:

I saw him water the plant.

Questions

- Is it a coincidence that some uses of these verbs involved finite, others non-finite complements?
- Are these verbs "ambiguous" (homophonous)?
- Do the different meanings come from the matrix verb, the complement clause, both?

{ I forgot / I forgot } { I told him / I told him } { I know / I know how } { that I watered the plant. / to water the plant. }

Direction

- Is it a coincidence that some uses of these verbs involved finite, others non-finite complements? No.
- Are these verbs "ambiguous" (homophonous)? Maybe not.
- Do the different meanings come from the matrix verb, the complement clause, both?

{ I forgot / I forgot } { I told him / I told him } { I know / I know how } { that I watered the plant. / to water the plant. }

Distribution of finiteness in English

Forget

	Factive	Implicative
Finite	I forgot that I watered the plant.	
Infinitive		I forgot to water the plant.

Factive:
forget that p: p = 1
not forget that p: p = 1
I forgot that I watered → I watered
I didn't forget that I watered → I watered

Implicative:
forget to p: p = 0
not forget to p: p = 1
I forgot to water → I didn't water
I didn't forget to water → I watered

Forget

	Factive	Implicative
Finite	I forgot that I watered the plant.	*I forgot that I water the plant.
Infinitive	*I forgot to have watered the plant.	I forgot to water the plant.

Factive:
forget that p: p = 1
not forget that p: p = 1
I forgot that I watered → I watered
I didn't forget that I watered → I watered

Implicative:
forget to p: p = 0
not forget to p: p = 1
I forgot to water → I didn't water
I didn't forget to water → I watered

Know

	Factive	Modal
Finite	I know that I won.	
Infinitive		I know how to win.

Know

	Factive	Modal
Finite	I know that I won.	I know how I could/would win.
Infinitive	*I know to have won. %I know him to have won.	I know how to win.

Tell

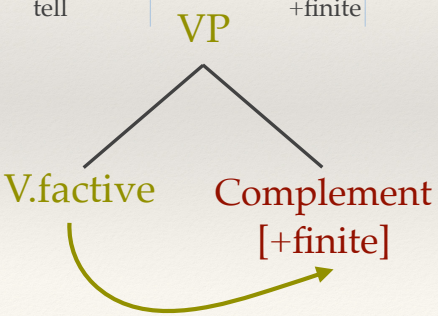
	Speech	Command
Finite	I told him that he won.	
Infinitive		I told him to win.

Tell

	Speech	Command
Finite	I told him that he won.	I told him that he should/must win.
Infinitive	*I told him to have won.	I told him to win.

Temptation

English	Factive, speech	Modal, Order	Implicative
forget	+finite		–finite
know	+/%±finite	±finite	
tell	+finite	±finite	



Non-alternating verbs

	Speech
Finite	He claimed that he won.
Infinitive	He claimed to have won.

	Factive
Finite	He is glad that he won.
Infinitive	He is glad to have won.

More complete picture

English	Factive, speech	Modal, Order	Implicative
forget	+finite		–finite
know	+/%±finite	±finite	
tell	+finite	±finite	
claim	±finite		
be glad	±finite		

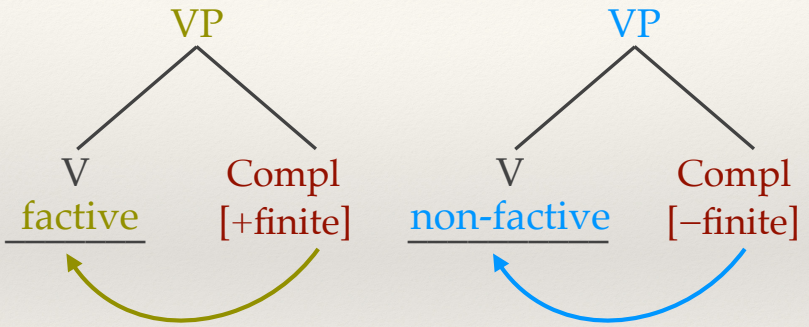
NOT: Factivity, propositional attitude → finiteness

Summary

English	Factive, speech	Modal, Order	Implicative
forget	+finite		–finite
know	+/%±finite	±finite	
tell	+finite	±finite	
claim	±finite		
be glad	±finite		

There is no 1:1 mapping between semantic properties and finiteness marking—factive and speech complements tend to be finite, but they can also be non-finite.

Synthesis



When a verb has alternating meanings, the morphosyntactic coding of the complement clause tends to correspond to different meanings.

An implicational hierarchy

English	Factive, speech	Modal, Order	Implicative
forget	+finite		−finite
know	+/%±finite	±finite	
tell	+finite	±finite	
claim	±finite		
be glad	±finite		

finite ⟷ infinitive

Although there are no universal settings for (e.g.,) finiteness, there are still patterns which can be described via implicational hierarchies.

Implicational complementation hierarch (ICH)

Universality of the clausal hierarchy?

Ramchand & Svenonius 2011 (simple clauses):

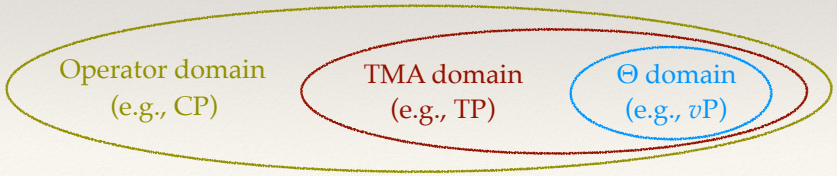
- Contra cartography, there is variation in the ordering/grouping of functional heads.
- But there is an irreducible functional hierarchy consisting of three domains.
- Language-specific ordering within these domains.

Ramchand, Gillian, and Peter Svenonius. 2014. Deriving the functional hierarchy. Language sciences 46:152-174.

Containment

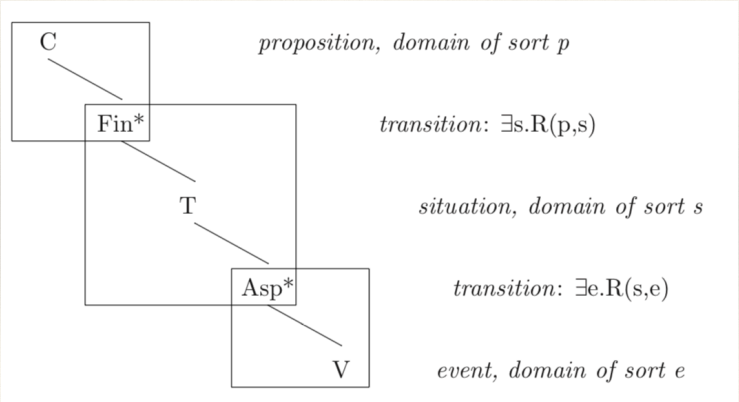
Ramchand and Svenonius 2014:

- Proposition, Situation, Event: semantic sorts, conceptual primitives in a coherent containment relation.
- Situations are elaborations of Events (created by combining time/world parameters with an existentially closed Event), Propositions are elaborations of Situations (combining speaker-oriented/discourse-linking parameters with an existentially closed Situation)



Stable clausal domains

Ramchand & Svenonius 2011



Broad grouping

- Wurmbrand and Lohninger 2019:
- Following typological studies, in particular Givón 1980, where semantic implicational complementation hierarchies are established.
- In addition to possible finer-grained distinctions, languages bundle complement types into three broad categories (see also Rochette 1988) which can be described in terms of the conceptial sorts defined in Ramchand & Svenonius 2011.

Broad complementation classes

Proposition	Situation	Event
speech, epistemic, factive contexts	emotive and situation contexts	implicative and strong attempt contexts
• temporally independent • no pre-specified tense value • anchored in an utterance or embedding context • may involve speaker-oriented parameters	• elaborate eventualities without speaker/utterance properties • time and world parameters • refer to a specific, possibly pre-determined, time	• no speaker/utterance properties • no time and world parameters • possibly actuality entailments • possibly reduced argument/event structures
claim, believe, know	decide, ask, want	manage, try, begin

Broad complementation classes

Proposition	Situation	Event
can be assigned a truth value or have a presupposed truth value	eventualities that are not evaluated for truth but for other aspects of content	semantic properties, some aspectual properties
Nova claimed that she bought salad, which is true/false/a lie.	Nova asked me to buy salad, which is a good idea/not easy to do on Sundays	

a. speech, attitude: admit, affirm, announce, assume, believe, claim, consider, discover, figure, find, forget (factive), imagine, know (factive), observe, say, suppose, tell (speech), wager

b. emotive, future, irrealis, modal (others?): agree, ask, choose, decide, demand, desire, know (modal), need, plan, promise, refuse, tell (imperative), want, wish

c. attempt, implicative: avoid (implicative), begin, can, continue, fail, finish, forget (implicative), manage, may, must, start, stop, succeed, try

Key points

- Verbs can belong to more than one class (cf. alternating verbs).
- Verbs may (be coerced to) shift meanings (e.g., future vs. performative decide).
- The semantic categories (what matters is the interpretation of the complementation configuration, not (just) the verb) form an Implicational Complementation Hierarchy (ICH).

(In)dependence

- Defining complement clauses in terms of the Ramchand and Svenonius 2014 primitives automatically gives us an (in)dependence scale: Events are most dependent, Propositions most independent; Situations in-between.

Proposition	Situation	Event
Operator properties		
TMA properties	TMA properties	
Θ properties	Θ properties	Θ properties

Implicational hierarchy

- If a type of complement shows an independence property, all types of complements to its left on ICH also allow that independence.
- If a type of complement is transparent for a property, all types of complements to its right on ICH are also transparent for that property.
- If a type of complement is integrated into the matrix clause, all types of complements to its right on ICH are also integrated.

Non-finiteness as a dependency property

English	Proposition	Situation	Event
forget	+finite		−finite
know	+/%±finite	±finite	
tell	+finite	±finite	
claim	±finite		
be glad	±finite		

finite ⟷ infinitive

If a language shows finiteness distinctions, a type of complement is never be 'more' finite than the complement to its left on ICH.

Initial question

Is it a coincidence that some uses of alternating verbs involved finite, others non-finite complements?

- No: Finiteness is a clause-hood property; meanings further to the left on ICH tend to be (more) finite.
- Finiteness 'grows' from right to left on ICH .

Finiteness and semantics

- The ICH does not predict all finiteness values, but it provides certain bounds.
- Not an absolute universal but an impliational one:
  - Semantics (e.g., factivity) does not predict finiteness.
  - Finiteness does not entail a particular semantics.
- Semantics matters only indirectly—semantics yields the ICH, and finiteness is sensitive to the ICH.

Non-existence

- Without the ICH it would not be clear, for instance, why there is no verb which is optionally finite under an Situation interpretation, but obligatorily non-finite under an Proposition interpretation?

English	Proposition	Situation	Event
overall	±finite	±finite	–finite
tell, forget	+finite	±finite	
not existent	–finite	±finite	
finite	←	→	non-finite

Non-existence

I TOLD him to win.

I TOLD him that he should win.

*I TOLD him that he won.

I TOLD him to have won. —> Attitude meaning

English	Attitude	Irrealis	Tenseless
overall	±finite	±finite	–finite
tell	+finite	±finite	
not existent	–finite	±finite	
finite	←	→	non-finite

Greek clause introducers

Greek clause introducer

a.	*eprospaθisen*	{??*oti*	*enna*	/ ✓*na*	} *lisi*	*to provlima.*
	try.PFV.PST.3SG	{??OTI	FUT	/ ✓NA	} solve.PFV.PRES.3SG	the problem
	'He tried to solve the problem'					
b.	*apofasisen*	{✓*oti*	*enna*	/ ✓*na*	} *lisi*	*to provlima.*
	decide.PFV.PST.3SG	{✓OTI	FUT	/ ✓NA	} solve.PFV.PRES.3SG	the problem
	'He decided to solve the problem.'					
c.	*isxiristiken*	{✓*oti*		/ ??*na*	} *elisen*	*to provlima.*
	claim.PFV.PST.3SG	{✓OTI		/ ??NA	} solve.PFV.PST.3SG	the problem
	'He claimed to have solved/thinks that he solved the problem.'					

ICH signature

Greek	Proposition	Situation	Event
oti	✓	✓	✗
na	✗	✓	✓
ICH signature	+P	±P	−P

(Greek) Decisions

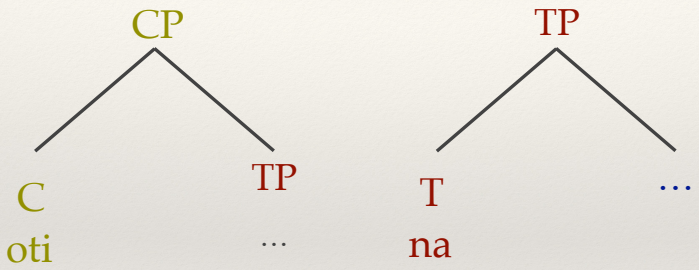
Apofasisen	***na***	*/ oti*	*/ oti*	***enna***	*lii*	*kathe*	*mera*	*enan*	*provlima*
decide.PFV.PST.3SG	NA	/ that	/ that	FUT	solve.IPFV.PRS.3SG	every	day	one	problem

na, ***oti enna***: 'He decided to solve/that he will solve one problem every day.'
oti (no *enna*): 'He came to the realization that he solves one problem every day.'

[Cypriot Greek: C. Christopoulos, p.c.]

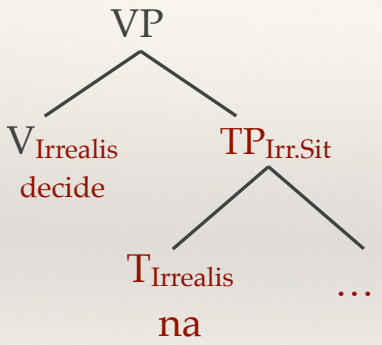
Proposition	Situation
oti	oti *(enna)
*na	na
Performative	Irrealis

Simplified…



See Wurmbrand & Lohninger 2019 for details and references

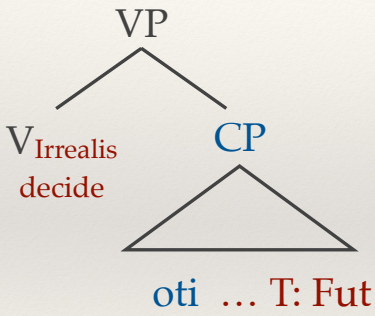
Decide–Situation



Situation
na
*oti

I decided to sing.

Non-local tense "selection"

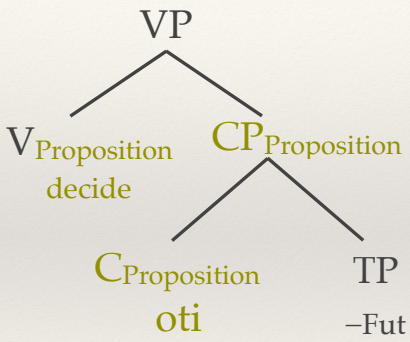


Synthesis options:

- Vacuous C
- Irrealis C
- Future proposition

I decided that I will/would sing.

"Counter-selection"



I decided that he is a nice person/that I like salad.

Synthesis approaches

- The meaning of a complementation configuration comes from both the matrix verb and the complement clause.
- Part of the meaning of an Attitude configuration is in the embedded clause (Kratzer 2006, Moulton 2009), in particular in the CP.
- CP must be present to yield an Attitude interpretation; CP-less complements yield a different interpretation (cf. ***na** with Proposition verbs).

Synthesis vs. selection

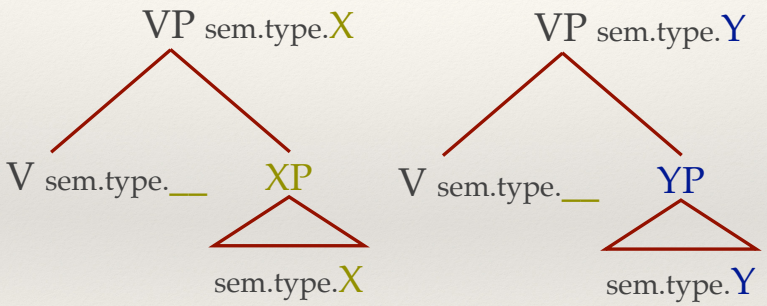
Meaning does not come from the matrix verb alone.

- If future was just built into the meaning of the matrix verb, it would not be clear why the Situation interpretation can only arise with na or oti enna, but not with oti alone.

The shape/meaning of the complement can influence the meaning of the matrix verb

- The lack of future/irrealis may allow a meaning shift.
- Verbs differ in being more or less specific, allowing or disallowing flexibility in complementation.

Vision for alternating verbs

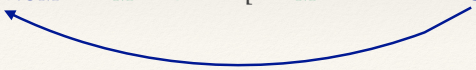


Long object A-movement: Another case of synthesis

Long object A-movement [LOM]

- A range of languages and constructions display an operation of long object A-movement [LOM].
- "Long" does not refer to a non-local operation; it indicates that the movement is to a higher predicate.
  - An embedded argument is promoted to matrix subject.
  - Diagnostics: Case of subject (NOM), agreement with matrix verb, language specific A-movement properties (see e.g., Polinsky and Potsdam 2008)

DP.NOM V.MATRIX [V.EMBEDDED DP.OBJ]

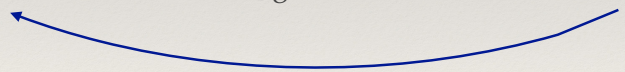


Four types of LOM

- Raising
- Default Voice: Acehnese, Croatian, Czech, European Portuguese, German, Italian, Japanese, Kannada, Mayrinax Atayal, Serbian, Slovenian, Spanish, Takibakha Bunun
- Voice Matching: Chamorro, Isbukun Bunun
- Crossed Control: Indonesian, Javanese, Malagasy, Tagalog, Tongan, Tukang Besi, Samoan
- See Kovač, Lohninger and Wurmbrand (2020)

LOM #1

DP.NOM	V.RAISING	[V.INF	~~DP.OBJ~~]
Nova	schien	[einzuschlafen	~~Nova~~]
Der Baum	schien	[zu fallen	~~der Baum~~]
Der Baum	schien	[gefällt zu werden	~~der Baum~~]



LOM #2

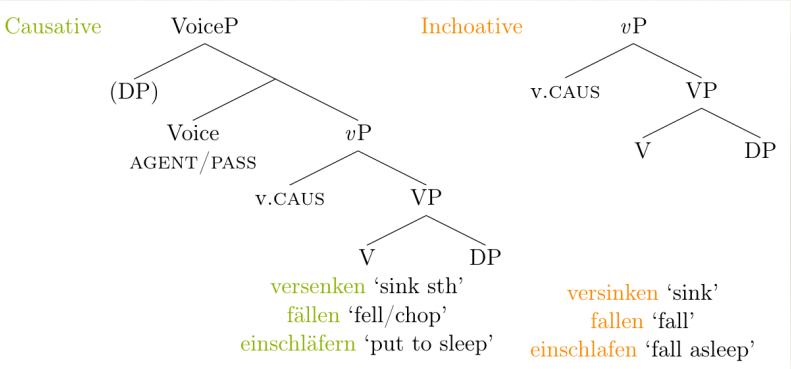
a. *Der Frachter wurde zu versenken / *versinken versucht.*
The.NOM freighter was to sink.CAUS / *sink.INCH tried.
'People tried to sink the freighter.' [Pitteroff 2014: 235, (31a)]

b. *Der Baum wurde zu fällen / *fallen begonnen.*
The.NOM tree was to fall.CAUS / *fall.INCH begun
'People began to cut down the tree.' [Pitteroff 2014: 236, (31b)]

c. *Der Vulkanier wurde einzuschläfern / *versinken versucht.*
The.NOM Vulcan was to.put.to.sleep.CAUS / *sink.INCH tried.
'People tried to put to sleep the Vulcan.' [Pitteroff 2014: 236, (31c)]

d. *Mado-ga {sim-e / *sim-ar-i} -tuzuke-rare-tei-ta.*
window-NOM {close-CAUS / *close-INCH-EV} -continue-PASS-PROG-PAST
'They kept the window closed.' [Wurmbrand and Shimamura 2017: 185, (11b)]

Causative–inchoative distinction



Causative–inchoative distribution

VoiceP (Pass)
(thematic)

Der Baum wurde [zu fällen / * fallen ~~der Baum~~] begonnen.
Der Baum begann [zu fallen / * fällen ~~der Baum.~~]

—
(Raising)

Causative–inchoative distribution

VoiceP (Pass)
(thematic)

VoiceP *—

Der Baum wurde [zu fällen / * fallen ~~der Baum~~] begonnen.
Der Baum begann [zu fallen / * fällen ~~der Baum.~~]

— *VoiceP

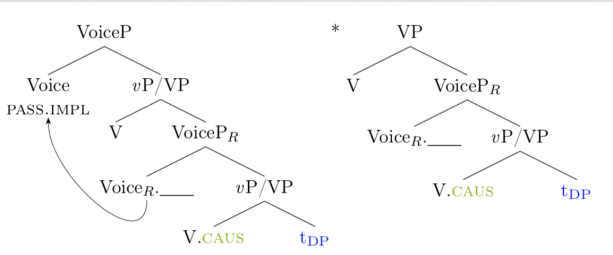
—
(Raising)

LOM

- No embedded syntactic subject (no overt DP in Spec,VoiceP, no PRO; see Wurmbrand 2001, Chen 2010, Wu 2013, Wurmbrand and Shimamura 2017, Berger 2019).
- But in the thematic matrix cases, the complement is (obligatorily) interpreted with a subject:
  Der Baum wurde zu fällen begonnen/versucht.
  beginner/tryer = chopper

Synthesis Part #1

- Underspecified embedded subject/Voice needs to be licensed from above—possible when matrix verb is thematic, impossible when raising.



Causative–inchoative distinction

VoiceP (Pass)
(thematic)

VoiceP *___

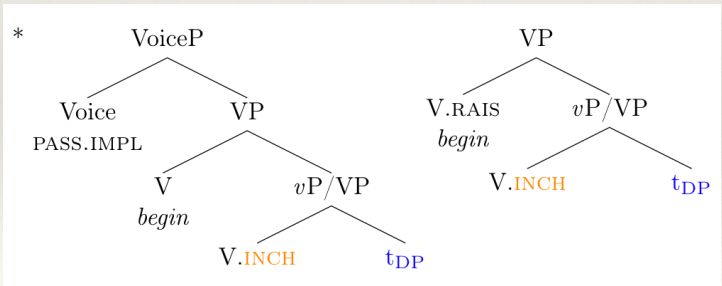
Der Baum wurde [zu fällen / * fallen ~~der Baum~~] begonnen.
Der Baum begann [zu fallen / * fällen ~~der Baum.~~]

___ *VoiceP

___
(Raising)

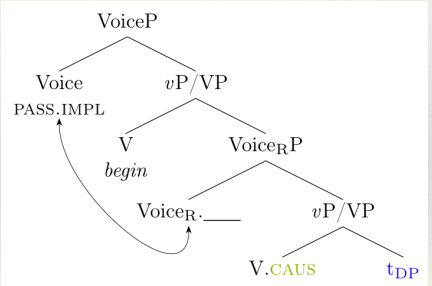
Main puzzle

- Why is an inchoative structure is not possible in cases where the matrix verb is thematic?



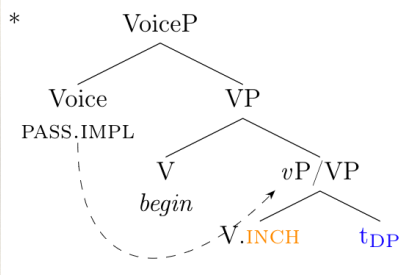
Synthesis Part #2

- Thematic predicates do not just license lower Voice/subject, they need to obligatorily do so, and "give" their Voice features to an embedded element (to establish argument-sharing).



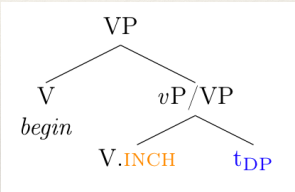
Synthesis Part #2

- A thematic Voice sharing predicate (in contrast to a Raising predicate) needs to look down for an argument to share.



Synthesis Part #2

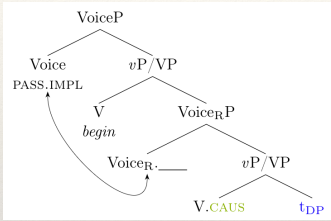
- Raising verbs have no arguments, hence are free to combine with any type of complement (that meets the restrictions from below).
- In this sense, the type of complement restricts the type of matrix predicate.

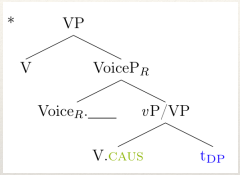


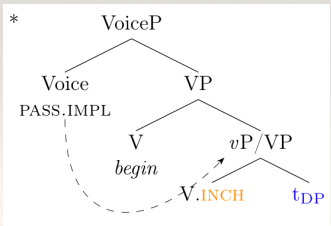
Against selection

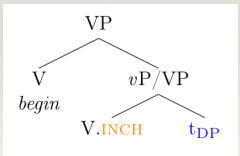
- begin in German can combine with any type of complement:
  - *v*P/VP: triggers LOM with a matrix Raising verb
  - Underspecified VoiceR: triggers LOM with a thematic matrix verb
  - Voice.PASS: triggers LOM with a matrix Raising verb
  - Full VoiceP with an overt DP subject: triggers subject raising, but no LOM
  - Full VoiceP with PRO: triggers some size restructuring effects, but no LOM
  - Full TP or CP: no restructuring effects
- To solve the unaccusativity puzzle, a selectional restriction (e.g., begin must select VoiceP) does not seem to be motivated.

Counter selection









- Indeed, "selection" appears to go in the other direction—the composition of the embedded complement restricts the matrix predicate.

Finiteness in South Slavic

The team

Iva Kovač

Magdalena Lohninger

Caroline Pajančič

Neda Todorović

South Slavic

- Bosnian, Bulgarian, Croatian, Macedonian, Serbian, Slovenian
- Variation along two dimensions: language and type of complement

a. *Pokušala* *sam* {*da* *čitam* / *čitati*} *ovu* *knjigu.* (Sr)
tried.SG.F AUX.1.SG {DA read.1SG / read.INF.IPFV} this book
'I tried to read this book.'

b. *Poskusila* *sem* {*brati* / **da* *berem* / **da* *bom* *brala*} *to* *knjigo.* (Sl)
tried.SG.F AUX.1.SG {read.INF.IPFV / *DA read.1SG / *DA will.1.SG read.SG.F} this book
'I tried to read this book.' (Adrian Stegovec, p.c.)

c. *Trdim,* {*da* *berem* / **brati*} *to* *knjigo.* (Sl)
claim.1.SG {DA read.1.SG / *read.INF.IPFV} this book
'I claim that I am reading/to be reading this book.' (Adrian Stegovec, p.c.)

Bulgarian

- Bulgarian: no infinitives; all complements are finite
- But we do nevertheless see an ICH signature.

a. *Lea* *tvărdi* {*če* / **da*} *čete* *kniga.* (Bu)
Lea claim.PRS.3.SG {that / *DA} read.PRS.3.SG book
'Lea claims that she is reading a book.' (Marchela Oleinikova, p.c.)

b. *Lea* *reši* {*da* *čete* / *če* *(šte) *čete* } *kniga.*
Lea decided.PRF.3.SG {DA read.PRS.3.SG / that *(will) read.PRES.3.SG} book
'Lea decided to read/that she will read a book.'

c. *Lea* *se* *opitvaše* {**če* / *da*} *čete* *kniga.*
Lea REFL try.PRF.3.SG {*that / DA} read.PRS.3.SG book
'Lea tried to read a book.'

Macedonian

- The same is the case in Macedonian

a. *Lea tvărdi {deka / *da} čita kniga.* (Ma)
Lea claim.PRS.3.SG {that / *DA} read.PRS.3.SG book
'Lea claims that she is reading a book.' (Sandra Jakimovska, p.c.)

b. *Lea se rešila {da čita / deka *(e) čita } kniga.*
Lea REFL decided.PRF.3.SG {DA read.PRS.3.SG / that *(will) read.PRS.3.SG} book
'Lea decided to read/that she will read a book.'

c. *Lea probala {*deka / da} čita kniga.*
Lea try.PRF.3.SG {*that / DA} read.PRS.3.SG book
'Lea tried to read a book.'

Slovenian

a. *Trdim, {da berem / *brati} to knjigo.* (Sl)
claim.1.SG {DA read.1.SG / *read.INF.IPFV} this book
'I claim that I am reading/to be reading this book.'
'I claim that I am reading/to be reading this book.'

b. *Odločila sem se {brati / da bom brala /*
decided.SG.F AUX.1SG REFL {read.INF.IPFV / DA will.1SG read.SG.F /
(*) da berem} to knjigo.*
(*) DA read.1.SG} this book
'I decided to read this book.'

c. *Poskusila sem {brati / *da berem / *da bom brala} to knjigo.* (Sl)
tried.SG.F AUX.1.SG {read.INF.IPFV / *DA read.1SG / *DA will.1.SG read.SG.F} this book
'I tried to read this book.' (Adrian Stegovec, p.c.)

ICH signature

Slovenian	Proposition	Situation	Event
finite	✓	✓	✗
non-finite	✗	✓	✓
ICH signature	+P	±P	–P

Other South Slavic (minus Bu, Ma)

a. *Tvrdim {da čitam / čitati} ovu knjigu.*
claim.1SG {DA read.1SG / read.INF.IPFV} this book
'I claim that I am reading this book.' (FINITE) ✓Sr, ✓Bo, ✓Sl, ✓Cr
'I claim to be reading this book.' (NON-FINITE) *Sr, *Bo, *Sl, *Cr

b. *Odlučila sam {da čitam / da ću čitati / čitati}*
decided.SG.F AUX.1SG {DA read.1.SG / DA will.1.SG read / read.INF.IPFV}
ovu knjigu.
this book
'I decided that I will read this book.' (FINITE) ✓Sr, ✓Bo, ✓Sl, *Cr
'I decided to read this book.' (NON-FINITE) ✓Sr, ✓Bo, ✓Sl, ✓Cr

c. *Pokušala sam { da čitam / čitati} ovu knjigu.*
tried.SG.F AUX.1SG { DA read.1SG / read.INF.IPFV} this book
'I tried that I am reading/will read this book.' (FINITE) ✓Sr, ?Bo, *Sl, *Cr
'I tried to read this book.' (NON-FINITE) ✓Sr, ✓Bo, ✓Sl, ✓Cr

South Slavic

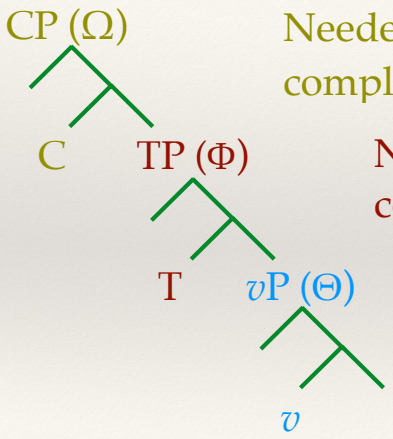
South Slavic	Proposition	Situation	Event
Bulg, Mac	finite	finite	finite
Serbian, Bosnian?	finite	(non-)finite	(non-)finite
Slovenian, Bosnian?	finite	(non-)finite	non-finite
Croatian	finite	non-finite	non-finite

finite ⟷ non-finite

If a language shows finiteness distinctions, a type of complement can never be 'more' finite than the complement to its left on ICH.

Deriving the implicational finiteness universal

In terms of structure



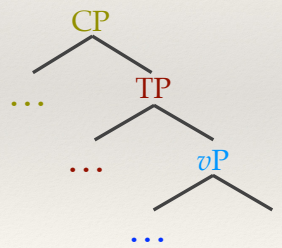
Needed for propositional complements

Needed for future complements

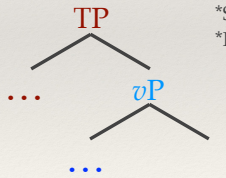
Needed to be a complement

One way to formalize: minimal clause size

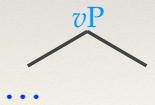
Event complement
Situation complement
Proposition complement



Event complement
Situation complement
*Proposition complement



Event complement
*Situation complement
*Proposition complement



Possible implementation

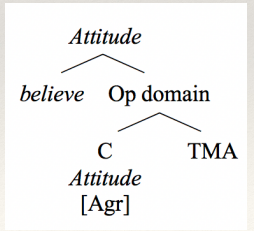
Decomposed notion of finiteness (Adger 2007)

- Finiteness features (language-specific choice) located on different clausal heads (see also Todorović and Wurmbrand 2019).
- South Slavic: finitess corresponds to agreement features.

South Slavic Propositions

South Slavic	Proposition	Situattion	Event
Bulgarian, Macedonian	+finite	+finite	+finite
Serbian, Bosnian?	+finite	±finite	±finite
Slovenian, Bosnian?	+finite	±finite	–finite
Croatian	+finite	–finite	–finite

All SSL:
C [Proposition]: +Agr



Generalizations

- South Slavic: Whenever the operator domain is required (i.e., in Proposition complements), finiteness is obligatory.
- Proposition ➟ CP-domain ➟ Agr (in South Slavic)
- Not a direct entailment/causal relation:
  Proposition ➟ Agr
  Since all types of complements can be finite/non-finite in at least some language.

South Slavic

South Slavic	Proposition	Situation	Event
Bulgarian, Macedonian	+finite	+finite	+finite
Serbian, Bosnian?	+finite	±finite	±finite
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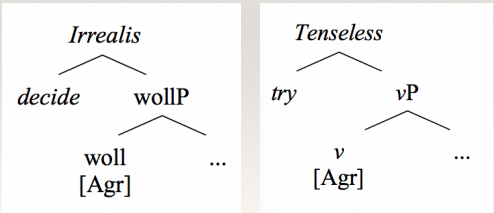
Croatian	+finite	–finite	–finite

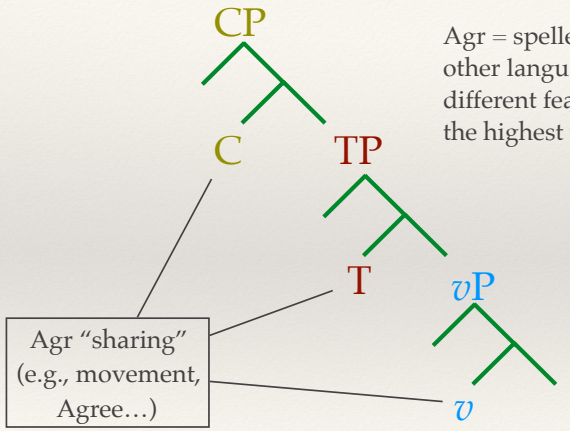
Finiteness in lower clausal domains: different distribution of Agr

South Slavic settings

South Slavic	CP-domain	TMA domain	*v*P domain
Bulgarian, Macedonian	(Agr)	(Agr)	Agr
Serbian, Bosnian?	Agr	optional Agr	optional Agr
Slovenian, Bosnian?	Agr	optional Agr	no Agr
Croatian	Agr	no Agr	no Agr



Linking of clausal heads



Agr = spelled out as finite (in other languages it could be a different feature/property) on the highest verbal element

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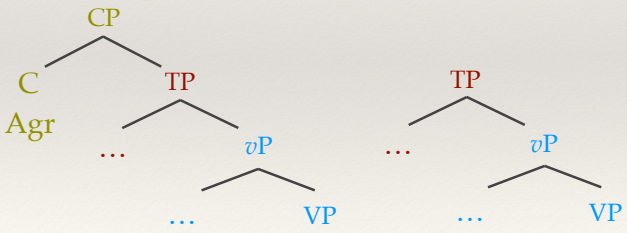
No top-down implicational relation

- If in a language the OP domain is specified as (obligatorily) finite (as in South Slavic), only Proposition complements will be obligatorily finite
- Other clause types could be missing the operator domain and hence lack the Agr finiteness associated with C.

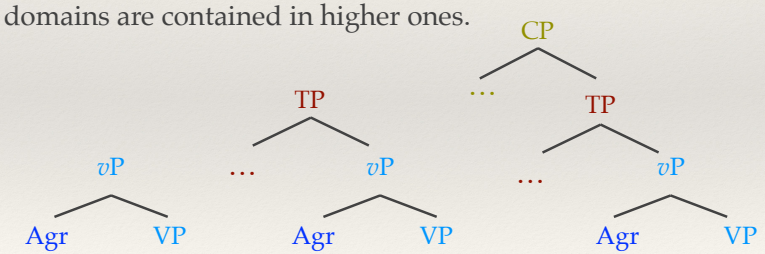


non-finite

Bottom-up implicational relation

- If a lower domain is specified as obligatorily finite, all types of clauses with greater complexity will also be realized as finite since the lower domains are contained in higher ones.

Gr, Bu, Ma



Finiteness and CP

- If [finite] is a property of the CP (e.g., selected by matrix verb):
  - What derives the scale?
  - E.g.: Why is there no language where Event complements are (non-)finite and Situation complements non-finite?
  - Needed: Event complements can only be finite CPs when Situation (and Proposition) complements can be; Situation complements only when Proposition complements can be.

South Slavic	Proposition	Situation	Event
Bulg, Mac	finite	finite	finite
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finite ⟷ non-finite

Finiteness

- The distribution of finiteness shows significant variation across languages, but it also follows certain patterns.
- Finiteness is sensitive to syntactic structure (in particular the containment relations), but there is no single location of finiteness.
- Finiteness is spread over the entire clause, e.g., via agreement features associated (language-specifically) with other syntactic heads.

Conclusions

Complementation

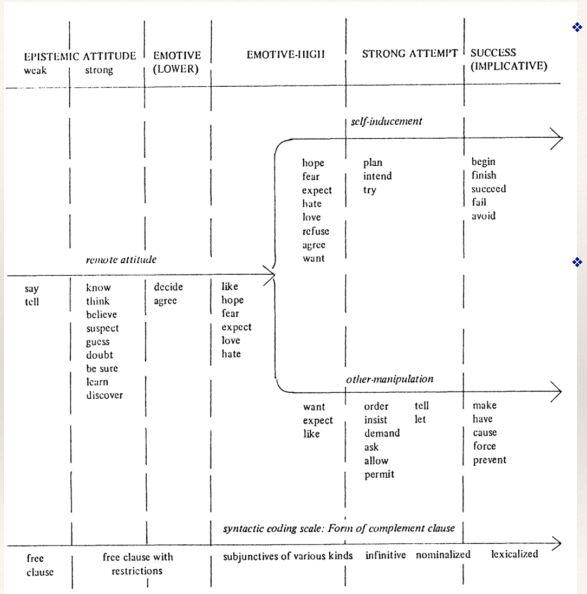
- No selection.
- The meaning of the matrix verb and the meaning of the embedded clause conspire to yield the interpretation of a complementation configuration.
- Meaning shifts (triggered by the shape/meaning of the embedded clause) may be coerced in certain cases.
- Verbs differ in the strength (coercion/no coercion) and specificity of their meanings (alternating verbs are less demanding).

Universals and variation

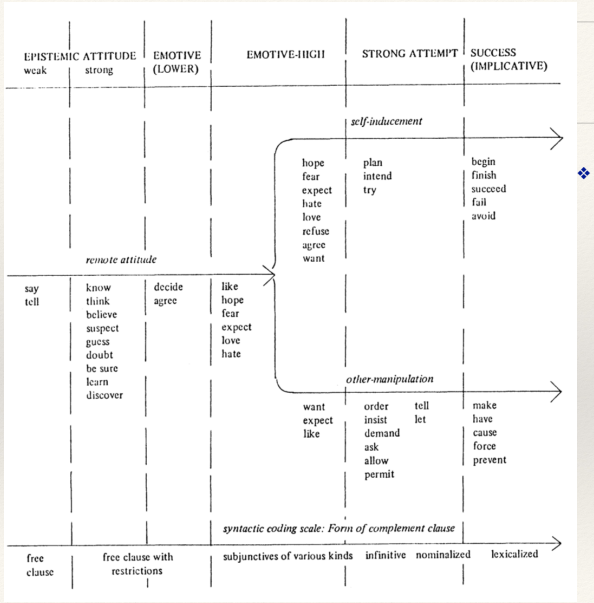
- Different degrees of clausehood: ICH observable cross-linguistically through morphological, syntactic, semantic, and processing differences.
- Language-specific factors often mask common properties among languages when viewed only on the surface.
- Languages nevertheless share core grammatical properties at a more abstract level such as the predictable variable structural complexity of different types of complements.

Thank you!

Appendix



- Givón 1980: complementation configurations are ranked according to an implicational (functional) binding hierarchy.
- Binding hierarchy: The stronger the influence exerted over the agent of the complement clause by the agent of the main-clause verb, by whatever means, the higher [right] is the main-clause verb on the binding scale



Givón 1980

- Syntactic coding: The higher [further right] a verb is on the binding scale, the less would its complement tend to be syntactically coded as an independent/main clause.

What is finiteness?

Finiteness

- There is no cross-linguistic definition of finiteness.
- Languages employ different forms of (in)dependent markings signalling that a clause is (more or less) dependent on the syntactic context.
- Dependent markings can take language-specific forms.
- Dependency can be defined via different degrees of syntactic integration of a clause.
- But: There are implicational hierarchies which allow certain predictions.

A broad attempt at a definition

- Strategy: finite—free/independent form; non-finite—dependent form
- Possibility to occur as a free-standing declarative main clause:
  - "clausal category defined in terms of a clause's degree of similarity to the prototype transitive main clause" (Givón 1990)
  - semantic finiteness as "a condition for an independent interpretation of a sentence" (Maas 2004)

Typological observations

Morpho-syntactic categories reflecting (in)dependence:

- Bisang 2007: tense, illocutionary force, person, politeness
- Givón 1990: tense/aspect/modality, pronominal (grammatical) agreement, nominalizing affixes, case marking of the subject and object, articles, determiners, use of a topic marker
- Cristofaro 2007 (no grammatical notion of finiteness): tense, aspect, mood, person agreement, special forms not used in independent clauses, nominal morphology (case, adpositions) on the verb, overtly expressed arguments, coding of arguments as possessors

Typological results

- It is impossible to define a (single) category that would work cross-linguistically as an (in)dependence marker.
- There is no single morpho-syntactic definition of finiteness, nor a single semantic function (see Class 4) associated with it (Cristofaro 2007, Bisang 2007, Nikolaeva 2007).

Implicational relations?

Cristofaro 2007:

- Case marking/adpositions on the verb ➟ T/A/M not expressed ∨ special T/A/M forms
- Arguments expressed as possessors ➟ T/A/M not expressed ∨ special T/A/M forms
- Person agreement not expressed ➟ T/A/M not expressed ∨ special T/A/M forms
- Special person agreement forms ➟ T/A/M not expressed ∨ special T/A/M forms
- Arguments not expressed ➟ T/A/M not expressed
- Case marking/adpositions ➟ Person agreement not expressed
- Arguments expressed as possessors ➟ Person agreement not expressed ∨ Special person agreement forms
- Arguments not expressed ➟ Person agreement not expressed
- Arguments expressed as possessors ➟ Case marking/adpositions

Tendencies vs. implicational universals

Cristofaro 2007: 112

TABLE 4.5. Absence of overtly expressed arguments vs. absence of tense, aspect, and mood distinctions

	T/A/M not expressed	TAM expressed
Arguments not expressed	127	49
Arguments expressed	117	150

27.8%

Implication: Arguments not expressed → T/A/M not expressed (11).

Significant cases
Cases supporting the implication:
Arguments expressed and T/A/M not expressed 117
Cases contradicting the implication:
Arguments not expressed and TAM expressed 49

Cristofaro, Sonia. 2007. Deconstructing finiteness: Finiteness in a functional-typological perspective. In Finiteness: Theoretical and empirical foundations, ed. by Irina Nikolaeva, 91-114. Oxford: Oxford University Press.

Serbian overt subjects

a. *Jovan je tvrdio da je Ø / Petar / on otišao pre Marije.*
Jovan$_i$ AUX claimed da AUX Ø / Peter / he$_i$ left before Mary
'Jovan claimed to have left before Mary.'
'Jovan$_i$ claimed that Peter/he$_i$ has left before Mary.'

b. *Jovan je odlučio da Ø / Petar / on$_i$ ode.*
Jovan$_i$ AUX decided DA Ø / Peter / he$_i$ leaves
'Jovan decided to leave' 'Jovan$_i$ decided that Peter/he$_i$ would leave.'

c. *Jovan je pokušao da Ø / *Petar / *on ode.*
Jovan$_i$ AUX tried DA Ø / *Peter / *he$_i$ leaves
'Jovan tried to leave.' 'Jovan tried that Peter/he would leave.'

Anything goes?

- Is there anything about "finiteness" that holds cross-linguistically?
- There are still exciting things to discover if we move away from the idea that there is a universal definition of "finiteness".