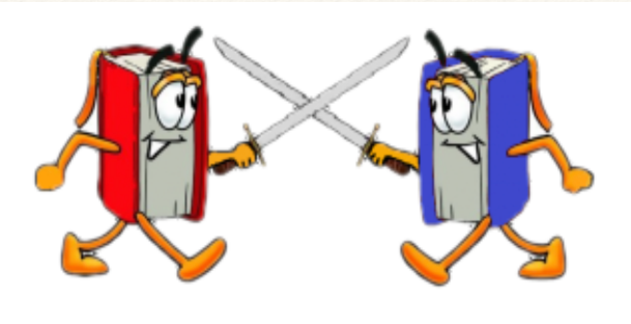

Linguistics Flash-Mobs

Complementation

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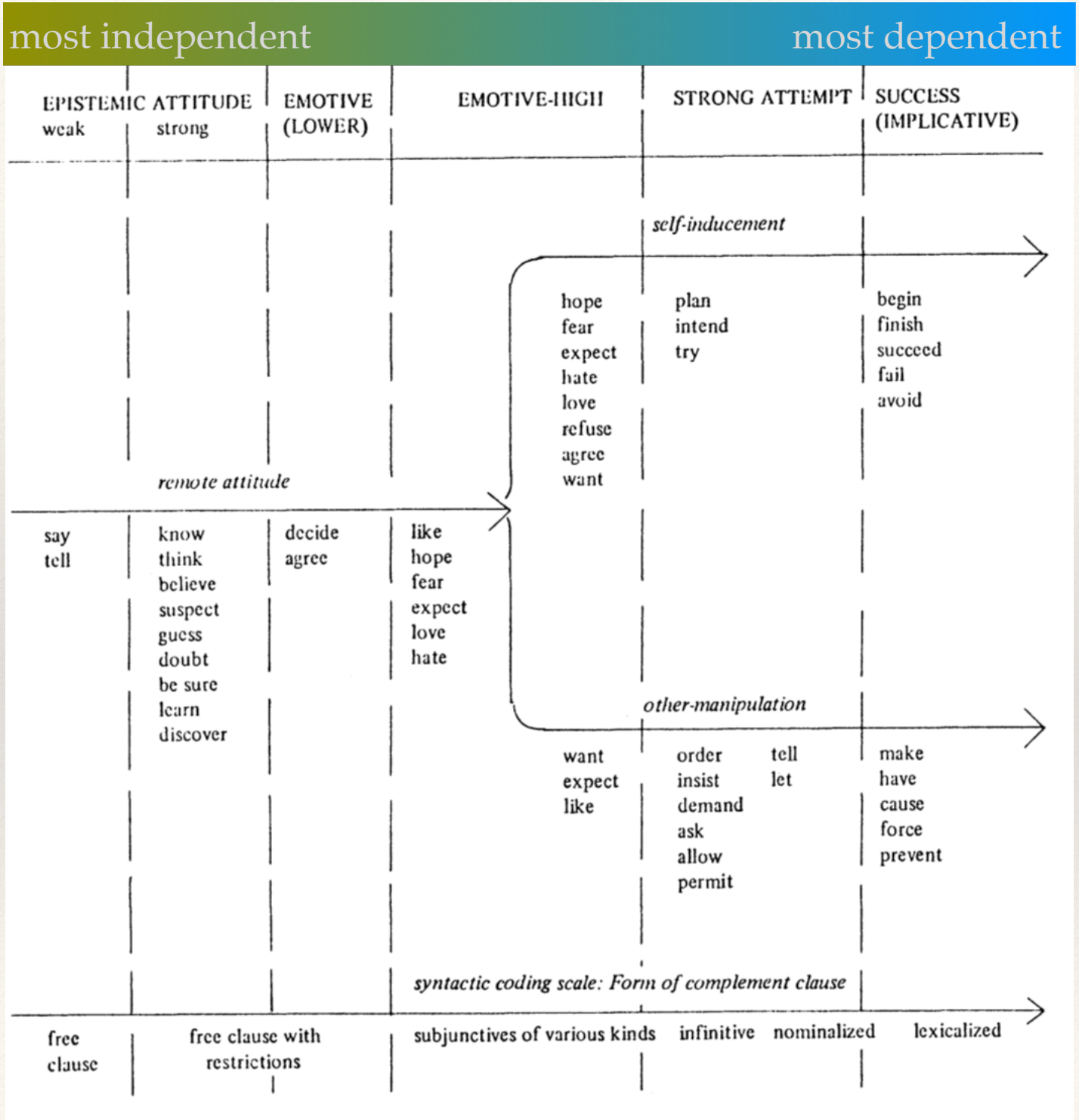
Austrian Science Fund (FWF) Project
Implicational hierarchies in clausal complementation (P34012-G).

Clause size and related phenomena

General questions about complementation

- Are there universal properties of complementation?
  Yes, an implicational semantic hierarchy.
- Are there predictable mappings between (morpho-)syntax and semantics?
  To some degree: partial autonomy of syntax; but there are implicational relations (Question 3).
- What is the relation between a matrix verb and a complement clause?
  Synthesis: the matrix verb and complement can "select" each other.

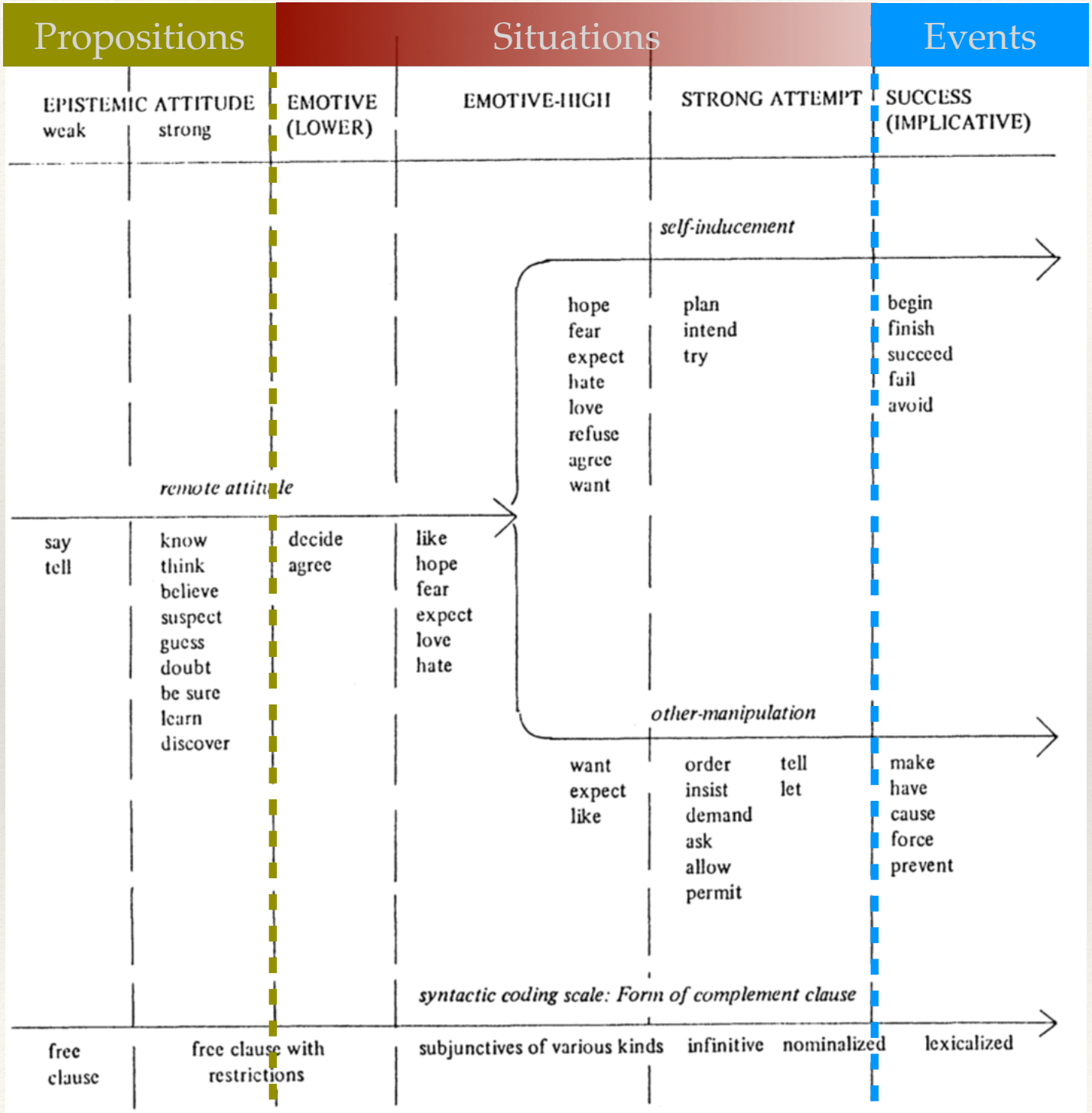
Implicational semantic hierarchy



Givón 1980: implicational hierarchy (functional definition)

Scale of (in)dependence (from the matrix clause).

Implicational semantic hierarchy



Wurmbrand & Lohninger to appear:

Define the Implicational complementation hierarchy (ICH) via three broad semantic complement types (finer grained distinctions possible; Question 3).

Questions

- Cross-linguistic variation in complementation
- Ontology of the ICH
- Modeling the implicational relation
- Mapping between ICH and syntax

Universals and variation

Universal	Variation
SM(I)Ds* operate along the ICH.	SM(I)Ds may be neutralized.
SM(I)Ds cannot go against the hierarchy.	SM(I)Ds can have different cut-off points on the hierarchy.
Classes are defined by the meaning of the complementation configuration.	Verbs may change meaning based on the morphosyntax of the complement.
Certain degree of vagueness of the categories.	"Fuzzy" edges (e.g., Bryant 2021 for strong epistemic verbs in Oromo) Multiple class membership: promise (Proposition, Situation); try (Situation, Event)

* SM(I)Ds: syntactic and/or morphological (in)dependence properties

Clausal domains

- Ramchand and Svenonius 2014: Broad clausal domains correspond to conceptual primitives Events (theta domain), Situations (TMA domain), Propositions (CP domain).
- Moltmann 2021: Possible alternative—distinction between the directions-of-fit of the attitudes involved.
- Wurmbrand & Lohninger to appear: Complement types can be classified in the same way.

Containment

- Ramchand and Svenonius 2014: Situations are elaborations of Events (combine time/world parameters with existentially closed Event), Propositions are elaborations of Situations (combine speaker-oriented/discourse-linking parameters with existentially closed Situation).
- Complement types have different minimal requirements which stand in an implicational relation.

Minimal structure differences

- Translating into structure…
- Complement types have different minimal structures which stand in an implicational relation.

Proposition	Situation	Event
CP		
TP (or similar)	TP (or similar)	
Voice domain	Voice domain	Voice domain

No 1:1 syntax–semantics mapping

Partial autonomy of syntax: same meaning—different structures (vs. cartography).

Semantics	Proposition	Situation	Event
Syntax	CP	CP	CP
		TP (or similar)	TP (or similar)
			Voice domain

Possible complementation configurations (languages vary in the availability of these options, in particular CP Events are often excluded).

Debate: Implementation

- Small: Clause-building can stop when the minimal structure is reached (Wurmbrand).
- Big: Full clauses (CP domains) are built, followed by structure removal/exfoliation (Müller, Pesetsky).
- Hybrid: Only the minimal contentful structure is built, followed by adding deficient or semantically vacuous structure up to CP (possibly all approaches have a version of this).

Questions

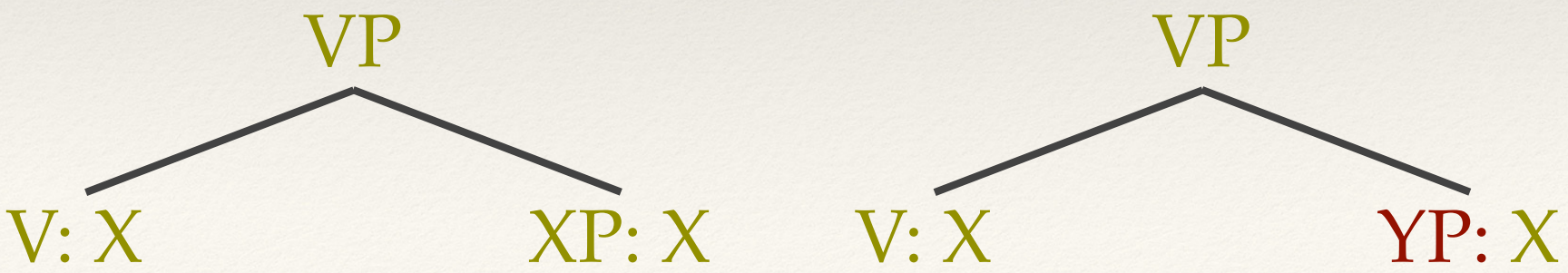
Small	Big
How is the implicational nature of the ICH derived?	
What determines when the clause building can stop?	What regulates the amount of structure removal?
What is the motivation for building additional structure?	What is the motivation for the initial building of full clausal structures (in particular when they are vacuous)?

Semantics	Proposition	Situation	Event
Syntax	CP	CP	CP
		TP (or similar)	TP (or similar)
			Voice domain

Answers for (at least) Small approaches

- Containment and minimal structures: derive the implicational nature of the ICH.
- Synthesis: determines when the clause building can stop.
- Independence properties (which diagnose the larger structure): may provide motivation for building additional structure.

Synthesis: Syntax computes structure (relatively) freely (no selection); output has to be interpretable and meet the restrictions of the parts (cf. Kratzer 2006, Moulton 2009).



Raising and control

Taking a step back

Fundamental questions:

- Shared labor of syntax and semantics
- Is control (whether raising or PRO) necessarily syntactic?
- Related debate: are (certain) control complements properties or propositions?

The road less traveled

- Object-to-subject promotion across control predicates (Long Passive, Crossed Control)
- Backward control (without movement)
- Implicit exhaustive control (Kovač 2021)

Goals:

- Bring new/less discussed phenomena and questions into the investigations and debates of control.
- Possibly provide insights for control in general.

Weird for English, but found cross-linguistically

The banana was tried to be eaten.

The banana tried to be eaten.

The banana was tried to eat.

Meaning of all of the above:
Someone tried to eat the banana.

Acehnese, Amis, Balinese, Chamorro, Croatian, Czech, Danish, European Portuguese, German, Indonesian, Isbukun Bunun, Italian, Japanese, Javanese, Kannada, Madurese, Malagasy, Matu'uwal Atayal, Norwegian (varieties), Puyuma, Samoan, Seediq, Serbian, Slovenian, Spanish, Squliq, Sundanese, Tagalog, Takibakha Bunun, Tongan, Tsou, Tukang Besi…

Long object A-dependency

The banana was tried to be eaten.

The banana tried to be eaten.

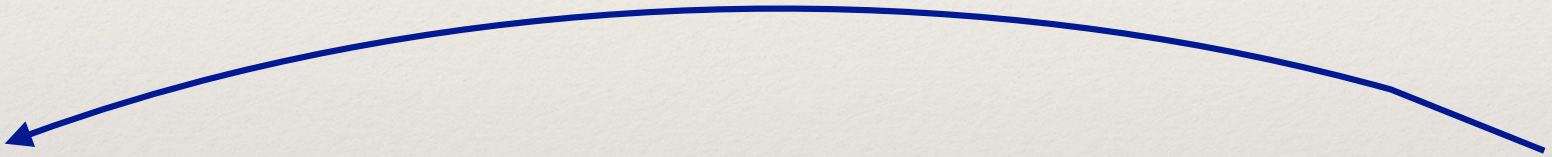
The banana was tried to eat.

Meaning: Someone tried to eat the banana.

Embedded object is promoted to matrix subject (via A-movement) across a thematic matrix "control" verb.

Morphology

One or both verbs are marked with morphology corresponding to object promotion (passive, patient voice).

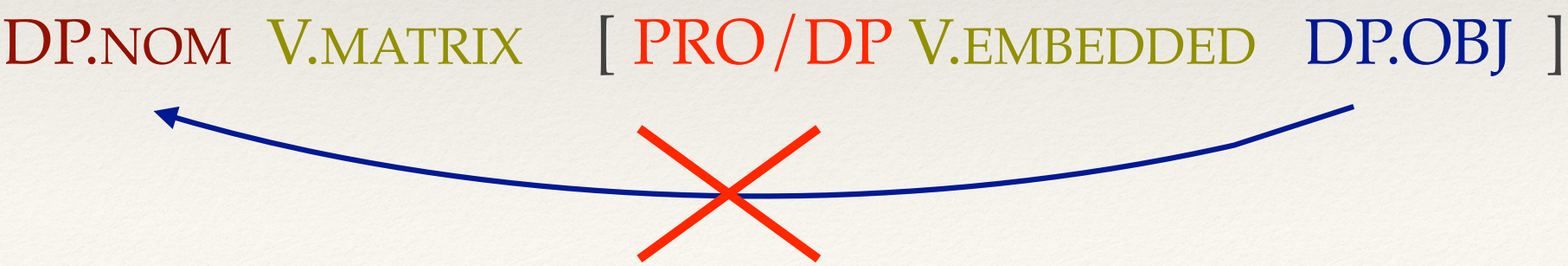


DP.SUBJ	V.PASS/PV	… [V	DP.OBJ]
DP.SUBJ	V	… [V.PASS/PV	DP.OBJ]
DP.SUBJ	V.PASS/PV	… [V.PASS/PV	DP.OBJ]

The banana (was) tried … [to eat/to be eaten]

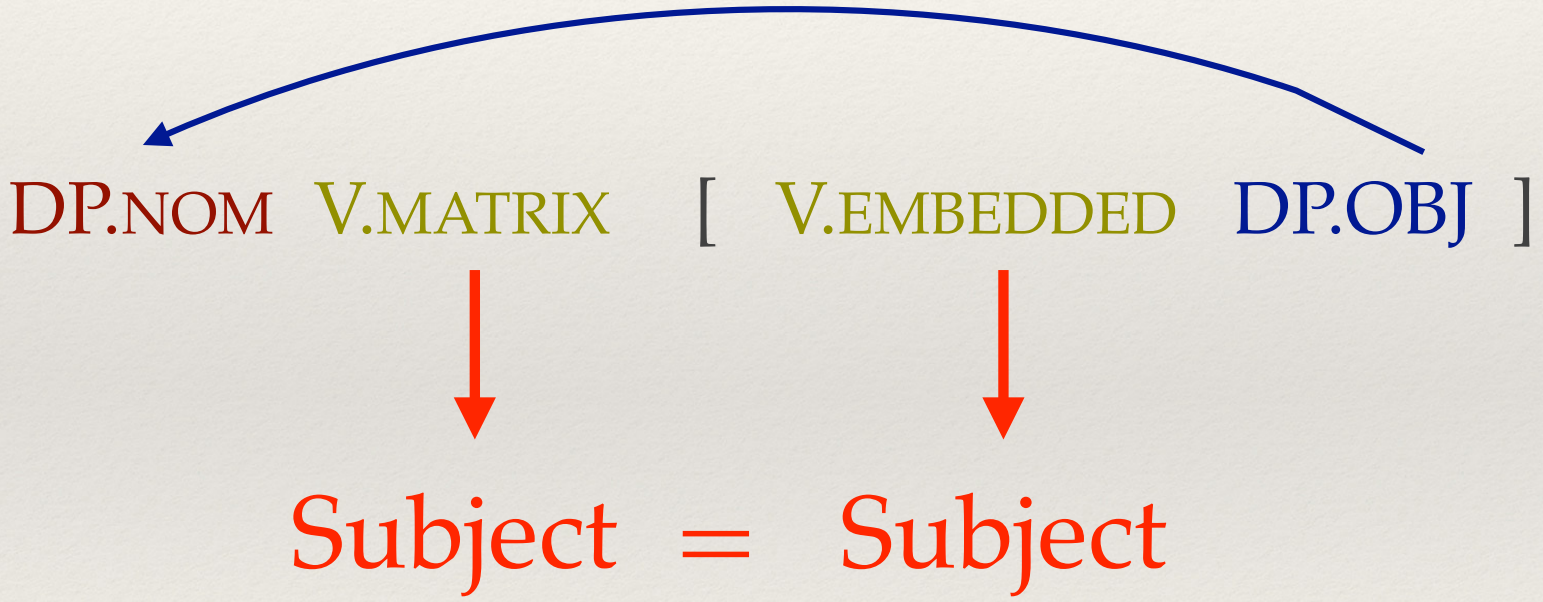
Syntactic properties

- Only possible with exhaustive control predicates.
- There is no embedded syntactic subject argument (there may be a clitic subject in certain languages).



Raising AND control

- There is an obligatory semantic control relation.

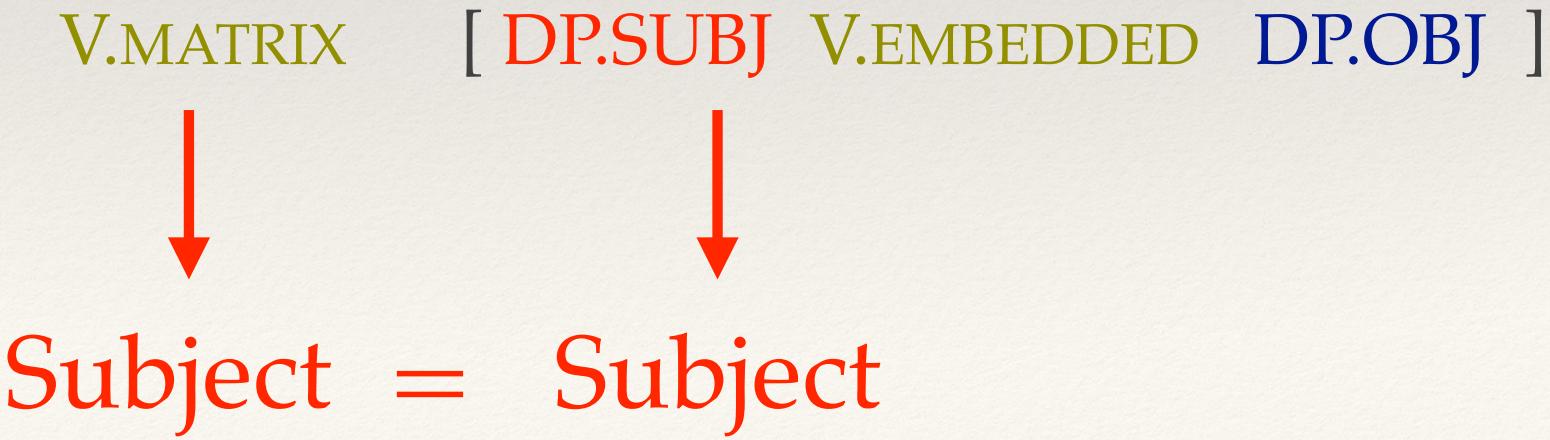


Mechanisms: lexical/semantic rule (Chierchia 1983, 1984a,b, Wurmbrand 2001, 2002, Polinsky and Potsdam 2008, Grano 2015); clause union, incorporation (among others, Aissen and Perlmutter 1976, 1983, Sato and Kitada 2012, Kroeger and Frazier 2020); Voice dependency (Wurmbrand and Shimamura 2017)

Backward control

Pietraszko 2020:

- In Ndebele control constructions, the subject can appear in the embedded clause—backward control.
- Backward control does not involve movement (neither overt nor covert), nor an agreement dependency.
- The "control" dependency is derived semantically via index agreement.



Shared labor

- Syntax: needs to provide the configuration for a shared semantic subject (without projecting an actual subject):
  - The subject-less predicate must be compatible with a subject (e.g., unaccusatives are impossible).
  - Some form of a syntactic dependency between the predicates takes place (e.g., index binding, Voice sharing).
- Semantics (of exhaustive control verbs): Identifies the matrix and embedded agents (even when implicit).

Exhaustive control: always semantic?

- PRO/movement approaches cannot (easily) derive these configurations.
- Given that semantic control must be an option in grammar (even if it is only noticeable in certain constructions), a possible direction is to always derive exhaustive control semantically.
- This would not entail that, globally, PRO (or movement in backward control) does not exist—it only means that it would not be necessary for the interpretation; there may be syntactic factors (e.g., EPP) that require these.

Classification of control

	Syntactic views	Alternative
Exhaustive control	PRO/trace	Semantic dependency
Partial control	*pro* (+ PRO)	PRO
Non-obligatory control	*pro*	*pro*

The nature of complementizer

Selection of properties related to C

- Semantic types of C
- Selection of syntactic properties of C
- Finiteness and C

Semantic C-related phenomena

- Interrogative semantics
- Indexical shift
- Logophoricity, binding, pronouns
- Control, *de se* contexts
- Evidentiality, commitment
- Speech act differences
- (Semi-)Quotations, direct/indirect/mixed discourse

Semantic composition of CP

- Trend: finer grained left periphery (beyond/instead of information structural projections in the CP).
- Speech act, speaker/addressee information in a decomposed CP (following Speas and Tenny 2003, Giorgi 2010, Wiltschko 2014).
- Different types of Proposition complements created by truncation, in accordance with the ICH.

Dayal 2020	SAP (speech act)	ForceP	CP
Deal 2017	OP_{LOC}	OP_{ADDR}	OP_{AUTH}
Krifka 2018	ActP (speech act)	ComP (commitment)	JP (judgment)
Rabinovich 2020	UP (utterance)	ForceP	CP
Sundaresan 2013	CP	Speech-ActP	PersP (perspective)

A-dependencies

- A-dependencies (raising, ECM, agreement): in some languages restricted to non-finite complements (*Nova seems (that) is cute.)
- Common view: ECM, raising infinitives are smaller than finite clauses.
- But cross-clausal A-dependencies across finite CPs exist in many languages:
  - Raising: Bantu, Bhojpuri, Brazilian Portuguese, Cantonese, Dholuo, Finnish, Greek, Jordanian Arabic, Kipsigis, Lubukusu, Maithili, Moro, Moroccan Arabic, Rumanian, Persian, Tagalog, Vietnamese, Zulu
  - ECM: Buryat, Chamorro, Dholuo, Fijian, Herero, Janitzio P'urhepecha, Japanese, Kipsigis, Korean, Mongolian, Nez Perce, Tatar, Turkish, Uyghur
  - Agreement: Innu-Aimûn, Nez Perce, Tsez

A/Ā nature of CP

- One option for regulating the (im)possibility of finite A-dependencies is to follow the view that CPs are not exclusively Ā-domains.
- Coon and Bale 2014, van Urk 2015: A single head can have both A and Ā-features; an XP agreeing with both types of features inherits the mixed A/Ā-property of that head.
- If in a language C (also) has A-features/properties, movement to the CP qualifies as A-movement, and further (finite) A-movement to the matrix clause is possible (Wurmbrand 2018, Fong 2018).

Other syntactic CP-related correlations

- Gärtner (2009): If a language has wh-infinitives, then its pronominal system does not have a robust indefinite/interrogative ambiguity.
- Lohninger (2020): If in a language wh-movement is A-movement (Richards 1997), then it allows A-dependencies across finite clauses.
- Sabel (2006, 2015): If a language has wh-infinitives, then it has infinitival complementizers.
- Satik (2021): If a language has tough-constructions, then it has infinitival complementizers, wh-infinitives, and its pronominal system does not have a robust indefinite/interrogative ambiguity.

Two views

- Finiteness is solely a property of the CP (Fin): lack of CP entails lack of finiteness (Rizzi 1997).
- Finiteness is not restricted to the CP—lack of CP does not entail lack of finiteness (Adger 2007, Todorović and Wurmbrand 2019).

Finite, yet small

- Serbian: all types of complements can be finite (da + inflected verb).
- ICH effects are nevertheless observed (Stjepanović 2004, Todorović and Wurmbrand 2019).
- As predicted by the ICH, finite complements differ regarding a range of properties: long passive, overt subjects, free wh-ordering, NPI licensing, various word order differences, clitic climbing (see Jurkiewicz-Rohrbacher, Hansen, Kolaković 2017 for experimental evidence).

What is finiteness?

Typological conclusions (Nikolaeva 2007):

- The finite/non-finite distinction is not universal.
- No uniform cross-linguistic definition of "finiteness" is possible.
- "Finiteness" is not an elementary syntactic primitive.
- There is no single morpho-syntactic definition of "finiteness", nor a single semantic function associated with it.

Finiteness: language-specific morpho-syntactic property distinguishing free vs. dependent clauses.

A possible universal?

- Cross-linguistically, all types of complements can be finite or non-finite in at least some language (under the same meaning).
- Finiteness ≠ tense or other semantic property.

	Proposition	Situation	Event	
Greek, Bulgarian, Macedonian	+finite	+finite	+finite	
Serbian, Bosnian?	+finite	±finite	±finite	
English	+/±finite	±finite	−finite	
Slovenian, Bosnian?	+finite	±finite	−finite	
Croatian	+finite	−finite	−finite	
finite	⟷			non-finite

Wurmbrand, Kovač, Lohninger, Pajančič, Todorović 2020

Thank you!