# Sinfonija 13, Budapest September 24, 2020 Accounting for cross-linguistic variation in modification by depictives\* David Erschler Ben-Gurion University of the Negev erschler@bgu.ac.il

# 1. Introduction

## **1.1 Depictives**

- Depictives are constituents (typically APs) that describe a stage-level property of a participant of the situation described by the main verb.
- A depictive must not be a subconstituent of the DP that expresses the participant.
- I will use the term "host" for the participant modified by the depictive, and indicate the relationship between a depictive and its possible hosts by indices.
- (1) a. Mary<sub>i</sub> ate the fish<sub>j</sub>  $raw_{\#i/j}/ drunk_{i/\#j}$ .
  - b. Johni served Maryj coffee **drunk**i/\*j.
  - Depictives have been the subject of a vast literature, see e.g. Himmelmann & Schultze-Berndt (2004), Rothstein (2017), Potsdam & Haddad (2017), and the references there.
  - The semantics and, to some extent, the morphological marking of depictives, have been relatively extensively studied crosslinguistically, see, e.g. Schultze-Berndt & Himmelmann (2004); Himmelmann & Schultze-Berndt (2005); Schroeder et al. (2008), and Schultze-Berndt (2017).
  - The variation in what can serve as a depictive host across languages has been studied much less.

## **1.2 Possible depictive hosts**

- In English, only subjects and direct objects can serve as hosts<sup>1</sup>, Williams (1980).
- The same pattern obtains in several other well-studied languages, e.g. Spanish, Demonte (1987), Basque, Obria (2014) via Bárány (2018).
- But there are languages where it is not so, see e.g. Nichols 1978: (120-121) for Finnish (2), Marušič et al (2003; 2008) for Slovenian, and Irimia (2005) for Romanian and Albanian.

<sup>&</sup>lt;sup>\*</sup> The main bulk of the data for this work was collected during my fieldwork in North Ossetia in 2010-2013 in the city of Vladikavkaz and in the village of Lesken. I thank the Takazov family for their hospitality; Aslan Guriev, Elizaveta Kochieva, and Fedar Takazov for crucial help in organizing the work, and for all my consultants for their immensely generous and patient cooperation. I'm grateful to Arbilana Abaeva, Uruzmag Abaev, Tsara Dzhanaev, Elizaveta Kochieva, Andzhela Kudzoeva, and Fedar Takazov for some last-minute judgments. I thank Arzhaana Syuryun for a discussion of the Tyvan data. Thanks go to Daniel Büring, Seth Cable, Kyle Johnson, Idan Landau, Tova Rapoport, and Rok Žaucer for their feedback and discussions at various stages of this research.

<sup>&</sup>lt;sup>1</sup> This generalization has apparent exceptions, see Maling (2001) and Demonte (1987) for examples, and Pylkkänen (2008) for a discussion.

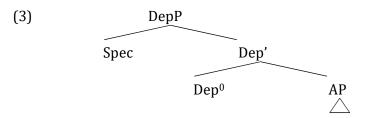
(2) Finnish, Nichols 1978

proilahetimmehänellejrahaalapsenai/j1PLwe.sents/he.ADESS<sup>2</sup>money.PARTchild.ESS'We sent him money as a child (when we/he were/was a child)'

• There has been relatively little systematic cross-linguistic research on what constituents can be modified by depictives.

# 1.3 DepP

- I will use the notation DepP for the immediate constituent containing a depictive.
- At a first approximation, there is a large consensus in the literature about the internal structure of DepP.
- The nature of Dep<sup>0</sup> and of its Spec depends on the specific proposal, more of that later.



• The head Dep<sup>0</sup> is assumed to be responsible for the idiosyncratic morphological marking that the adjective receives, e.g. the essive marking in Finnish (2), and for the depictive semantics.

## 2. Analyses in the literature

BASIC QUESTIONS:

- How is the relation established between a depictive and its host?
- What is the syntactic position of the depictive?

<u>MAIN CONTENDERS IN THE LITERATURE</u> for this relation:

- Control
- Binding
- Semantic combination with arguments at the LF
- Grafting of DepP to the finite clause
- Merger of DepP (with the host DP as its subject) in the position of the host.

## 2.1 Control of PRO

• Spec DepP is taken to be occupied by PRO. (Chomsky (1981: ch. 2.6); Safir (1983: 735); Stowell (1983); Hornstein & Lightfoot (1987: 27); Franks & Hornstein

<sup>&</sup>lt;sup>2</sup> Glosses and abbreviations: ADESS adessive; ABL ablative; ALL allative; Appl applicative; CVB converb; DAT dative; ESS essive; GEN genitive; INS instrumental; LOC locative; PART partitive; POSS.1/2/3.PL/SG possessive proclitic; PRV preverb; REFL reflexive; SUP superessive;

(1992); Bowers (1993); Legendre (1997: 44); Zhang 2001; Szajbel-Keck (2015); and others)

# 2.2 Binding

Rothstein (1983) for English; Bailyn (1995, 2012) for Russian; Richardson (2007) for Russian and other East Slavic languages.

- The restriction to subjects and direct objects was taken to be semantic by Rothstein (1983: 154).
- With the advent of a richer clause structure, specifically, with the introduction of vP and ApplP, this property has become to be deducible syntactically (more about this later).

# 2.3 Semantic combination with arguments at LF

Pylkkänen (2008):

- A specific proposal about the semantics of Dep and Appl (based on Geuder 2000).
- Applicatives can be "high" and "low", that is, they can be higher or lower than V<sup>0</sup>.
- The semantics of high and low applicatives are different.
- DepP can only adjoin to vP (VoiceP in her notation) and VP (for type matching reasons)
- DepP cannot combine with low applicatives (for semantic reasons) but can do so with high applicatives.
- Apparently, her analysis massively over-generates.
- Some of Russian indirect objects are demonstrably high applicatives, Boneh & Nash (2017), but they are still unable to be modified by depictives.
- Bruening (2010, 2018a, 2018b) effectively argues against the low-applicative analysis of ditransitives in English.
- If Bruening's reasoning is correct, Pylkkänen's analysis is inapplicable even to English.

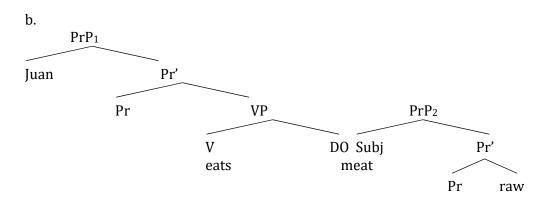
# 2.4 Grafting

- Rapoport (1999) for English; You (2016) for Spanish; Rapoport & Irimia (2018)
- DepP and the rest of the clause are derived separately.
- Then, a multidominant structure is created.

(4)	Spanish, You (20	16: 723-725)

a. Juan comió la carne cruda

J. ate DEF.F meat raw.F.SG 'Juan ate the meat raw.'



- Rapoport (1999) and Irimia & Rapoport (2018) implement grafting differently.
- It is unclear how such systems account for restrictions on the type of a host.

### 2.5 Merger of DepP in lieu of the host DP: Marušič et al (2003, 2008) for Slovenian

- In Slovenian, no restrictions are reported to obtain on DPs that host depictives.
- Proposal: The host DP is the subject of a small clause whose predicate is the depictive. The respective small clause is merged wherever the respective DP could be merged.

(5) Slovenian, Marušič et al. (2008) Vidai Včeraj smo a. na vesterdav Vid.ACC AUX.1PL onto čisto naleteli Prešercu še **pjanego**i na completely drunk Prešeren.square still ran on 'Yesterday we ran into Vid at Prešeren square, and he was still completely drunk.' PP b. Р DepP

• It's not fully clear how to modify this proposal to make it sensitive to differences between hosts.

Dep<sup>0</sup>

AP

Tuble In Toposea analys	1	
Type of Proposal	Languages it's been	Predicted restrictions on the
	proposed for	host
Binding	English, Eastern Slavic	to be explored
Control	English, Polish	to be explored
Merger of DepP in lieu	Slovenian	no restrictions on the host
of the host DP		
Composition on LF	proposed to be universal	S, DO, High applicatives <b>in</b>
		Low applicatives <b>out</b>
Grafting &	English, Spanish	no obvious restrictions
Multidominance		

**Table 1.** Proposed analyses and their predictions

DP

- Out of these, the grafting-based approach and that of Pylkkänen (2008; 2010) can be rejected out of hand.
- The main contenders for depictives sensitive to the type of a host are binding and control.

### My proposal:

- Spec DepP is occupied by a null anaphor.
- The relationship between a host and a depictive is that of anaphoric binding.
- As standardly assumed in binding-based approaches, different readings correspond to different base positions of the DepP.
- Across languages, DepP can adjoin to VP, ApplP, and vP.
- I conjecture that the binding-based approach (with varying adjunction sites) can account for the entire range of cross-linguistic variation.

### The argument briefly

- I first look at one case study, that of Ossetic, with a pattern of depictive hosting very different from the "Standard Average European"
- "Depictive control" in Ossetic is very different from the "normal" adjunct control. Only subjects and direct objects may control non-finite adjuncts.
- On the other hand, the relationship between a depictive and its host is reducible to binding under c-command (with some additional assumptions).
- The arguments are of the same type that are standardly marshalled to tell apart control and binding, Landau (2013: 57-58).

## 3. Case Study: Depictives in Ossetic

### 3.1 Background on Ossetic

- Ossetic: Two closely related Iranian languages, Iron Ossetic and Digor Ossetic, spoken in the Central Caucasus, Erschler (2018; to appear).
- Predominantly head final, with a moderately large case system, for a recent nanosyntactic analysis of case in Ossetic, see Caha (2019).
- The case is marked on the right edge of DP.
- The DP is rigidly ordered and unsplittable; it shows no overt agreement, either in case or in number, (6).

(6)	a.	at∫i this 'this b	ustur big ig white	white	horse		Digor Ossetic
	b.	this	ustur-Ø big ese big v		wors-Ø white lorses'	bɐχ- <b>t-en</b> horse-PL-DAT	Digor Ossetic

• The constituent order in a finite clause is relatively flexible (see Kudzoeva (2003) and Erschler (2012) for a discussion of restrictions it is subject to).

### 3.2 Depictives in Ossetic 3.2.1 Marking and Meaning of Depictives

• Depictives are obligatorily marked with the ablative, (7a), no matter what the case of the host DP is. They do not agree with the host in number (7 b).

(7)	a.	soslan < <b>tuzmeg-*(ej)&gt;</b>	ratsudej	<tuzmeg-*(ej)></tuzmeg-*(ej)>	Digor
		S. angry-ABL	s/he.left		
		'Soslan left angry.'			

b. inne-tæ=ba **eguppeg-ej** baduntse other-PL=CTR silent-ABL sit.PRS.3PL 'Others are sitting silent.' Ik'ati 2011: 23

• In other instances of non-verbal predication, the ablative marking does not arise.

(8)	a.	copular clau	ses		
		je=dɐr	kedzos	adtej	Digor
		it.NOM=too	clean. <b>NOM</b>	was	
		'It (air) was clean too.' (from a recorded narrative)			

- b. 'become X' se=tsard=der tsubur issej Digor their=life.NOM=too short.NOM became 'Even their life became short.' (from a recorded narrative)
- <u>CONCLUSION</u>: Depictives are a separate class of predicates in Ossetic, *cf* the argument of Matushansky's (2019) against a one-serves-all PredP.
- I assume that the ablative is assigned to the AP by Dep<sup>0</sup>.

## 3.2.3 Depictive hosts: Arguments vs. Adjuncts

• Any verb argument in Ossetic, no matter which morphological case marks it (except the Iron comitative), can host a depictive.

(9)	a.	Subject; Dire	ct object				
		ezine	ervong-ej <sub>i/j</sub>	soslan-i <sub>j</sub>	proi	fejjidton	Digor
		yesterday	sober-ABL	S-ACC		I.saw	
		'Yesterday, I s	saw Soslan (w	hen I/Sosla	in was) so	ber.'	
		Idiosyncratic	ally marked se	econd argui	ment		
	c.	Ablative 'to fe	ear X-ABL'				
		soslani <b>xeteg</b>	ejj <u>rasug</u>	-ej <sub>i/j</sub> ter	suj		Digor
		S Kh-AB	L drunk	-ABL fea	irs		
		'Soslan fears	Khetag drunk.	,			

d. Superessive 'to trust X-SUP'

soslani	<b>xeteg-</b> belj	<u>rasug</u> -ej <sub>i/j</sub>	ewwenduj	Digor
S	X-SUP	drunk-ABL	trusts	
'Soslan tru	ists Khetag drun	ık.'		

Ditransitives

e.	dative	e marked hos	t			
	soslar	hi <b>xeteg-en</b> j	ma∫in-i	qerel-te	<u>rasug-ej</u> i/j	ravardta
	S	Kh-dat	car-GEN	key-pl	drunk-ABL	gave
	'Sosla	n <sub>i</sub> gave Kheta	ag <sub>i</sub> the car key	vs when he <sub>i/j</sub> wa	as drunk.'	Digor

- f. ablative marked host (Iron Ossetic) foflan **χeteg-ej**<sub>j</sub> maſin-ə deʁel-te **raſəg-ej**<sub>i/j</sub> rajſta S Kh-ABL car-GEN key-PL drunk-ABL took 'Soslan<sub>i</sub> took the car keys from Khetag<sub>j</sub> when he<sub>i/j</sub> was drunk.'
- On the other hand, for the majority of consultants, adjuncts are never able to be modified by depictives. The subject wins out even when the resulting interpretation is pragmatically odd, like in (10a).

(10)	a.	Case-marked adjunct	
		tikis <sub>i</sub> <b>soslan-bel</b> j <b>rasug-ej</b> i/*j xussuj	Digor
		cat S-SUP drunk-ABL sleeps	
		'The cat sleeps on Soslan (when it/*Soslan is) drunk.'	
	b.	PP adjunct	
		soslan alan-i <b>razi</b> rasug-ej lewuj	Digor
		S A-GEN in.front.of drunk-ABL stands	
		'Soslan stands in front of Alan drunk'	

- The contrast between the superessive NPs in (9d), where it's an argument, and in (10a), where it's an adjunct, show that it is not the case marking, but indeed the argument/adjunct status that is responsible for the ability of NPs to control depictives in Ossetic.
- Possessors cannot host depictives.

(11)	[ <b>soslan-</b> i <sub>i</sub>	χedzare <sub>j</sub> ]	pasnrqaj	rasug-ej* <sub>i/j</sub>	
	Soslan-GEN	house	burned	drunk-ABL	
	'Soslan's house burned drunk.'				

## 4. Towards an analysis

## 4.1 Against control

- The behavior of control clauses is very different from that of depictives.
- We are interested primarily in control into adjuncts, because Deps are adjuncts, but control into complements behaves in the same manner.
- Converb clauses can only be controlled by subjects or direct objects, see also Belyaev & Vydrin (2011: 123-124) for Iron Ossetic.

(12) Subject control

a.	soslani je=nsuver-ejj	[PRO <sub>i</sub> /*j	χod-gɐ-j]	raledzuj
	Soslan POSS.3SG=brother-	ABL	laugh-CVB-ABL runs.away	
	'Soslan is running away from his brother laughing			Digor

b.	Object control			
	soslan medin-i <sub>j</sub>	fejjidta	[PRO <sub>j</sub> zar-ge-(j)]	
	Soslan Madina-ACC	see.pst.3sg	sing-CVB-ABL	
	'Soslan saw Madina	Digor		

- Other arguments cannot control converbial clauses, although we have seen that they can serve as depictive hosts.
- This is illustrated for a dative-marked IO in (13a). The sentence with a depictive in (13b) serves as a minimal pair.

(13)	a.	fidei	e=furt-en <sub>j</sub>	qerelte	Digor
		father.NOM	poss.3sg=son-dat	keys	
		[kust-me	PRO <sub>i/*j</sub> ratsewu-ge-j]	ravard	lta
		work-ALL	go.away-CVB-	BL give. P	st.3sg
		'The father <sub>i</sub> le	eft the keys to his son <sub>j</sub>	when PRO <sub>i/*j</sub>	leaving for the work.'

b. soslani **Xeteg-en**j mafin-i debel-te **rasug-ej**i/j ravardta S Kh-DAT car-GEN key-PL drunk-ABL gave 'Soslani gave Khetagj the car keys when hei/j was drunk.'

<u>CONCLUSION</u>: The relationship in Ossetic between a DepP and its host is not that of control.

### 3.2 In favor of binding 3.2.1 What can bind anaphors

- Subjects and DOs can bind anaphors
- (14) a. Subject

ez	mɐ=χe	enamond	ne=xon-un	Digor
Ι	POSS.1SG=R	EFL unlucky	NEG=call-PRS.1SG	
ʻI do	not call myse	elf unlucky.' Agł	nuzarti A.	

- b. DO soslan-i **e=xe xetstse** ba-zonge kodton S-ACC POSS.3SG=self with PRV-known do.PST.1SG 'I introduced Soslan to himself.'
- Arguments with lexical case marking can bind anaphors

### (15) Iron Ossetic

'to believe (in) X-sup'							
∫o∫lan-əli	je=mad	ewwendə	je=xii	fersə			
Soslan-SUP	POSS.3SG=mother	believes	poss.3sg=refi	for.the.sake			
'Soslan's moth	ner believes in him f	or his own (lit.	himself's) sake	e.'			

• IOs can bind anaphors

(16)	a.	S-ALL	ɐ=χe <sub>i/*j</sub> POSS.3SG=self ι Soslan himse	I.showed	l	Digor
	_	Thave shown	i sosiali ililise			

- b.  $e=\chi e-me_{i/*j}$  soslan-i<sub>i</sub> bavdiston Digor Ossetic POSS.3SG=self-ALL S-ACC I.showed *Idem*
- As we have seen, all these entities can serve as depictive hosts.

#### 3.2.2 What cannot bind anaphors

• Adjuncts cannot bind anaphors (17).

(17)	χetɐgi	radzoruj	soslan-bel <sub>j</sub>	e=xets-eni/*j	Digor	
	Kh.NOM	tells	Soslan-SUP	poss.3sg=refl-dat		
	*'Khetag is telling himself; about Soslan;.'					

• Possessors and PP complements cannot bind anaphors

(18)	a.	Possessor					
		batradzi	warzu	ıj[ɐ=χe-bɐl <sub>i/*j</sub>		soslan-ij	radzur-te-me
		Batraz	loves	POSS.3SG=RE	FL-SUP	Soslan-gen	story-PL-ALL
		PRO <sub>i</sub> isos-u	n]				-
		listen-	·INF				
		'Batraz <sub>i</sub> loves	to liste	en to Soslan <sub>j</sub> 's	s stories	about himself	i/*j.' Digor
	b.	Postposition	comple	ement			
		*е=хе		soslan-i	χetsts	e ba-zonge	kodton
		POSS.3SG=self.	ACC	S-gen	with	PRV-known	do.pst.1sg
		lit. 'I made hi	mself <sub>i</sub> a	acquainted w	ith Sosla	ını.' (intended)	Digor
•	As wa	have seen a	diunct	e noccoccore	and P	P complement	ts cannot serve a

• As we have seen, adjuncts, possessors, and PP complements cannot serve as depictive hosts.

<u>CONCLUSION</u>: A full parallelism exists between hosting depictives and binding anaphors in Ossetic.

### 4. Proposal

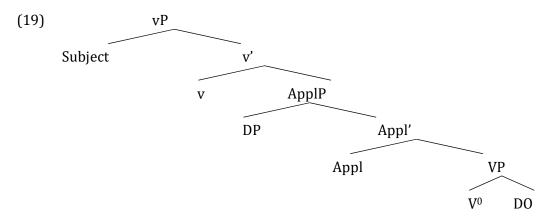
To repeat, <u>BASIC QUESTIONS</u>:

- How is the relation established between a depictive and its host?
- What is the syntactic position of the depictive?

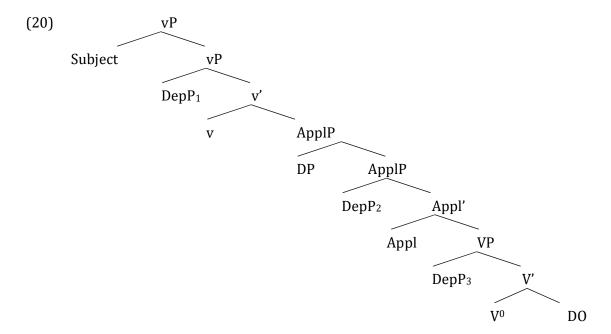
#### 4.1 Basic Answers

✓ The relation is that of anaphoric binding under the appropriately defined ccommand relationship. Specifically, I assume that only maximal projections count for the purposes of c-command (m-command).

- ✓ DepP can adjoin to VP, ApplP, and vP.
- I make fairly standard assumptions about the clause structure (19).
- Nothing in the proposal depends on whether DO is generated as the complement of V<sup>0</sup>, as shown in (19), or as the specifier of a respective functional projection, as in Borer (2005); Ramchand (2008), Adger (2013), a.o.
- Likewise, nothing hinges on whether idiosyncratically case-marked internal arguments (9 c-e) are Spec ApplPs or are the complements of the respective V<sup>0</sup>'s.



- REMARK: The order DO>IO is also possible, see the binding facts in (16).
- Accordingly, DepP may occupy the positions shown in (20).
- In (20), DepP<sub>1</sub> is a subject-oriented depictive; DepP<sub>2</sub> is an applicative-oriented depictive; and DepP<sub>3</sub> is an object-oriented one.



• The c-command relationship between a DP and a depictive that modifies it must hold at the base position. It doesn't need to hold on the surface.

(21) rasug-eji <soslan-ii> neked fejidton <soslan-ii> Digor drunk-ABL Soslan-ACC never I.saw Soslan-ACC 'I've never seen Soslan drunk.'

### 4.2 Deriving the properties of Ossetic depictives

- RULING IN ARGUMENTS: this follows immediately from the c-command condition.
- RULING OUT PP COMPLEMENTS AND REGULAR POSSESSORS (that is, possessors other than in idiomatic expressions): this again follows immediately from the(underlying) c-command condition.
- Possessors occupy Spec DP in Ossetic, Erschler (2019).

RULING OUT ADJUNCTS

- ✓ Adjunct bare DPs are introduced by null adpositions.
- ✓ Alternatively, we may just posit that adjuncts cannot bind in Ossetic.
- Either assumption is unfortunately stipulative, but at least it reduces restrictions on depictives to restrictions on anaphor binding

### 4.3 What exactly is bound?

- Ossetic data do not allow us to decide whether Spec DepP is null (in which case the host binds Dep<sup>0</sup> or DepP) or occupied by a dedicated anaphor.
- The locality domain for this anaphor in the Ossetic can be taken to be the minimal finite clause.

### 5. Cross-linguistic generalizations

- CONJECTURE: cross-linguistically, binding can account for the properties of the depictives
- The variation comes from variation in the lexical properties of Dep<sup>0</sup> and in the binding properties of the anaphor in Spec DepP.
- The lexical properties of Dep<sup>0</sup> are responsible for possible adjunction sites of DepP.
- The size of the binding domain of the anaphor is its lexical property.

### 5.1 Why does the binding domain matter?

**CASE STUDY 1**: Russian instrumental-marked depictives

- Russian has object-oriented depictives, but lacks applicative-oriented ones.
- - IOs are able to bind DOs in Russian (see e.g. Nash & Boneh 2017)

<sup>&</sup>lt;sup>3</sup> The judgment that the depictive can be DO-oriented is mine.

- If the binding domain of depictives were the same as for regular anaphors, we would have predicted that applicatives would be able to bind depictives adjoined to VP.
- Proposal: the binding domain of the respective depictive anaphor is the category it adjoins to.
- Under this assumption, DepP adjoined to VP is not visible either the subject or any applicative.

**CASE STUDY 2:** Tyvan (Turkic)

• Tyvan only has DO-depictives; subject depictives are expressed by converbial clauses, Nevskaya (2019).

(23)		Tyvan, Nevskaya (2019)				
	a.	ol	etti	čig-ge	či:r	
		he	meat-ACC	raw-DAT	eats	
		'He ea	eats meat raw.'			
	b.	ol	anïyaq tur-γaš čoq.apar-γai			
		s/he	young stand.	AUX-CVB die-P	ERF	
		'S/he	died young.' (l	it. 'being your	ıg')	

PROPOSAL: DepP only can adjoin to VP in Tyvan, and VP serves as its binding domain. CONJECTURE: Depictive anaphors always have the narrow binding domain.

Adjunction site of DepP	Predictions	Languages				
DP	no sensitivity to the type of	Slovenian;				
	a host	possibly case-agreeing				
		depictives in Russian				
vP	only subject depictives	?				
VP	only object depictives	Tyvan				
vP, VP	subject and object	The Standard European				
	depictives	system				
vP, VP, ApplP	any arguments	Ossetic				

#### Table 2. Cross-linguistic predictions

#### 6. Conclusion

- A binding-based account has enough flexibility to explain the cross-linguistic variation in the realm of depictives.
- Further typological research is needed to check whether languages exist where only subjects are able to host depictives.

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