A unified account of Ancient Greek participles across syntactic contexts

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Participles: syntactic contexts

Participles in Ancient Greek occur in a variety of different contexts:

1. as **NP adjuncts** (≈ attributive use, "**adnominal participles**", Lowe 2015)
2. as clausal or VP-adjuncts (≈ predicative use, "**circumstantial participles**"; "converbal participles", Lowe 2015); modifying the clause or the main predicate
   - 2.1 with case & nominal agreement morphology via agreement with a head noun in the matrix clause (PRO subject)
   - 2.2 with case & nominal agreement independent from the matrix clause (genitive subject); "absolute constructions", e.g., the **genitive absolute (GA)**
3. as **complements** to verbs of perception and knowledge and "phase verbs" (*begin*, *stop*...)
4. *Perfect* participles are moreover used in a **periphrastic perfect construction (PPC)**

- These contexts are rarely treated together.
- Are they all (syntactially/semantically) "identical"? (Wegner 2019)
- Why do participles occur in these particular contexts, rather than finite verb forms?

Core claims

- AG participles are structurally identical across contexts → **AG participles always spell out Asp**
- Their distribution follows from Spell-Out conditions on Asp in different types of contexts & from the feature content of different types of clausal functional heads (T and C)

→ Participles share some verbal functional structure with finite verbs, but occur in environments in which the verb stem cannot combine with T & Agr features.

(1) a. $\sqrt{}$-*v*-Voice-Asp-(Mod)-**T-Agr** (finite verb)
b. $\sqrt{}$-*v*-Voice-Asp(-???) (nonfinite verb/participle)

Participial morphology = *non-finite Asp(ect)*

Proposal: Ptcp = Asp

- "PTCP" (participial morphology) spells out Asp when the verbal stem cannot move to T.
  - Embick 2000, 2003, 2004b; Embick & Halle 2005; Bjorkman 2011
  - Participial morphology as realization of (underspecified?) Asp also in Alexiadou & Anagnostopoulou 2008; Alexiadou et al. 2015; Grestenberger 2018, 2020; Calabrese 2019, 2020 etc.
- "PTCP" = a contextual allomorph of Asp.
  - Can realize different features of Asp (e.g., perfective vs. imperfective).
  - Can realize Asp in different environments, e.g. adjacent to Voice[±ext.arg.] → nonactive/middle participles, Grestenberger 2018, 2020.

Ptcp = Asp

- Based on Embick (2000)'s analysis of perfect passive participles in Latin, specifically the periphrastic passive
- In Latin, the perfect active and the present active/passive are synthetic while the perfect passive is analytic, (2).
- Embick: the *combination* of Voice[PASS] and Asp[PFV] blocks the formation of a synthetic verb form.

(2) PPCs in Latin

present active	present passive	perfect active	perfect passive
*am-**ō***	*am-**or***	*amā-**v**-**ī***	*amā-**t**-us/a sum*
'I love'	'I am loved'	'I loved'	'I was loved'

Applying PTCP = Asp to Ancient Greek

In addition to (and eventually replacing) its inherited synthetic perfect, Ancient Greek develops a periphrastic perfect construction (PPC) consisting of the active/nonactive perfect participle + a BE-auxiliary (= εἶναι)

(3) Periphrastic perfect forms of λύω 'release'

		Ptcp.act.	Ptcp.mid.	Aux.act. BE	Aux.mid. BE	
a.	Pf.act.	λελυκώς		εἰμι		'have released'
b.	Pf.pass.		λελυμένος	εἰμί		'have been —'
c.	Plupf.act.	λελυκὼς		ἦν		'had released'
d.	Plupf.pass.		λελυμένος	ἦν		'had been released'
e.	Pf.act.	λελυκὼς		ὦ		'shall release'
f.	Pf.pass.		λελυμένος	ὦ		'shall be released'
g.	Pf.act.opt.	λελυκὼς		εἴην		'might release'
h.	Pf.pass.opt.		λελυμένος	εἴην		'might be released'
i.	Fut.pf.act.	λελυκὼς			ἔσομαι	'will have released'
j.	Fut.pf.pass.		λελυμένος		ἔσομαι	'will have been —'

$\sqrt{}$-v-Voice/Asp(?) on the participle; (Mod)-T-Agr on the auxiliary

Voice and Asp in AG PPCs

In the case of Ancient Greek, the relevant features that block movement cannot be on Voice (both active and nonactive forms in the PPC are analytic), nor PFV (the aorist is synthetic) — unlike in Latin (Embick 2000; Bjorkman 2011).

- Since the (Homeric/pre-Classical) synthetic perfect, and especially the perfect participle, are usually characterized as *resultative* (Schwyzer 1939: 768, Haspelmath 1992, Bentein 2012a, 2012b, 2013, Napoli 2017), I assume that the feature that distinguishes the pre-Classical synthetic perfect from the aorist is **[RES]**.
- This feature became grammaticalized in the PPC, while the *synthetic* perfect became perfective and merged with the aorist (= Modern Greek)

Asp in participles

- By the end of the pre-Classical period, [RES] on Asp had developed into a marked (movement-blocking) feature → spelled out with nonfinite (= participial) morphology because it cannot combine with T
- Like in the periphrastic perfect passive in Latin, the copula BE picks up the stranded T and Agr features on T.
- AG participial morphology realizes Asp under different conditions (Grestenberger 2018, 2020, 2022):

(4) Vocabulary Items for AG Asp

a. Asp[RES]	↔	*-ot-/-os-*	/*v*/Voice[+D]⌢_
b. Asp	↔	Ø	/⌢_⌢T
c. Asp	↔	*-men-*	/Voice[-D]⌢_
d. Asp	↔	*-nt-*	

→ Participial morphology in AG spells out Asp that has not moved to T.

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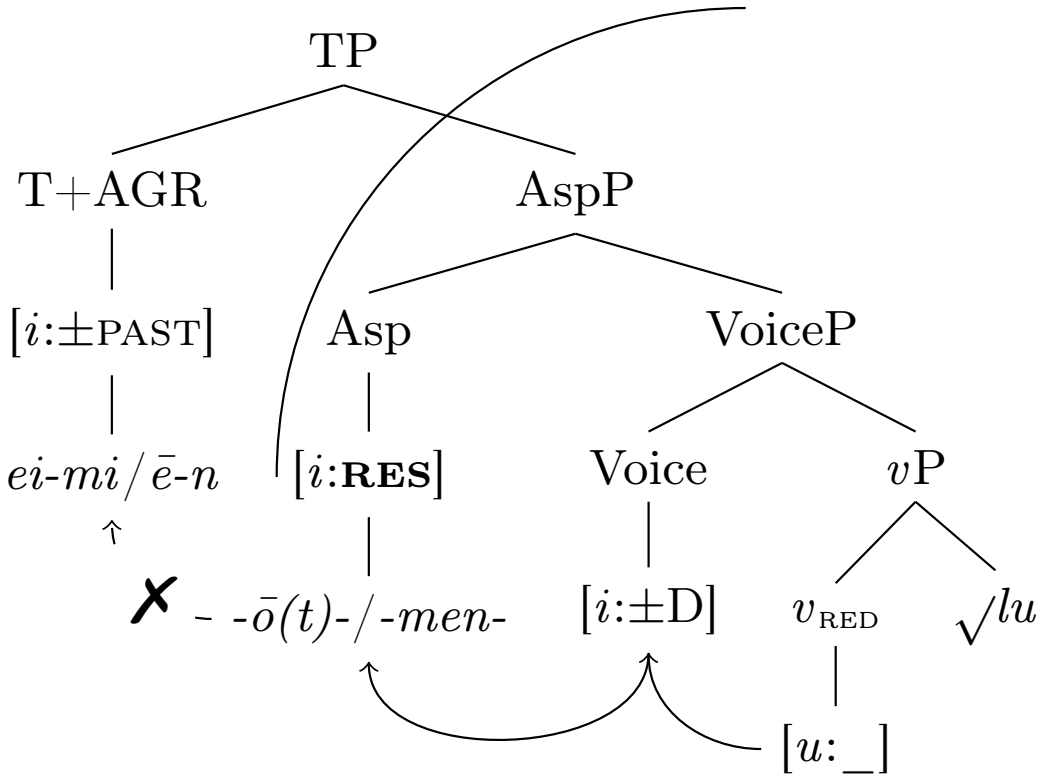
- **If participial morphology spells out Asp in the PPC, we also expect to see it in "tenseless" environments (the complement of verbs like *think, see, ..*, as NP-adjuncts, etc.)**

Deriving the periphrastic perfect indicative

(5) AG Perfect/pluperfect active/nonactive indicative:

le-lu-k-ō(t)-/-men- *ei-mi/ē-n*
PF-release-PF-PTCP.ACT/PTCP.NONACT BE-1SG.PRES.ACT/BE-1SG.PAST.ACT



Evidence for v & Voice

Assuming PTCP = Asp as given, how much additional "functional structure" is there in participles?

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- Participles (including attributive ones) can be modified by event- and manner-modifying adverbs → diagnostic for v/event structure, e.g., (6).

(6) ἑπτὰ δέ οἱ δώσω **εὖ ναιόμενα πτολίεθρα**
"I will give him seven **well-inhabited cities**" (Hom., *Il.* 9.149)

- All participles (including attributive ones) can be used in active–nonactive voice-alternation contexts → diagnostic for VoiceP

(7) Passive GA with agent *by*-phrase (Hdt., *Hist.* 1.19.1; George 2005: 24)
τῷ δὲ δυωδεκάτωι ἔτεϊ [**ληίου ἐμπιπραμένου ὑπὸ τῆς στρατιῆς**] ...
"In the twelfth year, [**as the crops were being burned by the army**] ..."

(8) Circumstantial/adnominal, Hdt., *Hist.* 2.29.2:
τὸ πλοῖον οἴχεται [**φερόμενον ὑπὸ ἰσχύος** τοῦ ῥόου]
"... the boat gets lost, [**carried off by the strength of the current**]"

(9) Adnominal/attributive, Hdt. 9.66.1 (George 2005: 116):
τοῖσι πρήγμασι [**τοῖσι ἐκ Μαρδονίου ποιευμένοισι**]
"with the pursuits [**that were being conducted by Mardonius**]"

Attributive/adnominal participles

- How much structure do Greek (adnominal/circumstantial) participial adjuncts actually contain? T(ense)P? C(complementizer)P? ($\approx$ clause structure)

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- How much structure do Greek (adnominal/circumstantial) participial adjuncts actually contain? T(ense)P? C(complementizer)P? (≈ clause structure)

Appositive/adnominal participles functionally compete with finite relative clauses (restrictive/non-restrictive):

(10) τουτέων δὴ τὴν νεωτέρην [**ἐπισπομένην οἱ ἐπ' Αἴγυπτον**] κτείνει
"The younger of these, **who had followed him to Egypt**, he killed."
(participial, non-restrictive; Hdt. 3.31.6, cit. after Goldstein 2015: 234)

(11) ἀμφὶ δέ μιν κρατεραὶ στίχες ἀσπιστάων λαῶν, [**οἳ οἱ ἕποντο** Τρίκης ἐξ ἱπποβότοιο]
"Around him [were] the stout ranks of the shieldbearing men **who followed him** from the pasturelands of Trica." (finite, restrictive/non-restrictive; *Il.* 4.201–2)

TP in participial adjuncts?

- NB we already know that participles do not contain their own tense specification, so if there is a TP it must be *defective* at least w.r.t. its tense feature
- Evidence that TP is present, but defective in these types of reduced clauses (cf. Pires 2006) comes from attributive participles that can be modified by temporal adverbs, as in (12).

(12) Hdt., *Hist.* 1.1.2:
ἐν τῇ **νῦν** Ἑλλάδι **καλεομένῃ** χωρῇ
"in the land (that is) **now** **called** Greece."

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→ Adnominal participial clauses contain (at least) defective T.

TP in participial adjuncts?

Brodahl (2022: 306): Sentential negation in participial adjuncts is indirect evidence for TP, assuming that Neg is dependent on T (e.g., Zanuttini 1997), (13).

(13) τῶν δὲ βαρβάρων οἱ πολλοὶ ἐν τῇ θαλάσσῃ διεφθάρησαν [**νέειν οὐκ ἐπιστάμενοι**]
"But many of the barbarians drowned in the sea [**because they didn't know how to swim**]" (Hdt. 8.89.2)

Circumstantial participles

(14) [PRO$_i$ **συλλέξας στράτευμα**] pro$_i$ ἐπολιόρκει Μίλητον
"[PRO$_i$ **Having collected an army**] he$_i$ laid siege to Miletus" (Xen. *An.* 1.1.7)

- Participles are in general underspecified for *tense* — circumstantial participles like in (14) receive temporal interpretation only relative to the matrix clause
- The subject of the participial clause is usually PRO, which is bound by an argument (usually the subject) of the matrix clause
  - Participial agreement is parasitic on agreement between the PRO subject of the particpial clause and the controller argument in the matrix clause
- Functionally, these are adverbial adjunct clauses

Circumstantial participles

For circumstantial participles, Goldstein (2015) distinguishes between participial clauses and participial VPs (and chained participles, not discussed here):

- Participial clauses modify a proposition and act as islands for clitic climbing, modal scope and scope of negation.
- Participial VPs "typically modify an element within the finite clause, as opposed to the finite clause itself. In contrast to participial clauses, they do not form independent domains for negation, modality, and tense." (Goldstein 2015: 225)
- Participial VPs allow clitic climbing into the matrix clause, (15), participial clauses do not.

(15) Ὀυδείς **με**$_i$ ἀποδείξει [t$_i$ **βουλεύσαντα**]
"Nobody will prove that I sat on the council" (lit. "will prove **me to have sat ...**"), (Lys. 25.14.4)

→ suggests that participial clauses come in different "sizes".

CP in circumstantial participles/GAs

We have seen evidence for Voice, Asp, and T in adnominal and circumstantial participial clauses. In circumstantial participial clauses and GAs, there is even evidence for CP:

- Ex. like (16) with overt complementizers.

(16) ἐκ Λέσβου δὲ λιμαινούσης οἱ τῆς στρατιῆς πέρην διαβαίνει, [$_{\text{Foc}}$ **ἐκ τοῦ Ἀταρνέος** [$_{\text{CP}}$ **ὡς** [**ἀμήεσων τὸν σῖτον** (...)]]]
"Because his army was starving, he crossed over from Lesbos [**to reap corn from Atarneus** (...)]" (Hdt. 6.28.2)

Note availability of topic/focus position to the left of complementizer.

- Other complementizers used in circumstantial participial clauses/GAs: ἅμα 'while' (temporal), ἅτε 'because, inasmuch as' (causal), καίπερ, καί 'although, even if' (concessive); Schwyzer & Debrunner 1950: 387ff.; van Emde Boas et al. 2019: 626–30

CP in circumstantial participles/GAs

- Further evidence for CP in circumstantial participles/GAs: left periphery/operator domain movement (topicalization, wh-movement), e.g., (17)–(18)

(17) [[**πατρὸς δὲ καὶ μητρὸς**]$_{CT}$ οὐκέτι μοι **ζωόντων**] ἀδελφεὸς ἂν ἄλλος οὐδενὶ τρόπῳ γένοιτο
"[**My mother and father**]$_{CT}$ being no longer alive], there's no way I could get another brother." (Hdt. 3.119.6, cit. after Goldstein 2015: 229)

(18) [**τί** δ' ἂν **ἐπιδιζήμενος**] ποιοῖμι ταῦτα
"[**In search of what**] would I do these things"? (Hdt. 5.106.3; Goldstein 2015: 235)

CP in circumstantial participles

- The circumstantial/absolute use of the AG active participle gave rise to the Modern Greek (MG) gerund in *-ondas*
- But the MG gerund in *-ondas* is usually argued *not* to contain CP based on the diagnostics in (19) (Tsimpli 2000; Manolessou 2005)
- By the same diagnostics, AG participial clauses/circumstantial participles *do* contain CP

(19) AG participial clauses vs. MG gerunds

	AG participial clauses	MG gerunds
1) can be introduced by conjunctions	✔	✗
2) allow operator/wh-movement	✔	✗
3) allow nominalization	✔	✗
4) provide a landing position for topics and dislocated elements	✔	✗

Participial adjuncts: analysis

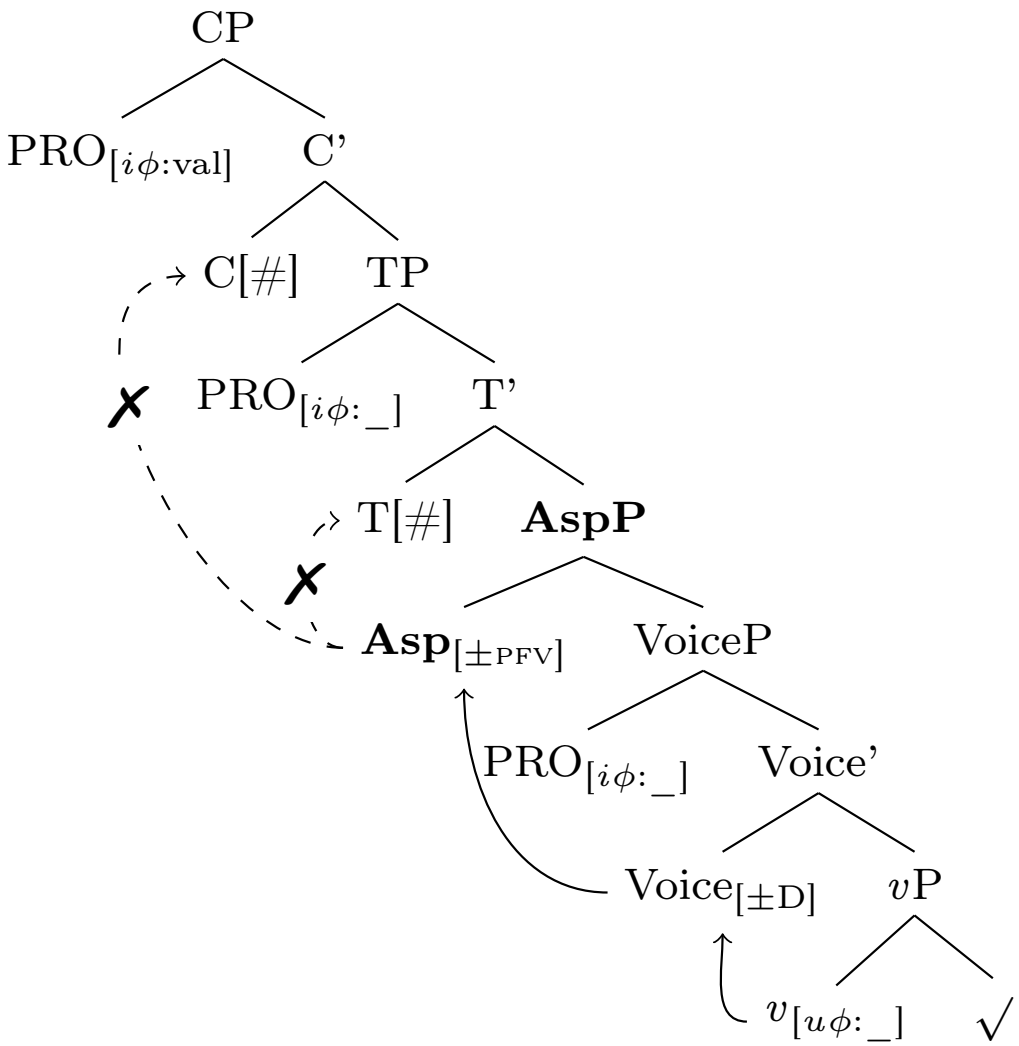
- Clausal participial adjuncts (participial clauses) contain a **defective CP** which cannot license ϕ-features on T (cf. recently Ershova 2023)
- Assuming that there is a selectional relationship between C and T (Chomsky 2001), ϕ-complete C can only select ϕ-complete T $\rightarrow$ T then becomes the goal for agreement with the [uϕ] feature on the verbal complex which is then spelled out as a synthetic finite verb.
- ϕ-defective C ("C[#]" following Ershova) can select either ϕ-complete T or ϕ-defective T[#], but neither is able to act as a goal for agreement with the [uϕ] feature on the verbal complex:
  - the former because it is not licensed by C
  - the latter because it does not contain the relevant features
- ... so the verb is spelled out with infinitival morphology in the former and with participial morphology in the latter context, (20).

(20) AG clause types

	CP[ϕ]	CP[#]
TP[ϕ]	finite verb	inf
TP[#]	n/a	**ptcp**

Clausal participles

(21) AG participial adjunct clause



Participial adjuncts

- The structure in (21) is in a sense the "largest possible" one for participial clauses — up to [C#]
- Smaller structures which allow clitic climbing into the matrix clause must also be possible (minimally Asp), cf. Goldstein's "participial VPs"
- But the exact size of these clauses and the question of where they can adjoin must be left for another time
- Note that *adnominal* adjuncts seem to be able to project at least up to T[#]

Participles as complements

"Supplementary participles"; "complementary participles" (Rijksbaron 2002: 117ff.; Jaszczyński 2021: 195ff.; van Emde Boas et al. 2019: 610ff.)

- Complements of verbs of perception, knowledge, finding
- Complements of *begin*, *stop*, *cease*, *endure*, *allow*, ...

(22) σοὶ μελέτω τὸ ἐνθεῦτεν ὅκως μὴ **σε** ὄψεται [**ἰόντα διὰ θυρέων**]
"Take care thereupon so that she does not see **you going through the door**." (Hdt. 1.9.3)

- Clitic climbing into matrix clause possible, (22).
- complements of perception and knowledge verbs can be either participles or infinitives, depending on whether the complement refers to something that is known to be true/actually occuring (participles) or not (infinitive), (23)–(24).

Participles as complements

(23) ἱστορέων δὲ εὕρισκε [**Λακεδαιμονίους τε καὶ Ἀθηναίους προέχοντας** (...)]
"And inquiring he found (out) [**that the Spartans and the Athenians were oustanding** (among...)]" ("found the Spartans & Athenians to be oustanding"; Hdt. 1.56.2 — knowledge, true)

(24) νυκτὶ δὲ βουλὴν διδοὺς πάγχυ εὕρισκέ [**οἱ οὐ πρῆγμα εἶναι στρατεύεσθαι ἐπὶ τὴν Ἑλλάδα**]
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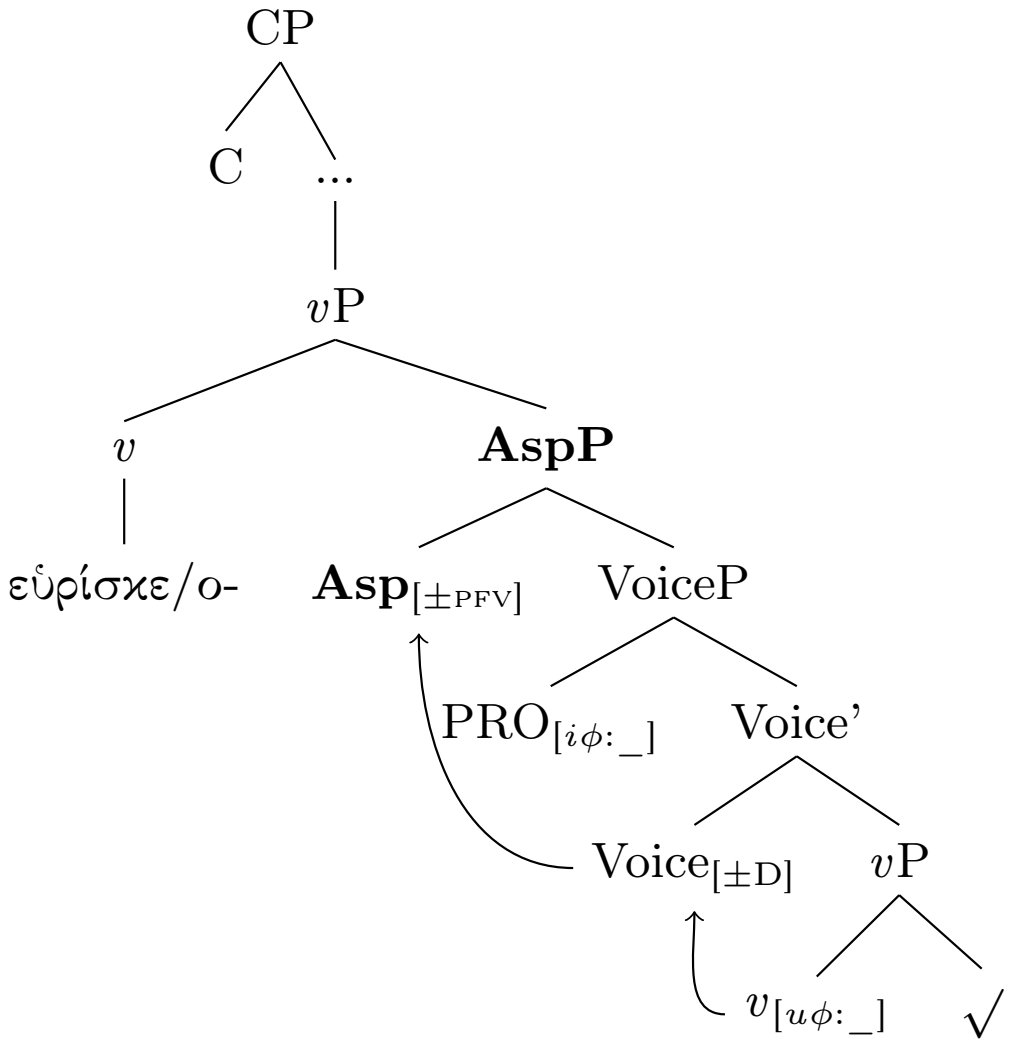
→ evidence that these verbs select complements of different "sizes" depending on whether they are (semantically) propositions (CP), situations (TP) or events (vP/VoiceP), Wurmbrand & Lohninger (2020)

- ... but the event-types actually contain **Asp** in AG and are spelled out as participles (Faure 2017)
- situations = T/ infinitives
- propositions = finite clauses with a complementizer.

Participial complements

(25) AG participial complement (εὑρίσκω ‘find (out); know’)



Summary

(26) Structure of participial constructions in AG

	Asp	T	C
Complementary ptcp	✔		
PPC participle	Asp[RES]	T[ϕ]	C[ϕ]
Adnominal ptcp	✔	T[#]	?
Circumstantial ptcp	✔	T[#]	C[#]
GA	✔	T[#]	C[#]

Conclusion

- Participles occur in a variety of syntactic contexts in AG, both finite and (different types of) non-finite ones — but they always realize the same syntactic head, **Asp**
- Assuming participial morphology is used when the verb cannot move to T or when there is no (ϕ-complete) T, we derive the distribution of attributive participles, various types of participial adjuncts, and participial complements.
  - Note that these are environments which are independently analyzed as "tenseless"
- When there *is* a finite T, Agreement/movement can fail when a marked feature intervenes/blocks movement
  - Asp[**RES**] in the PPC

→ Finiteness is gradient — "clause size" in AG varies.

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Thank you for your attention!

Appendix: Voice in participles & finite verb forms

Nonactive ("middle") morphology is found in different syntactic environments (anticausative, reflexive, self-benefactive, passive...) → **Voice syncretism** (Embick 1998, 2004a; Oikonomou & Alexiadou 2022): the same morphological exponent surfaces in different syntactic environments.

- Voice syncretism follows from a particular condition on the realization of Voice in a specific syntactic context, (27).
  - Cf. Kratzer 1996; Alexiadou 2013, Alexiadou & Doron 2012; Alexiadou et al. 2015, Schäfer 2017; Grestenberger 2018, 2020; Kastner 2020, etc.

(27) Voice → Voice[NonAct]/_ No DP specifier
(Alexiadou et al. 2015: 102, after Embick 2004a: 150)

[NONACT] = VoiceP without an external argument.

- i.e., Voice[-D] (Kastner 2020; privative: Alexiadou et al. 2015; Schäfer 2017)
- ACT = elsewhere.

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