Polarity focus in a cross-dialectal grammar of Coptic Egyptian

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0.   Introduction

Coptic Egyptian (not to be confused with present-day Egyptian Arabic) is the indigenous language spoken and written in Late Roman, Byzantine and Early Medieval Egypt (from around the mid-third century to the twelfth century CE). Historically speaking, it represents the last developmental stage of Ancient Egyptian [Afroasiatic] (see Reintges 2022 for further background information). The language itself presents us with a picture of great internal diversity. Although many issues are still outstanding, it may actually be more correct to speak of a cluster of mutually eligible speech varieties with a scattered geographical distribution. This led one scholar to posit that the very notion of the Coptic language amounts to a dialect continuum (Funk 1988: 150).[1]

The unusually rich inventory of word-like tense–aspect–mood [TAM] particles is one of the most complex areas of the cross-dialectal grammar of Coptic. As the morphological exponents of fine-grained distinctions in the temporal, aspectual and modal-evidential domain, uninflected TAM particles, which are traditionally known as "conjugation bases", are paradigmatically organized items, whose members are defined in opposition to each other (see, among various others, Polotsky 1960, 1987/1990: 175–176 §§1–2; Layton 2000: 252–254 §325; Reintges 2018: 246–252 §7.1). Example (1) from the Akhmimic dialect features the perfect tense/aspect particle *ha*, which appears clause-initially, leaning on the nominal subject *Paͅulos* 'Paulus'. The basic word order in Coptic Egyptian is subject–verb–object (SVO).

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[1] The early literary varieties of Coptic that flourished in the fourth and fifth centuries CE look in many ways like migratory dialects without a localizable center. Ironically, the Akhmimic dialect (siglum A) did not develop in present-day ʾAkhmīm (ancient Panopolis), where most of the extant manuscripts have been unearthed but rather emerged in the Theban region. The classical Sahidic dialect (Arabic: al-Ṣaʿīd 'Southern Egypt'; siglum S) covers some middle ground between the southern and the northern dialect group, suggesting that it actually originated in the region of ancient Hermopolis (modern al-ʾAshmūnayn) before it spread southward. One of the more recently discovered dialects is the Oxyrhynchitic dialect (siglum O), also known as Middle Egyptian or Mesokemic, whose place of origin is the Graeco-Roman town of Oxýrrhynchos (modern al-Bahnasā). The linguistic material of the present study comes from two main sources, to wit, the Early Coptic Bible translations in the Sahidic, Akhmimic and Oxyrhynchitic dialects and the extensive literary corpus of Shenoute of Atribe (347–465 CE), whose idiolect represents high-standard literary Sahidic with dialect admixture from Akhmimic (see Shisha-Halevy 1986 for a detailed description of Shenoutean syntax).

(1) Pre-subject perfect tense/aspect particle **ha** in basic SVO sentence

ha	Pau̯los	telɛl	əmmə=f	mən	ɔnɛsiphoros	mən	wan
PERF	Paulus	rejoice.ABS	PREP=CL.3M.SG	with	Onesiphoros	with	one.M.SG

nim
each.M.SG

"Paulus himself rejoiced and Onesiphoros and everyone (else)." [A] (Acta Pauli 19: 25–26, ed. Schmidt)

On top of their multifaceted semantics, Coptic TAM particles encode polarity oppositions as well. The negative future tense particle *ənne*, for instance, is a portmanteau morpheme, synthesizing future time reference and negative polarity into a single unsegmentable morph (Reintges 2018: 357–359 §9.4.4). The Sahidic example in (2) is another illustration for the language's basic word order pattern, where the TAM particle is placed in front of a SVO clause and is separated from the main lexical verb by the subject expression. Due to the built-in negation of the negative future particle *ənne*, the indefinite subject *laʔau̯ ən=roːme* 'some (of) man' and direct object NP *ənka* 'thing' are semantically interpreted as negative indefinites. As an aside, it should be noted that there are no morphologically distinctive negative indefinites altogether.

(2) Pre-subject negative future tense particle **ənne** in basic SVO sentence with indefinite subject and direct object NPs

ənne	laʔau̯	ən=roːme	wəm	ənka	ən–te=f–ri
NEG.FUT	someone	LINK=man	eat.CS	thing	in–DEF.F.SG=POSS.3M.SG–cell

"No one should eat anything in his cell." [S] (Precepts of Pachomius 115, ed. Lefort)

TAM particles are not restricted to the pre-subject position of SVO sentences but may also be attached higher up in the structure in the left periphery of the clause (see Rizzi 1997, 2001; Poletto 2014, and much related work). The context in which this happens is a variant of <u>*clitic left-dislocation*</u> [henceforth CLLD] (Cinque 1990: chap.2), where two identical copies of a given TAM particle co-occur within the same syntactic domain. The higher copy (TAM$_2$) linearly precedes the CLLDed Topic, while the lower copy (TAM$_1$) follows it. More precisely, TAM$_1$ is placed in the pre-subject position in front of the resumptive subject clitic.

The main structural features of the TAM doubling construction is illustrated with the Oxyrhynchitic example in (3) below. The doubled TAM is the perfect tense/aspect particle *ha*. The CLLDed subject, the possessive DP *ta-ʃɛre* 'my daughter', is anaphorically related to the enclitic subject pronoun third person feminine singular *=s* 'she' (as indicated by subscript$_i$).

(3)   PERF2 **ha** > CLLDed Topic$_i$ > PERF1 **ha** > Subject clitic$_i$ > Verb

ha   ta–ʃɛre$_i$ **ha**   =s$_i$ muː   ən–te–unuː

PERF   DEF.F.SG.POSS.1SG–girl   PERF   =CL.3F.SG   die.ABS   in–DEF.F.SG–hour

"My daughter has just died." [O] (Matthew 9:18 [Codex Scheide, ed. Schenke])

The combination of clitic left-dislocation and TAM doubling is also attested for negative TAM portmanteaux, which makes the study of the construction all the more interesting. In the Oxyrhynchitic Coptic example in (4), it is important to note that despite the presence of two occurrences of the negative future particle *ənne*, the sentence as a whole does not convey a double negation reading. Neither is there a difference in temporal interpretation vis-à-vis the pragmatically neutral SVO sentence in example (2) above, which only comprises a single instance of the negative future particle *ənne*.

(4)   NEG.FUT2 **ənne** > CLLDed Topic$_i$ > NEG.FUT1 **ənne** > Subject clitic$_i$ > Verb

ənne   peï–tʃom$_i$ peï   **ənne**   =f$_i$ wɔtəβ

NEG.FUT   DEM.M.SG–generation   DEM.M.SG   NEG.FUT   =CL.3M.SG   pass.ABS

"This very generation will not change." [O] (Matthew 24:34 [Codex Schøyen, ed. Schenke]

We will present evidence and arguments for a unified analysis of Coptic TAM doubling as a case of polarity focus (Höhle 1992; Reintges 2011a; Poletto and Zanuttini 2013). The basic ingredients of our analysis are represented in the tree diagram given below.

(5)   The cartographic structure of the Coptic TAM doubling construction (first outline)
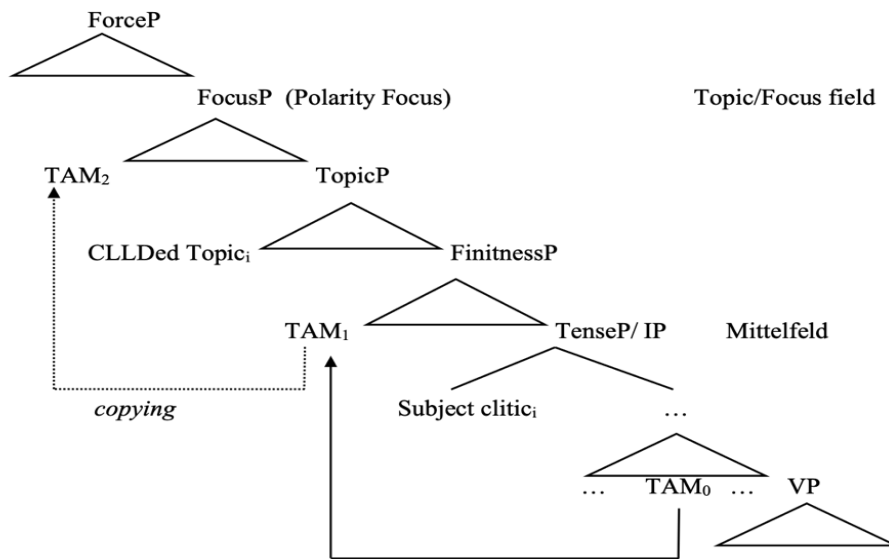
The roadmap of the paper is as follows. The next section (Section 1) takes a closer look at the morphosyntax and the distributional behavior of various kinds of pre-subject and preverbal TAMs. This leads to Section 2, which presents a combined cartographic/nanosyntactic analysis of TAM placement in general, and of the syntactic derivation of the TAM doubling process in particular. Section 3 brings in the comparative dimension and calls attention to the similarities and the differences in the morphosyntactic expression of polarity emphasis or verum focus that we can see between the Coptic TAM doubling constructions and different polarity focus constructions in Italian dialects, as discussed in important work by the Jubilar (Poletto 2008, 2010; Poletto and Zanuttini 2013).[2] Section 4 concludes

1.   The syntax of Coptic TAM particles

We will commence with the main syntactic characteristics of the TAM doubling construction, with particular attention for the contingency of TAM particle copying on a prior application of clitic left-dislocation (Section 1.1). We will then turn to the syntactic mobility of TAM particles (Section 1.2). Despite initial appearances to the contrary, we will argue that all TAM particles, even those that only surface in pre-subject position, originate in the Mittelfeld above the verbal

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[2] We are grateful to an anonymous reviewer for *ASIt* for drawing our attention to recent work on the semantics of polarity focus (Gutzman et al. 2020). However, the main objective of our contribution is to provide a cartographic analysis of the TAM doubling construction and to explain why some TAM particles can be doubled while others cannot. We keep a further investigation of the semantic properties and our position within the rich semantic literature on polarity focus for future research.

domain. For the extensive class of pre-subject TAM particles, the movement path will always extend to the FIN(iteness) projection at the bottom of the clausal left periphery. The situation is diametrically opposite for preverbal/post-subject TAM particles, which move to the Mittelfeld domain but move no further. These are the particles that cannot appear in the TAM doubling construction. Subsequently, we will discuss why negative TAM portmanteaux can undergo TAM doubling as well (section 1.3).

1.1 General properties of the TAM doubling construction

The TAM doubling construction has received a fair amount of scholarly attention in Coptic linguistics, where it is generally analyzed as a syntactic variant of CLLD (e.g., Shisha-Halevy 1986: 162–163 §6.0.2.2; Layton 2000: 247 §321, 257 §332(a); Reintges 2018: 380 §10.1.3.2). Bosson (2006) proffers a survey of the cross-dialectal evidence. In what follows, we will illustrate the core properties of the TAM doubling construction with the example of the perfect particle *ha* ~ *ʔa*, which, according to Sethe (1915), has been grammaticalized from the pre-Coptic positional verb *wʔḥ* 'to place, put'. The lexical source verb *wʔḥ* has a completive aspect connotation 'to finish', which explains the diachronic pathway from a (semi)auxiliary verb to a perfect aspect marker. Of the two allomorphic variants, *ʔa* is the more common one. It is the only allomorph available in the Sahidic dialect, from which the following example of the TAM doubling construction is taken.

(6)   PERF$_2$ **ʔa** > CLLDed Topic$_i$ > PERF$_1$ **ʔa** > Subject clitic$_i$ > Verb
       ʔa   ne–roːme$_i$ de   ən=pə-ma   [$_{RC}$ et _ ənmau̯]
       PERF   DEF.PL–man   PCL   LINK=DEF.M.SG–place   REL   there
       ʔa   =uː$_i$ weh   pə-sɑma   ən=pə-makarios   Apa Mɛna
       PERF   =CL.3PL   put.CS   DEF.M.SG–body   LINK=DEF.M.SG–blessed   Apa Mena
       e–p–esɛt   həm   pə–kʲaːmul
       to–DEF.M.SG–ground   from   DEF.M.SG–camel
       "The people of that place put the body of the blessed Apa Mena from the camel
       to the ground." ^{S} (Apa Mena, Martyrdom 5a:14–19, ed. Drescher)

Although the TAM doubling construction is built on clitic left-dislocation, the topic phrase itself does not necessarily have a contrastive topic or aboutness reading. In example (6) above, we seem to be dealing with a topic shift that advances the story line. In any event, this is clearly not an out-of-the-blue context (Reintges 2018: 381 §10.1.3.3).

In Coptic dialects other than Sahidic, the TAM doubling construction also admits the topicalization of non-subject constituents. In the Akhmimic example below, the CLLDed direct

object *pa-het mən pa-nuβ* 'my gold and my silver' is a coordinated noun phrase, which consequently triggers plural number agreement on the resumptive direct object clitic =*uː* 'they'.

(7) PERF2 **ʔa** > CLLDed Topic$_{DOi}$ > PERF1 **ʔa** > Subject pronoun > Verb > Direct object clitic$_i$

ʔa	pa–het			mən	pa–nuβ$_i$
PERF	DEF.M.SG.POSS.1SG–silver			with	DEF.M.SG.POSS.1SG–gold

ʔa	=tetən	tˤit	=uː$_i$
PERF	=CL.2PL	take.CS	=CL.3PL

"My silver and my gold, you (plural) took it away." [A] (Joel 3:5 §79, ed. Till)

The higher particle copy need not be placed in absolute sentence-initial position, but may be preceded by a range of adverbial modifiers. As pointed out by Bosson (2006: 286–287), the Greek loan adverb *tote* '(and) then', which indicates temporal progression in the narration, is particularly common in this context.

(8) Adverb **tote** > PERF2 **ʔa** > CLLDed Topic$_i$ > PERF1 **ʔa** > Subject clitic$_i$ > Verb

tote	**ʔa**	p–aggelos$_i$	ənte–	pə-tˤaei̯s	**ʔa**	=f$_i$	ʃiːβe
then	PERF	DEF.M.SG–angel	LINK–	DEF.M.SG–lord	PERF	=CL.3M.SG	change.ABS

ən–te=f–morphɛ	əntoot	əm–pə-ma	[$_{RC}$ et _ əmmɔː]
PREP–DEF.F.SG=POSS.3M.SG–form	through.CL.1SG	in–DEF.M.SG–place	REL there

"Then the angel of the Lord, he changed his form through me in that place." [A] (Apocalypse of Elias 6: 15–17, ed. Steindorff)

The adverb *tote* is a short adverbial modifier, but the position preceding the TAM2 copy may also be occupied by a temporal adjunct clause with a fully-fledged functional superstructure. The next example from the Oxyrhynchitic dialect illustrates this point. As an important detail, it should be observed that temporal adjunct clause [$_{RC}$ *et ha=ï arkhesthe e–setˤe*] "when I had begun to speak" takes the form of headless ('antecedentless') relative clause, which is introduced by the relative complementizer *et* 'that'.

(9)   Adjunct clause > PERF₂ **ha** > CLLDed Topic_SUi > PERF₁ **ha** > Subject clitic_i > Verb
       > prepositional complement **et'ɔ=uː**

[_RC_ **et**	**ha**	=ï	arkhesthe	de	e–set'e]
REL	PERF	=CL.1SG	begin.ABS	PCL	to–speak.ABS

ha	pe–pneuma_i	[_RC_ et	_	weβ]	**ha**	=f_i	iː
PERF	DEF.M.SG–spirit	REL		purify.STAT	PERF	=CL.3M.SG	come.ABS

ehrɑ̆	et'ɔ=uː
PCL	on=CL.3PL

"When I had begun to speak, the Holy Spirit, he came down on them" [O] (Acts 11:15
[Codex Glazier], ed. Schenke])

The TAM doubling construction may also contain two topic constituents—a feature that aligns well with the syntactic versatility of left-dislocation and topicalization (Reintges 2018: 378 §10.1.3.1d). The joint patterning of subject and direct object topicalization displays what one might call "inverse superiority effects", with the CLLDed direct object preceding and c-commanding the CLLDed subject. The below example, again from the Oxyrhynchite dialect, exemplifies this syntactically and information-structurally complex construction, in which the comment clause comprises both a resumptive subject and direct object clitic.

(10)   CLLDed Topic_DOj > PERF₂ **ha** > CLLDed Topic_SUi > PERF₁ **ha** > Subject clitic_i >
       Verb > Direct object clitic_j

neï_j	de	tɛr=uː	**ha**	Iɛsus_i	**ha**	=f_i	t'a	=uː_j
DEM.PL	PCL	entire=POSS.3PL	PERF	Jesus	PERF	=CL.3M.SG	say.CS	=CL.3PL

e–pə-mɛʃe	hən	hen–paraβolɛ
to–DEF.M.SG–crowd	in	INDEF.PL–parable

"All these (things), Jesus said them to the crowd in parables." [O] (Matthew 13:34
[Codex Scheide], ed. Schenke])

When both the subject and the direct object are topicalized, the higher particle copy TAM₂ is sandwiched between the CLLDed direct object and subject constituent. The information-structural status of the higher topic is furthermore indicated by the Greek discourse particle *de* (Reintges 2001: 221–232). All this considered, it stands to reason that TAM₂ is not associated with topicality, but rather with focality. As a final observation, it should be noted that TAM doubling is not restricted to root clauses but is also documented in embedded contexts. Finite subordinate clauses are introduced by the quotative complementizer *t'e* 'that', which is derived from the reportative verb *t'oː* 'to say'. The quotative complementizer itself has a broad syntactic distribution and can be used to introduce finite adverbial cause/reason clauses. The Sahidic example shown next illustrates this point.

(11) Complementizer **t͡ɕe** > PERF₂ **ʔa** > CLLDed Topic$_i$ > PERF₁ **ʔa** > Subject clitic$_i$ > Verb

mu꞉te   erɘ=ï   t͡ɕe   t–   [$_{RC}$ et   _   sa꞉ʃe   (…)]
call.IMP PREP=CL.1SG   QUOT   DEF.F.SG   REL   turn_bitter.STAT

[t͡ɕe   **ʔa**   pɘ–hikanos$_i$ ɘm=pɘ–dynatos
COMP   PERF   DEF.M.SG–sufficient   LINK=DEF.M.SG–mighty

ʔa   =f$_i$ ti   si꞉ʃe   na=ï   emate]
PERF   =CL.3M.SG   give.CS   grief   to=CL.1SG   much

"Call me « She who is bitter (…) », because the Almighty One has given me a lot of grief." ^{S} (Ruth 1:20, ed. Thompson)

We suspect that the embeddability of the TAM doubling construction is correlated with the general acceptability of embedded topicalization (for additional examples, see Reintges 2018: 376–377 §10.1.3.1; see also Cinque 1990: 57–60 for comparable facts in Italian). The main structural characteristics of the TAM doubling construction are summarized in the following syntactic template.

(12)   Preliminary syntactic template for the TAM doubling construction

Comp	Topic$_{DO}$	TAM₂	Topic$_{SU}$	TAM₁	SUBJ.CL	VP

Two generalizations emerge from the facts gathered so far. First, the presence of the higher copy TAM₂ is dependent on the presence of the lower copy TAM₁ as well as on a prior application of clitic left-dislocation. Second, TAM₂ must be located in a lower-than-Comp position, considering that TAM doubling is also permissible in finite CP embeddings with the multifunctional complementizer *t͡ɕe* 'that'.

In order to provide a neat map of the distribution and order restrictions of the different constituents involved, we will adopt Rizzi's (1997, 2001) cartography of the left periphery, which is demarcated upwards by the Comp/Force projection that hosts clause-typing and subordinating devices, and downwards by the Finiteness projection, which we identify with the pre-subject TAM position. The topic–focus field is located between the Comp/Force and the Finiteness projection. In view of the fact that TAM₂ occupies an intermediate position between two topic constituents, it stand to reason that it occupies the Focus projection below CP. The template for the TAM doubling construction in (12) above can straightforwardly be aligned with the sequence of left-peripheral functional projections of the Rizzian cartography.

(13)   Template for the TAM doubling construction including the topic/focus field

ForceP	TopicP	FocusP	TopicP	FinP	TP	VP
Comp	Topic$_{DO}$	TAM$_2$	Topic$_{SU}$	TAM$_1$	SUBJ.CL	VP

To make sense out of the dependency of TAM doubling on CLLD, we capitalize on Rizzi's (1997: 287–288) idea that the topic–focus field must be activated in order to project the relevant configurational space for topics and foci. In the case of TAM doubling, the projection of the Focus Phrase is contingent on a prior application of CLLD.[3]

1.2   TAM particle movement out of the Mittelfeld domain and another TAM position
With this much in place about the cartography of Coptic TAM doubling, we will now turn to another positional class of TAM particles, which appear in a post-subject/preverbal TAM position within the Mittelfeld domain. The distributional behavior of members of this class provides conclusive evidence for TAM particle movement out of the inflectional domain. Accordingly, the movement of the TAM particle around the CLLDed topic starts much lower in the structure. In terms of word order typology, Coptic can be classified as a SVO language, in which an auxiliary-like TAM element is placed in front of the subject. The resulting TAM SVO order is the order used in pragmatically neutral declarative clauses. These are declarative clauses without topicalized or focalized constituents, as seen below.

(14)   TAM initial SVO order with pre-subject perfect tense/aspect particle **ʔa**

TAM	Subject	Verb	Object	Indirect Object
ʔa	tə–sophia	**ket**	u–ə̣i̯	na=s
PERF	DEF.F.SG–wisdom	build.CS	INDEF.SG–house	for=3F.SG

"Wisdom has built a house for herself." [S] (Proverbs 9:1, ed. Worrell)

However, there is another type of SVO order to consider, in which the TAM particle is placed between the subject and the main verb. Example (15) features TAM-medial SVO order with the epistemic future tense auxiliary *na*.

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[3] Although most syntactic properties of the TAM doubling construction can be explained from the general properties of CLLD, there is a non-neglectable explanatory residue. Unlike as in the case of CLLD topicalization, the TAM doubling construction is not attested with CLLDed independent pronouns. We leave this an open question for future research.

(15) TAM medial SVO word order with epistemic future particle **na**

Subject	TAM	Verb	Direct Object		
pə–tˤʃæ̰is	**na**	**tˤne**	pə–dikaios	mən	p–aseβɛːs
DEF.M.SG–lord	EPIST.FUT	examine.CS	DEF.M.SG–righteous	with	DEF.M.SG–lawless

"The Lord will examine the righteous and the lawless one." [S] (Psalm 10:5, ed. Worrell)

The future tense auxiliary *na* forms a bipartite verbal cluster with the lexical verb *tˤne* 'to examine', with the result that no intervening element can disrupt the linear adjacency between the two elements. TAM medial SVO word order points in the direction of an extended Mittelfeld domain, which hosts an additional TAM projection. This raises a question as to whether the clause-internal TAM position is reserved to post-subject/preverbal TAM particles or plays a broader role in the derivation of basic TAM SVO word order with pre-subject TAM particles. The cross-dialectal evidence suggests that it does. The Akhmimic dialect, which is renowned for its linguistic conservativity, has retained a phonologically fuller form *ʔah* of the perfect particle *ʔa ~ ha*, which has a limited syntactic distribution (Till 1928: 263–264 § 236b). As far as one can tell, this allomorphic variant only occurs in gapped subject relative clauses, such as the one given below.

(16) Gapped subject relative with phonologically fuller form **ʔah** of the perfect particle

aṷ	hen–makarios	ne	wan	nim		
and	INDEF.PL–blessed.M.SG.NOM	COP.PL	one.M.SG	each.M.SG		

[RC **et**	_	**ʔah**	eḭ	ʔaħu(n)	əħɛt=əs]	
REL		PERF	come.ABS	inside	into=CL.3F.SG	

"And blessed is everyone who has gone inside into it (the doorway)." [A] (First Epistle St. Clement 48:4, ed. Schmidt)

In line with Rizzi's (1990: 51–60) *Relativized Minimality* framework, the gap in the embedded subject position of the relative clause is licensed by the relative complementizer *et*. But how can we be sure that the phonologically fuller form *ʔah* is positioned lower in the structure, presumably in the same TP/IP-internal position as the epistemic future tense particle *na*. The very existence of gapped subject relatives provides the crucial argument. If the allomorph *ʔah* were located in the Finiteness projection at the bottom of the left periphery, i.e., the position occupied by the pre-subject allomorphs *ʔa ~ ha*, one would expect the fuller form *ʔah* to intervene between the relative complementizer *et* and the embedded subject position. As a result, the relative complementizer would no longer govern the subject position and the gapping

strategy would no longer be available: *et > *ʔah* > subject gap _. The way out is to replace the offending gap by the corresponding resumptive pronoun clitic. And this is indeed what we find. In the Akhmimic example in (17), the nominalized subject relative clause contains the shorter base form of the perfect particle *ʔa*, while the third person plural resumptive pronoun =*uː* 'they' surfaces in the preverbal subject position. The nominalized subject relative, which contains the *ʔah* variant and a subject gap, is therefore distinguished from the nominalized resumptive subject relative in syntactic and morphological respects.

(17) Nominalized resumptive subject relative with standard form **ʔa** and nominalized gapped subject relative with phonologically fuller form **ʔah**

f=	na	ər	krine	ən–	n–	[RC et	**ʔa**	=uː
CL.3M.SG=	FUT	do.CS	judge.ABS	PREP–	DEF.PL	REL	PERF	=CL.3PL

ər	paraβa	ʰən	təpe]	mən	n–	[RC et	__	**ʔah**
do.CS	trespass.ABS	in	DEF.F.SG–heaven	with	DEF.PL	REL		PERF

eˌire	hitˤʼən	pəkah]
do.ABS	on	DEF.M.SG–earth

"He (the Lord) will judge those who trespassed in heaven and those who did (it) on earth" [A] (Apocalypse of Elias §42:4–6 [p.104], ed. Steindorff)

Based on synchronic morphophonology and historical evidence, Sethe (1915) identifies the allomorph *ʔah* as a stative-inflected auxiliary, which is deeply entrenched in the lexical-derivational process of stative stem formation and hence linked to the verbal domain and the position of other lexical verbs. Just like stative-inflected lexical verbs, the allomorph *ʔah* cannot move out of the IP/TP domain (for further details, see Reintges 2011b: 83–87). The allomorphs *ʔa ~ ha*, on the other hand, have no such inflectional features. Because of that, these particles can or even must move from their Mittelfeld position to the Finiteness projection.

We find supportive evidence for this claim in the syntax of the conditional mood *e=f ʃan-sɔːtəm* 'if he hears' and the deontic future tense *e=f e-sɔːtəm* 'he shall hear'. These two tenses are compound tenses, in which the relative complementizer *e* and its phonologically fuller form *ere* appear in initial position. In the conditional sentence presented below, the conditional mood appears in the protasis and the deontic future tense in the apodosis clause.

(18) Biclausal conditional sentence with conditional mood in the protasis and deontic future tense in the apodosis clause

e	=f	**ʃan**	ei̯	nə	=f	toːhəm
REL	=CL.3M.SG	COND	come.ABS	CONJ	=CL.3M.SG	knock.ABS

e	=uː	**e**	won	na=f	ən–te–unuː
REL	=CL.3PL	DEON.FUT	open.ABS	for=CL.3M.SG	in–DEF.F.SG–hour

"When he comes and knocks, they should open to him immediately." [S] (Luke 12:36, ed. Quecke)

In the context of full lexical subjects, the conditional particle *ʃan* is no longer permissible in the Mittelfeld TAM position but moves one step up to Finiteness. Subsequently, the univerbation with the conditional particle *ʃan* leads to the shorting of the initial relativizer *ere* to *er* (*ere* + *ʃan* → *er–ʃan*). The below example provides an illustration.

(19) Movement of conditional mood particle **ʃan** to pre-subject position and univerbation with relative complementizer **ere**

etβe	pai̯	**er**	**ʃan**	pǝ-nuːte	kaʔat
for	DEM.M.SG	REL	COND	DEF.M.SG–god	let.CS.1SG

ti=	na	hoː	erɔ=i	e	=i	ɔː
CL.1SG=	EPIST.FUT	satisfy.ABS	PREP=CL.1SG	REL	=CL.1SG	do.STAT

ən–	hɛgɛmɔn	ɛ	ən–	maːto̯
in–	general	or	in–	soldier

"Because of this, if God allows me, I will satisfy myself being a general or a soldier." [S] (Shenoute I.1 38:6–7, ed. Amélineau)

Matters become more complicated in the deontic future tense, whose morphological exponent can be identified with a fully grammaticalized prepositional complementizer *e* 'to'. In the context of pronominal subjects, the deontic future tense particle *e* appears in Mittelfeld TAM position, as shown by the construction *e=uː e-won* 'they shall open' in example (19) above. In the context of lexical subjects, it looks as if the deontic future tense marker *e* has been elided from the surface structure of the clause altogether.

(20) Movement of deontic future particle **e** to pre-subject position and univerbation with the relative marker **ere**

er	**e**	p–	[RC et	_	ər	nɔːβe	əm–pe–mtɔː
REL	DEON.FUT	DEF.M.SG–	REL		do.CS	sin	in–DEF.M.SG–presence

eβɔl	əm=pe–	[RC nt	**ʔa**	=f	tamiɔː	=f]]
PCL	LINK=DEF.M.SG–	REL	PERF	=CL.3M.SG	create.CS	=CL.3M.SG

ei̯	e–toot=f	əm–pə–saei̯n
come.ABS	to–hand=POSS.3M.SG	as–DEF.M.SG–surgeon

"He who commits sin in the presence of Him who has created him will come into the hand of the surgeon." [S] (Sirach 38:15, ed. Lagarde)

As pointed out by Polotsky (1960: 394), the idea that a distinctive morpheme disappears with a trace is not very appealing. Based on the analogy with the conditional mood, it stands to reason that the deontic future tense particle *e* moves out of the TP/IP domain in much the same way as the conditional particle *ʃan*, but is coalesced with the final vowel *e* of the long form *ere* of the relative marker. In other words, the form *ere* is bimorphemic, consisting of the shortened relative complementizer *er-* and the deontic future particle *e* (*ere* + *e* → *er-e*). In defense of this analysis, Polotsky calls attention to the below example, in which the deontic future particle *e* remains in the Mittelfeld position and does not move. As a result, the initial relative marker retains its full form *ere*.

(21) Deontic future tense sentence without movement of the preverbal TAM particle **e** to the pre-subject position.

ere	n–	[RC et	koː	ənso=uː	əm–pə–tʃɔei̯s]	**e**
REL	DEF.PL–	REL	let.ABS	behind=CL.3PL	PREP–DEF.M.SG–lord	DEON.FUT

ei̯	e–toot=f
come.ABS	to–hand=POSS.3M.SG

"Those who abandon the Lord will come into his hand." [S] (Sirach 28:24, ed. Lagarde)

The movement of preverbal TAMs out of the TP/IP can also be observed for the modal auxiliary verb *ʃ* 'can, to be able to'. Intriguingly, this movement is only attested in combination with the negative future tense particle *ənne* (Shisha-Halevy 2003: 265–266; Bosson 2006: 289).

(22) Movement of modal auxiliary ʃ to pre-subject position and univerbation with the negative future particle **ənne**.

Ɂawɔː	er	ʃan	u–ɛi̭	poːrətˤ	e–nə=f–erɛṷ
and	REL	COND	INDEF.SG–house	divide.ABS	to–DEF.PL=POSS.3M.SG–RECIPROC

ənne–ʃ	p–ȩi̭	[RC et	_	ənmaṷ]	Ɂahe	rat=f
NEG.FUT–MOOD	DEF.M.SG–house	REL		there	stand.ABS	foot=POSS.3M.SG

"And if/when a house(hold) becomes divided into each other, that house(hold) will not be able to stand (upright)." (Mark 3:25, ed. Balestri).

The cross-dialectal evidence reviewed thus far argues in favor of a distinct TAM^0 position in the Mittelfeld. The TAM^0 position does not only provide a position for post-subject/preverbal TAM particles but also serves as an obligatory stop-over position on the movement path of pre-subject TAM particles to the Finiteness projection. To put it differently, pre-subject TAM particles are not directly merged into the Finiteness projection but arrive there as a result of movement. That considered, pre-subject TAM particles do not represent a positional class in its own right, as the received wisdom in Coptic linguistics would have it. The cartographic patterning that underlies the TAM doubling construction would look like in (23) below.

(23) Template for the TAM doubling construction including AGRSP and TP positions

ForceP	TopicP	FocusP	TopicP	FinP	AgrSP	TP*	VP
Comp	Topic$_{DO}$	TAM$_2$	Topic$_{SU}$	TAM$_1$	SUBJ.CL	TAM$_0$	VP

Concerning the associated inflectional heads, we would like to argue that the subject is located in AgrSP, as in Pollock's (1989) original analysis. The TAM$_0$ position is associated with one or several of the functional heads in the IP/TP domain (Cinque 1999; Julien 2001).

1.3 A closer look at negative TAM portmanteaux and standard bipartite negation

As already mentioned in the introduction, the TAM doubling construction can also be formed with negative portmanteau morphemes, even though the number of attested examples is more limited as compared with those formed with affirmative TAM particles. Reconsider in this regard the Oxyrhynchitic dialect example in (4) above, which is repeated here as (24).

(24) NEG.FUT$_2$ **ənne** > CLLDed Topic$_i$ > NEG.FUT$_1$ **ənne** > Subject clitic$_i$ > Verb

ənne	peï–tʃom$_i$	peï	**ənne**	=f$_i$	wɔːtəβ
NEG.FUT	DEM.M.SG–generation	DEM.M.SG	NEG.FUT	=CL.3M.SG	pass.ABS

"This very generation will not change." [O] (Matthew 24:34 [Codex Schøyen, ed. Schenke]

Interestingly, the compound negative portmanteau *ənne-ʃ*, which contains the modal auxiliary *ʃ*, is permissible in the TAM construction as well. As we can see from the following Oxyrhynchitic example, once a univerbized form is created in the lower left periphery, it becomes available for movement all the way up to the lower-than-Comp Focus Phrase.

(25) NEG.FUT + CAN$_2$ **ənne-ʃ** > CLLDed Topic$_{SUi}$ > NEG.FUT + CAN$_1$ **ənne-ʃ** > Resumptive subject pronoun$_i$ > Verb

ənne–ʃ	nə-ʃɐɛ	ən=pə-nymphon	**əɪneu̯**	=uː$_i$	ʃ
NEG.FUT–CAN	DEF.PL–son	LINK=DEF.M.SG–bridechamber	NEG.FUT	=CL.3PL	CAN
er	hɛβː	hoson	pə-nymphios	e	=f	nemme=uː
do.CS	grief	COMP	DEF.M.SG–bridegroom	REL	=CL.3M.SG	with==CL.3PL

"The children of the bridechamber won't be able to mourn as long as the bridegroom is with them." [O] (Matthew 9:15 [Codex Schøyen, ed. Schenke])

TAM doubling with negative portmanteau morphemes can occur in finite CP embeddings, thereby paralleling the case with doubled affirmative TAM constructions. The Oxyrhynchitic example features the negative habitual aspect particle *me=* and its lengthened allomorph *merɛː*.

(26) Complementizer **tʃe** > NEG.HAB$_1$ **merɛ** > CLLDed Topic$_{SUi}$ > NEG.FUT$_2$ **me** > Resumptive subject pronoun$_i$ > Verb

mɛː	**me**	=k	kitɛː	əntak
Q	NEG.HAB	=CL.2M.SG	double_drachma	INDEP.PRON.2M.SG
[tʃe	**merɛː**	pe=ten–she$_i$	əntaf	
COMP	NEG.HAB	DEF.M.SG=POSS.2PL–master	INDEP.PRON.3M.SG	
me	=f$_i$	ti	kitɛ]	
NEG.HAB	=CL.3M.SG	give.CS	double_drachma	

"Do you not give any double drachma because Your Master, he himself does not give any double drachma?" [O] (Matthew 17:24 [Codex Schøyen, ed. Schenke])

As with the affirmative TAM particle, we assume that the highest copy of the negative TAM contributes polarity focus, while the lower copy contributes both aspect/tense values and negation. An additional argument for the idea that polarity emphasis is involved is that the embedded sentence which contains the TAM-doubling construction is clearly not a conversational starter: it hinges on something that the interlocutor said in the discourse and that

the one asking the question is repeating – and emphasizing – as part of his turn in the conversation (on this point, see also Poletto and Zanuttini 2013).

Crucially, the doubling of negative TAM portmanteaux does not have the semantic effects of double negation, but is semantically interpreted as a single negation. This brings us to the syntax of negation in Coptic, and more particular to the fact that negative TAM portmanteaux are incompatible with the bipartite negation strategy *nə= … ʔan*. The bipartite *nə= … ʔan* construction conforms to the standard pattern of negation crosslinguistically (Miestamo 2005, see also De Clercq 2017a). As illustrated by the Sahidic future tense sentence below, the initial negator *nə=* (NEG1) precedes the first-person plural subject clitic *=tən* 'we', the epistemic future particle *na*, and the main verb *pot* 'run'. The negation adverb *ʔan* 'not' (NEG2) comes after the verb. The post-verbal placement of the second negator *?an* is an invariable syntactic feature of the standard bipartite negation *nə= … ʔan*.

(27)　Negated future tense sentence with bipartite standard negation **nə= … ʔan**

uːde	ɑnɔn	hoʔo=n	**nə**	=tən	na
and.not	FREE.PRON.1PL	EMPH.REFLEX=POSS.1PL	NEG1	=CL.1PL	FUT

pot	**ʔan**
run.ABS	NEG2

"And we, too, we will not run away." [S] (Apophthegmata Patrum nr. 186, 46 : 10–11, ed. Chaîne)

Next consider the slightly more complex example of a conditional construction, in which both the protasis and the apodosis clause are negated. The apodosis clause, which contains the epistemic future particle *na*, is negated by the standard bipartite negation pattern but this time the postverbal negation adverb *ʔan* is not the final sentence constituent.

(28)　Conditional sentences with negated protasis and apodosis clause

er	**ʃan**	**tən**	pə-roːme	apotasse	ən–enka	nim
REL	COND	NEG.AUX	DEF.M.SG–man	give_up.ABS	PREP–thing	each.M.SG

[RC et	___	həm	pə-kosmos]
REL		in	DEF.M.SG–world.M.SG.NOM

nə	=f	**na**	ʃ	ʃoːpe	**ʔan**	əm	monakhos
NEG1	=CL.3M.SG	FUT	CAN	become.ABS	NEG2	as	monk.M.SG.NOM

"If a man will not give up everything that is in the world, he won't be able to become a monk." [S] (Apophtegmata Patrum nr. 242, 74: 28–29, ed. Chaîne)

Although we will not pursue the issue in further detail here, there is reason to assume that both parts of the bipartite negation can be used separately, yielding sentential negation. As for the

syntactic placement of NEG₁ and NEG₂, we localize the negation adverb **ʔ**an in a position above the verbal domain, which is vacated by the verb and the subject for aspectual (telicity) and Case-related purposes respectively (for further details on verb raising and argument voiding, see Reintges 2012: 152–155; see also Poletto 2008; De Clercq 2013 for similar proposals concerning the position of negation). The initial NEG₁ *nə=* is clearly higher than the subject clitic in AGRSP, as shown by examples (27) and (28) above.

   This raises a question as to whether NEG₁ is located in the Finiteness position of pre-subject particle or in a position higher up in the clausal left periphery. If NEG₁ were competing with pre-subject TAM particles for the same syntactic slot, we would expect the two elements to be in complementary distribution with each other. But this is not what we see in the data. The negated past tense sentence in (28) shows that NEG₁ *nə=* linearly precedes the preterit particle *ne*, which must be located in the Fin position, as it linearly precedes the subject clitic pronoun in AGRSP.

(29) NEG₁ **nə=** > PRET **ne** > Subject clitic > Verb > PCL **de** > NEG₂ **ʔan** > locative PP

nə=	**ne**	=f	mɔkəh	de	ʔan	ən–hɐt
NEG₁	PRET	=CL.3M.SG	grieve.STAT	PCL	NEG₂	in–heart

etβe	pə–hiːse	[RC ent	ʔa	=uː	ʔaʔa	=f
because.of	DEF.M.SG–suffer.ABS	REL	PERF	=CL.3PL	do.CS	=CL.3M.SG

na=f]	alla	etβe	tə–mənt–ʔat–hɔːte	[RC et	=uː
to=CL.3M.SG	but	because.of	DEF.F.SG–NMLZR–NEG.ADJZR–fear	REL	=CL.3PL

mɛn	eβɔl	ənhɛt=s]
remain.STAT	PCL	within=CL.3F.SG

"He (Pachomius) did not grieve because of the suffering that they (the brothers) did to him, but (rather) because of the impudence in which they remained." [S] (Sahidic Vitae of S. Pachomius 6:12–14, ed. Lefort)

In line with other proposals in the literature for positions for negation/polarity at the edge of the left periphery (inter alia: Klima 1964; Aboh 2010; Moscati 2006, 2010, 2012), we propose to enrich the left peripheral structure with a polarity-related position ΣP on top of the Finiteness projection—an idea that goes back to Laka (1990). It has been overlooked in the philological literature, that NEG₁ *nə=*, too, can undergo TAM doubling, patterning exactly like negative portmanteaux. The negative polar question from Shenoutean Sahidic exemplifies this point.

(30) Q-particle **ɛ** > NEG₂ **mə**= > CLLDed Topic_Subi > NEG₁ **nə**> Subject cliticᵢ > Verb > Direct object pronoun > NEG₂ **ʔan**

ɛː **mə**= pə–roːme [_RC ent ʔa =s ʔɔːʃəs

Q NEG₁ def.m.sg–man REL PERF =CL.3F.SG become_broad.ABS

ehraị̈ nəmma=f **ɛ** hitɑwo=f] **nə** =f na

PCL with=CL.3M.SG or besides= CL.3M.SG NEG₁ =CL.3M.SG FUT

tʼɔʔɔ =s **ʔan**

say.CS =CL.3F.SG NEG₂

"Will the man with whom or besides whom it (the sword) has become at leisure (lit. broad) not say it?" ˢ (Shenoute IV 11: 15–16, ed. Leipoldt)

While we will not discuss this type of NEG_I doubling further in this paper, we wish to call attention to the correlation between particles that appear in FinP and ΣP and the option of taking part in a TAM-doubling construction. The negation facts discussed so far permit us to refine our cartographic analysis. The revised map in (31) below contains the polarity-related ΣP, which host NEG₁, and the clause-internal NEG₂ position above the VP domain. In the doubling construction, the highest *nə*= has been labelled NEG₃ to indicate that negation can appear in yet another position.

(31) Template for TAM particle placement including bipartite negation positions

ForceP	TopicP	FocusP	TopicP	ΣP	FinP	AgrSP	TP*	NegP	VP
Comp	Topic_DO	TAM₂	Topic_SU	NEG₁	TAM₁	Subj.CL	TAM₀	NEG₂	VP
		NEG₃							

As for negative TAM portmanteaux, we can now formulate an explicit theoretical proposal of how morphological syncretism relates to syntactic structure. Given that negative TAM portmanteaux are in complementary distribution with the bipartite negation *nə*= … *ʔan* and given that pre-subject TAM particles originate in the Mittelfeld, it can be deduced that negative TAM portmanteaux lexicalize not only contiguous positions in the functional sequence for finiteness and polarity, but also contiguous positions for TAM and negation in the Middlefield. The syntactic template below further illustrates this point.

(32) Template for TAM particle placement including negative TAM portmanteau positions

ForceP	TopicP	FocusP	TopicP	ΣP	FinP	AgrSP	TP*	NegP	VP
Comp	Topic$_{DO}$	TAM$_2$	Topic$_{SU}$	NEG$_1$+ TAM$_1$		SUBJ.CL	TAM$_0$ + NEG$_2$		VP
		NEG$_3$		= NEG.TAM$_1$			= NEG.TAM$_0$		

Based on evidence and arguments presented here, it stands to reason that firstly, pre-subject TAM particles originate in the Mittelfeld and, secondly, lexicalize at least all the features that we shaded in the table in (32), to wit, Σ, Fin, some flavor of TAM, and Neg. The same reasoning applies to affirmative pre-subject TAM particles, whose syntactic template includes a ΣP projection for affirmative polarity. In others words, affirmative particles also lexicalize (at least) one TAM-related feature(s), Fin, and ΣP, as illustrated in (33).

(33) Template for TAM particle placement including affirmative polarity

ForceP	TopicP	FocusP	TopicP	ΣP	FinP	AgrSP	TP*	VP
Comp	Topic$_{DO}$	TAM$_2$	Topic$_{SU}$	TAM$_1$		SUBJ.CL	TAM$_0$	VP

Just as negative portmanteaux lexicalize features of both the Mittelfeld and the left periphery, so do affirmative TAM particles. The generalization emerging from Table 1 below is that only those affirmative and negative TAM particles that move to the Finiteness projection (i.e. TAM$_1$) can undergo TAM doubling for polarity focus expression, i.e. if a marker gets a + in the TAM$_1$ column, it will get a + in the TAM$_2$ column as well.

Table 1. *Alignment of TAM particles with left-peripheral TAM positions*

	TAM$_0$	TAM$_1$	TAM$_2$
na	+	−	−
ʔah	+	−	−
ʔa, ha		+	+
ənne		+	+
ne(re)	−	+	+
ʃ	+	+	+
e(re) … e	+	+	+
e(re) … ʃan	+	+	+

The traditional division of the Coptic TAM system into two positional classes of pre-subject and preverbal/post-subject TAM particles is in need of revision in several respects. First of all, pre-subject TAM particles are not directly merged in the presubject Fin position, but are moved

there from the Mittelfeld domain. Second, preverbal/post-subject TAM particles *na* and *ʔah* are in the TAM^0 position but do not move any further. Third, the conditional mood *e=f ʃan-sɔːtəm* 'if he hears' and the deontic future tense *e=f e-sɔːtəm* 'he shall hear' form an intermediate class of TAM particles. In the context of lexical subjects, they must move around the lexical subject to the Finiteness projection, TAM_1, thereby mimicking the pathway of pre-subject TAM particles. There are additional complications, which are beyond the scope of this paper (but see Reintges 2011a: 567–571 for further details). In the next section we show how these data can be analyzed in Cartography/Nanosyntax.

2.   The Coptic TAM construction: a first stab at an analysis

So far we have seen that the doubling of affirmative/negative TAM particles is a multifaceted phenomenon, where syntactic cartographies and morphological matters are closely intertwined. As it happens, Coptic TAM particles are prosodically light functional categories, which are attached by the phonology to the linearly adjacent constituent. However, when we look at their distributional behavior, they turn out to be syntactically extremely versatile. As we shall see next, the relative flexibility of Coptic TAM particles is intimately related to their internal structural complexity, which is partially concealed by their prosodic lightness. To see this facet of Coptic particle syntax more clearly, we need to shift in theoretical perspective and move from cartography to Nanosyntax. Section 2.1 outlines our proposal in a nutshell. Section 2.2 offers some theoretical background on Nanosyntax. Section 2.3 addresses the Nano-syntactic structure of Coptic TAM particles. The syntactic analysis of TAM doubling is fleshed out in Section 2.4.

2.1   The proposal in a nutshell

If affirmative and negative pre-subject TAM particles lexicalize features, such as Σ, FIN, TAM, and NEG$_1$, they must be endowed with these features early on in the lexicon. This is the basic tenet of our proposal, but we will take the analysis one step further. In view of the fact that most of these features can be ordered hierarchically and are related to the left periphery, as argued in cartographic work by Rizzi (1997), Cinque (1999), Poletto (2014) and others, we will not only say that these lexical items are simply endowed with these features, but we will make the stronger claim that TAM particles are stored in the lexicon with a small syntactic structure, which accounts for the phonological form as well as for the syntactic distribution of the TAM particles in question. Based on our discussion up until now, the rough lexical structure of a pre-

subject TAM particle would thus look as in (34), where the relevant left-peripheral features are related to FɪɴP and ΣP. The lexical structure of a post-subject/preverbal TAM particle like the Future tense particle *na* would be missing FinP and ΣP as in (35). The smaller-sized lexical structure of these TAM particles accounts for why these particles cannot make it to the left periphery. In the below tree diagrams, the double arrow indicates that there is a particular phonology attached to the lexical structure, left unspecified for now, which will lexicalize the entire structure.

(34) Lexical structure of pre-subject TAMs   (35) Lexical structure of post-subject TAMs
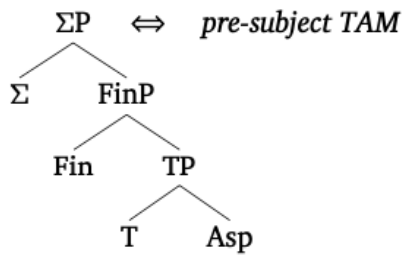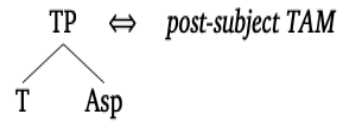
Under this type of proposal, the size of items in the lexicon determines their distribution within one language, and/or across languages (Starke 2014). Another consequence of this approach is that lexicalization must happen phrasally (and not under terminals), since even small particles are actually portmanteaux, for which the Coptic negative TAM portmanteaux particles provide illustrative cases in point. Affirmative and negative TAM particles thus consist of several submorphemic syntactic features. Before we develop our proposal further and explain how TAM$_2$ (the highest copy in the TAM doubling construction) fits into the story, we need to say something more about the theory of Nanosyntax in which this type of decomposed lexical structures is used.

2.2   *A note on Nanosyntax*

The idea to decompose lexical items and store them with their lexical structure, phonology (and conceptual information in the case of roots) in a post-syntactic lexicon is the core idea in Nanosyntax—a late-insertion theory that finds its origins in cartography, but which uses cyclic phrasal lexicalization (Starke 2009; Caha 2009; Baunaz et al 2018). The theory is well-equipped to capture instances of syncretism or polyfunctionality, which is exactly what we see in the Coptic TAM doubling construction. A hypothetical lexical item in Nanosyntax looks as in (36),

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with the conceptual information (here in capital letters), the phonological information (here between slanted brackets) and the tree structure (here as labelled brackets).[4]

(36)   A hypothetical lexical item with its conceptual, structural, and phonological information
         < BLA,   [XP [X][YP[Y] [ZP[Z]]], /bla/ >

The consequence of this type of approach is that lexicalization must be phrasal: a small phonological string can lexicalize several syntactic heads, i.e., a phrase. Lexicalization happens in a rigid cyclic way. After each step of merge, the lexicon will be consulted to check whether there is a matching lexical item. For instance, when syntax merges the structure in (37), the hypothetical lexical item in (37) is a candidate for insertion, thanks to the superset principle, defined in (38).

(37) Syntactic structure

$$ZP$$
$$|$$
$$Z$$

(38)   Superset Principle (Starke 2009: 3)
         A lexically stored tree matches a syntactic node, iff the lexically stored tree contains the syntactic node.

However, if there were another lexical item in the lexicon that had the structure in (39), then this item would have been the best match for (37) and would have won the competition. This is referred to as the Elsewhere Principle (Kiparsky 1973).

(39)   a hypothetical lexical item
         < BLI, [ZP [Z]], /bli/ >

If there is no match, lexicalization-driven movements will be tried according to the lexicalization algorithm in (40) (Starke 2018: 245), which assures a lexicalization for a given feature. For the purpose of this paper, we will not go very deep into the specifics of the

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[4] Conceptual information is only present with roots/non-functional material and will hence be irrelevant for most of our discussion.

lexicalization algorithm. However, we do need to mention it, because we want the reader to be aware of the fact that each part of the derivation is derived by phrasal lexicalization and complies with the specific steps that are specified in the lexicalization algorithm in (40). (But see section 3.3 for an update on this.)

(40)   Lexicalization algorithm
   a.   Insert feature and spell out.
   b.   If fail, try a cyclic (spec-to-spec) movement of the node inserted at the previous cycle and spell out.
   c.   If fail, try a snowball movement of the complement of the newly inserted feature and spell out.
   d.   If merge-f has failed to spell out (even after backtracking), try to spawn a new derivation providing feature X and merge that with the current derivation, projecting feature X to the top node.

In the next section, we will present a decompositional analysis for the perfect particle *ʔa*, the negative future tense portmanteaux *ənne* and the epistemic future tense particle *na*, explaining why the former two particles can take part in the TAM-doubling construction, while the latter cannot.

2.3   The Nanosyntax of Coptic TAM particles

Up until now, we argued that the features of a preverbal/post-subject TAM-particle, i.e., (NEG-)TAM_0 are also part of the feature structure of a presubject TAM-particle, i.e., a (NEG-)TAM_1. As we have seen in Section 1, there is converging evidence that the positions which pre-subject particles and preverbal/post-subject particles can occupy are connected via movement. Besides the empirical support for the mobility of TAM particles, there are semantic reasons to believe that pre-subject TAM particles are generated in the Mittelfeld, since they all express tense/aspect/mood/properties that are core properties related to the IP/TP domain. A key idea in Nanosyntax is that lexical structure determines the distribution of lexical items. When applied to the case at hand, a straightforward explanation for the fact that TAM particles can also appear in the high left peripheral TAM_2 position would be that (NEG-)TAM particles can be enriched with a Focus feature, as seen in the tree structure in (41).

(41)   Focus feature in pre-subject TAM particles

```
FocP      ⟺    pre-subject TAM
 /\
Foc  ΣP
    / \
   Σ  FinP
      / \
    Fin  TP
        / \
       T  Asp
```
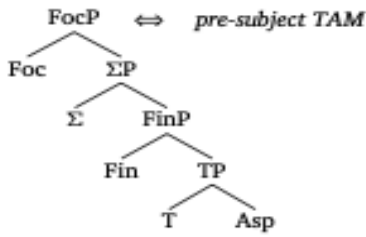
Adding the focus feature to the lexical structure of pre-subject TAM particles makes it possible to connect TAM$_2$ to the lower TAM positions. It also opens the way for this type of TAM particle to appear in different positions, each time contributing another property. And this is what we see happening: TAM$_2$ particles do not contribute TAM semantics or negation in the left periphery, but rather emphasis on the polarity present in the IP domain. In other words, the very fact that TAM particles can appear higher up in the structure as TAM$_2$ particles indicates that there is another layer of meaning within pre-subject TAM particles. In Nanosyntax, the focus feature that presubject particles can bear is naturally translated as another layer of internal structure. The idea that TAM$_1$ and TAM$_2$ are connected has been proposed before by Reintges (2011a: 135), who argues that they must be connected via movement and that TAM$_2$ is a copy of TAM$_1$. We will adopt the essence of this proposal, as will become clear in section 2.4. Before we go there, we first need to make the internal structure of some representative TAM particles more precise. This is the task ahead of us in the reminder of this section.

We will focus on three TAM particles: *ʔa, ənne and na*. It is not our aim to capture the exact TAM properties of all different particles, since this would go well beyond the limits of this paper. We adopt the idea that there are several heads for temporal semantics (Reintges 2011a: 557). For now, we will label these tense heads as T(Preterit) > T(Past) > T(Future) in line with proposals by Cinque (1999) and Julien (2001) for the tense domain. We will also adopt the well-accepted idea in the literature that aspectual heads are lower in the structure than tense heads. The aspectual head relevant for our current study is the perfective head, which we will capture with the feature "End" to indicate that it gives rise to the completion of an event (cf. Starke 2021, De Clercq 2022 for the use of this feature.)

A long-standing observation about the perfect tense/aspect particle *ʔa* is that it cannot be used with states, but only with events, as opposed to the preterit particle *ne*, which can be used with events and states alike (Reintges 2011a: 552). The base of our lexical structure needs to reflect this fact. For this reason, we propose here that the base of the lexical structure of *ʔa*

consists of the feature Process [Proc], which is a feature that makes up the core of eventive predicates according to Ramchand's (2008) decomposition of verbal predicates. In addition, we will need a feature that assures that the TAM particle expresses perfect aspect. As mentioned before, we adopt the feature End for this, although nothing crucially hinges on this term, which could alternatively be labeled Asp_{perf}. We adopt the feature T_{past}, one of the several Tense features in the TP domain to capture the fact that the perfect tense denotes past events. The feature Fin is also part of the lexical structure of the perfect particle ʔa, allowing it to mediate between the TP and the CP domain, and we will assume that Σ, responsible for polarity, is also there, on a par with the fact that we saw this position activated with negative TAM particles. As a final feature, we want to argue that ʔa also consists of a Focus feature, which is an optional feature and can be absent in the structure. Although barely meeting a minimal (CV) size requirement on morphosyntactic words, the perfect tense/aspect particle ʔa is associated with a complex lexical structure, as seen in (42).

(42) The lexical structure of the perfect tense/aspect particle ʔa
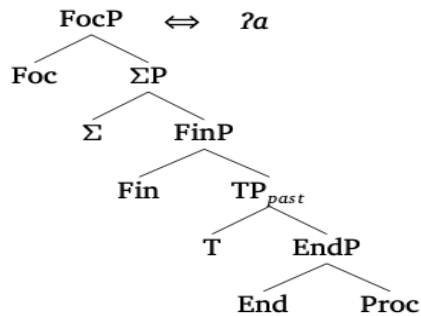
With respect to the lexical structure of *na*, which can also function as an independent verb (Reintges 2011b: 85–86), we want to propose that it consists at least of the aspectual feature Durative [Dur] (Starke 2021) to capture the progressive interpretation that is typical of stativized motion verbs, a T_{Future} feature and a $Mood_{Epistemic}$ feature, which in line with Cinque's (1999) functional hierarchy sits above T_{past} and hence, also above T_{fut}.[5]
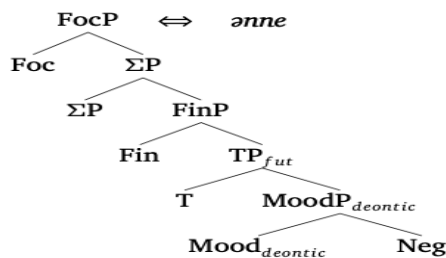
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[5] It is possible that *na* consists of some additional feature related to the inner aspect of the verbal spine (Ramchand 2008), since it can also occur on its own. However, we will assume for now that the structure is as in (44) in the main text and keep a further investigation for future research.

(43) The lexical structure of the epistemic future tense *na*

$$\text{Mood}_{epistemic}\text{P} \quad \Leftrightarrow \quad \textbf{\textit{na}}$$

Mood$_{epistemic}$ TP$_{fut}$ — T, Dur
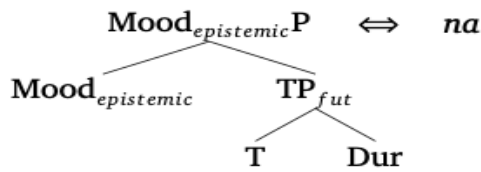
Also for historical reasons, the negative future *ənne* is commonly seen as "the isomorphic negation" of the deontic future (Shisha-Halevy 2003: 263). We wish to take the analogy between the negative and the positive deontic future one step further by decomposing the negative deontic future particle *ənne* into a geminated form of the initial negator (NEG1) *nə=* and the deontic future tense particle *e*. Here we propose that the negative deontic future *ənn-e* has three basic components. The first component is a low NEG head, which captures the incompatibility with NEG2 *ʔan*. The second component is a Mood$_{Deontic}$ feature, which captures its deontic modal meaning, and the third component is a T$_{Future}$ feature, which captures its future tense reference. We follow Cinque (1999) for the order between Mood$_{Deontic}$ and T$_{Future}$. Due to its pre-subject position, the Fin feature must be part of the lexical structure of the deontic future particle *ənne*, allowing mediation between the TP and the CP domain, as well as a Σ feature, accounting for the incorporation of NEG1. Last but not least, we argue that the lexical structure of *ənn-e* also consists of a Focus feature, which can be absent in the syntactic structure. Thanks to the Superset Principle in (38) a syntactic structure without Focus would still be lexicalisable by the item in (44).

(44) The lexical structure of the negative future tense particle *ənn-e*

$$\text{FocP} \quad \Leftrightarrow \quad \textbf{\textit{ənne}}$$

Foc — ΣP
ΣP — FinP
Fin — TP$_{fut}$
T — MoodP$_{deontic}$
Mood$_{deontic}$ — Neg

With the feature composition and lexical structures of these TAM particles in place, the remainder of the story follows quite naturally, as we will see next.

2.4   A Nanosyntactic account of the Coptic TAM doubling construction

Before we get to the analysis of the TAM doubling construction itself, we need to emphasize that we will not explicate all different steps in the Nanosyntactic spellout algorithm, because this would lead us too far for the current objective of the paper. However, we will illustrate the main steps for the derivation of the TAM doubling construction with the perfect tense/aspect particle *ʔa*. After merge and lexicalization of VP, the complex TAM particle will be merged. The key idea here is that it will be generated in a complex specifier, i.e., in a separate workspace. There is, as it were, no other way to lexicalize the first aspectual feature End that is merged after VP has been lexicalized. If the syntax needs to open an additional workspace to lexicalize a particular feature, then it continues merging features until it has used up the full potential of the complex specifier. The reason for this is related to the fact that opening a new workspace is the last step in the lexicalization algorithm, (40), and hence considered a last resort operation, which is always very costly. In the case at hand, this means concretely that the entire structure of the particle *ʔa* will be generated in the complex specifier that was opened in an attempt to lexicalize the aspectual feature [End], which is required for the lexicalization of *ʔa*. The generation of this particle will proceed in a stepwise fashion, with attempts to lexicalize the structure after each new merge. The lexicalization within the complex specifier will be effortless, since each new merge will lead to a match. Ultimately, the specifier will be closed and the feature that needed to be lexicalized will project in the main spine.[6] This yields the tree structure in (45).

(45) Generation of the lexical structure of the perfect particle *ʔa* in the specifier of EndP

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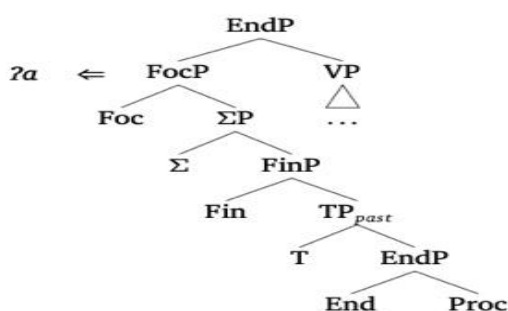
[6] Note that there is no head End° in the main spine. The idea is that this head is provided by the complex specifier and that having it in the main spine would be redundant (cf. Starke 2004).

As has been mentioned before, the syntax can either generate all possible layers relevant for the merge of the perfect particle *ʔa*, but it can also stop at ΣP, bearing in mind that Focus is an optional (and marked) feature in a derivation. After merge of this complex left branch, the derivation will continue merging the relevant features of the clausal *functional sequence* or *fseq*. The same features that were merged in the complex specifier will be merged in the main spine and at each merge step, lexicalization of the feature will be tried. However, that will fail, given that there is a big chunk of structure underneath these features on the one hand, and given that the Coptic lexicon does not consist of lexical items with these structures.

Now, under the lexicalization algorithm provided in (40), the derivation would start lexicalization-driven movements to lexicalize these features. However, the syntax has already compiled a complex specifier (and lexicalized it) that contains most of them. Accordingly, lexicalizing these features again seems a redundant procedure. It would be better if this complex specifier could be attracted to these heads in a successive cyclic way to ensure the interpretation of the various features the complex specifier consists of. In other words, what we need in the algorithm is a step for feature-driven movement. De Clercq (2019, 2020: 181) proposes to update the algorithm with a step that allows for just that. The Revised Lexicalization algorithm is given in (46) below.

(46) Revised Lexicalization algorithm
  a. Insert feature and spell out.
  b. **If fail, screen the derivation and attract a constituent with the required feature**.
  c. If fail, try a snowball movement of the complement of the newly inserted feature and spell out.
  d. If merge- f has failed to spell out (even after backtracking), try to spawn a new derivation providing feature X and merge that with the current derivation, projecting feature X to the top node.

The result of this update is that after each step of merge, the first step will be to check the lexicon whether there is any lexical item available that can lexicalize the feature immediately. If no such lexical item is available, the derivation will be screened for a constituent that can provide the feature. This is exactly what will happen when T_{past} is merged into the clausal spine. Since this feature is present in the complex specifier, that specifier will be attracted and merge continues. The next feature in line is AgrS. In the same way as with our TAM particle, the relevant constituent will be attracted to the specifier and the derivation continues. Fin will be merged and subsequently Σ*,* each time attracting the complex specifier that was lexicalized as

the TAM particle. If the complex TAM particle were not merged up to its full potential, but only up to ΣP, then SpecΣP in the main spine will be the halting position or criterial position of that particle, freezing it in place and blocking further movement pace (cf. Rizzi 2006, 2017; Rizzi and Shlonsky 2007).[7] The derivation in (47) shows the movement path of the complex specifier through the main clause.

(47) Movement path of the complex specifier through the main clause
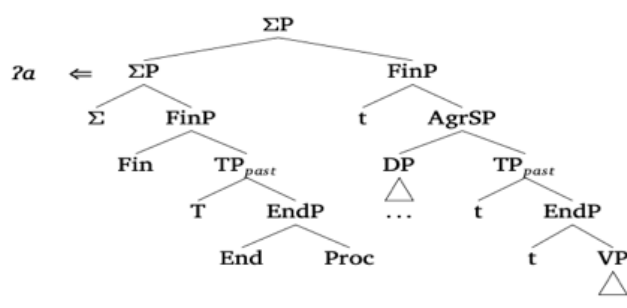
If the optional Focus feature were merged as well in the low complex specifier that lexicalizes *ʔa*, as illustrated in (45) above, then the complex constituent should be able to move further to SpecFocP, over the TopicP that activated this part of the left periphery.[8] However, since the main clause ΣP is a halting position for TAM-particles in Coptic, movement of the complex specifier to SpecFocP will not be an option.

So, what will happen when Foc is merged in the main spine? In accordance with the updated lexicalization algorithm, the derivation will be screened for a constituent that could lexicalize Focus. The frozen complex specifier in SpecΣP will be found, but since it can no longer move, and since subextraction is not possible from the complex specifier because the Focus-layer sits at the top of the spine, the only option is to copy the entire complex specifier and remerge it in SpecFocP. The syntactic configuration underlying the Coptic TAM doubling construction will look as in tree diagram (48) below.

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[7] The implications that the internal structure of lexical items determines what their criterial position will be, go beyond the confines of this paper and need to be considered against the rich literature on Criterial Freezing. We will take this up in future work.

[8] We will not discuss the details of the relation between the resumptive clitic in SpecAgrSP and the DP in the left peripheral TopicP.

(48) Copying of the entire complex specifier to SpecFocP
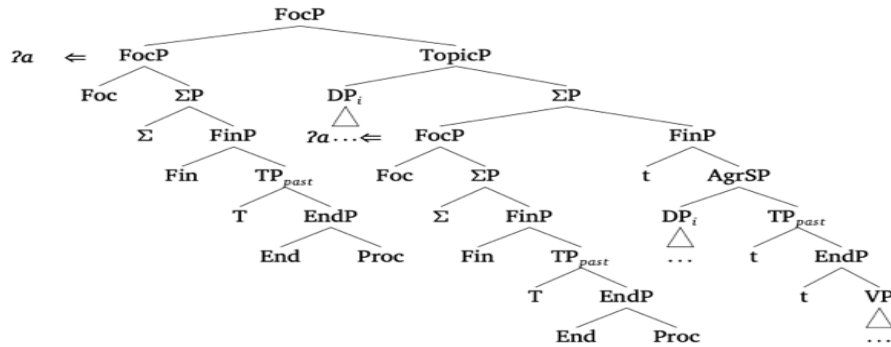
The same mechanism applies to the negative future tense particle *ənne*. The only difference is that due to the presence of NegP in the complex left branch, the polarity of the clause at ΣP will be negative. Preverbal/post-subject TAM particles cannot play a role in the left periphery of the clause, since the lexical structure of these particles lack the relevant features associated to information structure and polarity.

3.   Crosslinguistic comparison: Polarity focus in Italian dialects

At first blush, the flexible syntax of Coptic TAM particles and the morphosyntactic expression of polarity focus via doubling has a very exotic flavor to it. This impression diminishes when the comparative evidence is taken into consideration. Of special interest in this regard are comparable data on polarity focus from Italian dialects, as examined by Poletto (2010) and Poletto and Zanuttini (2013). Poletto (2010) discusses data from Regional Italian and Veneto, in which it is possible to combine the clause-initial standard negator *non* with a clause-final negative marker *no*, which is contrastively stressed.

(49)   Non ci   vado   NO!   [Regional Italian]
       Not there   go   NO

(50)   No ghe   vado   NO!   [Veneto]
       Not there   go   NO
       "I won't go there" (Poletto 2010: 40)

The affirmative counterpart of this construction also exists, (51), which increases the parallel with the Coptic doubling construction.

(51) Ci   vado   SI.   [Regional Italian]
     There go   YES
     "I will go there indeed"

As noted by Poletto (2010: 41), the construction with clause-final NO/SI is not so widespread, whereas the cleft-like construction in (52)–(54) is far more common. The cleft-like construction has the same meaning and pragmatic value and is also available in the positive and negative form. This construction is also the topic of discussion in Poletto and Zanuttini (2013).

(52) Sì   che ci   vado
     Yes   that there go (Poletto 2010: 41)
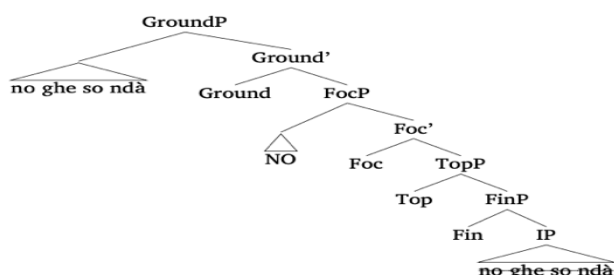
(53) NO che non ci vado!   [Regional Italian]
     NO that not there go

(54) NO che non ghe vado   [Veneto]
     NO that not there go
     "I won't go there." (Poletto 2010: 41)

Crucially, just like the case of Coptic, the two negative elements in both constructions do not give rise to two semantic negations, but only to one negation. The Coptic data involve TAM particles that include polarity features in their lexical structure, whereas the Italian data merely involves polarity particles. That considered, the situation in both languages is nevertheless comparable insofar as there is negative concord between two polarity sensitive particles. In Coptic, the concord arises between two copies of the same TAM particle, while in Italian the concord arises between two morphologically different markers.

     Addressing the issue, Poletto (2010: 41) suggests that there is an evidential value associated with the constructions: "The informal pragmatics of an utterance like the ones above is something like 'why are you asking me whether I'm going, it is self-evident to me and it should be to you as well'." She argues that the polarity particle NO contributes focus, as it is associated with a specific intonational contour. In the clause final construction and in the *si/no+ che* construction, the polarity particles *si* and *no* are located in a left-peripheral Focus projection. For the construction with clause final NO/SI in (49)-(51), it is proposed that the entire constituent preceding *si/no* moves to SpecGroundP, which Poletto and Pollock (2004) identify as a topic position on top of the FocP. The tree diagram in (55) further illustrates the structure for this construction.

(55) The syntax of polarity focus in Italian dialects (Poletto 2010)

```
                    GroundP
                   /       \
                  /      Ground'
                 /        /     \
        no ghe so ndà  Ground  FocP
                              /    \
                             /    Foc'
                            /    /    \
                          NO   Foc   TopP
                                    /    \
                                  Top    FinP
                                        /    \
                                      Fin    IP
                                             |
                                        no ghe so ndà
```

As with Coptic, focalization goes hand in with topicalization, which further strengthens the parallels between the polarity focus constructions in the two languages. An important piece of evidence for Poletto's analysis comes from the fact that nothing can follow clause-final NO/SI apart from dislocated constituents, as seen in (56). If *no/si* were located inside the IP, one would expect, contrary to fact, that it could be followed by arguments (57).

(56)   No ghe so ndà NO, al cinema
        not there am gone NOT, to the cinema
   "I really did not go to the cinema."

(57)   *No ghe so ndà NO, da nisuna parte
        Not there am gone NOT, to no place
        "I really did not go anywhere.'" (Poletto 2010: 48)

For the construction with *no/si* + *che*, Poletto (2010) proposes that the polarity particle *no/si* also sits in SpecFocP and that *che* does not sit in Force (as proposed by Rizzi 1997) but in a lower position. Poletto and Zanuttini (2013) adopt a biclausal structure for this construction, but keep the idea that it is a case of polarity emphasis, and that the highest polarity particle also ends up in SpecFocP.

As a final point, it needs to be mentioned that the Italian constructions are incompatible with interrogative wh-phrases. The same seems to be true for the Coptic data. While yes/no interrogative words can be combined with the TAM-doubling construction, as examples (26) and (30) illustrate, there is no recorded example of the TAM-doubling construction with pied-piped wh-argument and wh-adjunct questions. The distributional facts follow if the highest particle copy TAM$_2$ in Coptic and the polarity particles *no/si* in Italian occupy the Specifier of FocP—a position that is associated with the target position of wh-phrases. The fact that polarity-

sensitive yes/no interrogative particles are compatible with the construction can be accounted for, if we adopt Rizzi (2001)'s expanded left periphery structure, which contains the INT(errogative)P above FocP that is dedicated to yes/no and cause/reason questions. The tree structure in (57), taken from De Clercq (2017), shows the relevant functional heads involved in the derivation of regular statements, wh-questions and yes/no questions. Since wh-phrases target FocP, they cannot co-occur with the Coptic higher TAM$_2$ copies or the Italian polarity particles which also target this position.

(57) Sequence of functional heads including positions for interrogative elements
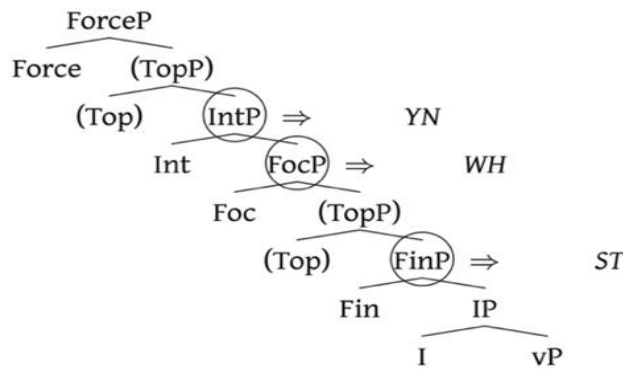
Despite the substantial differences between the Coptic and the Italian data, there is also considerable overlap. Crucially, the data from the two languages show that particles that are used elsewhere in the grammar can be used to express focus on polarity. In Italian, the regular polarity particles can be used for that purpose, giving rise to a concord pattern with the regular standard negator in the clause. In Coptic, affirmative and negative TAM particles can be copied in the left periphery, also leading to a situation of concord when a negative portmanteau is being doubled. While negative concord is a well-studied phenomenon for Italian, it is understudied for Coptic.

4.   Conclusions

We explored the - at first blush - typologically atypical TAM doubling construction in Coptic Egyptian, which features one TAM particle in the pre-subject position and one in the pre-topic position, both in the left periphery of the clause. The construction occurs with affirmative and negative TAM particles and does not give rise to double negation readings or to a double interpretation of TAM properties. To capture these facts, we adopted the idea proposed in Reintges (2011) that the highest TAM particle is a copy of the lower TAM particle and that it

contributes polarity focus. It could be also shown that the highest particle sits in a left peripheral Focus projection, and that it can only appear there if the left periphery has been activated by a lower CLLDed topic. With respect to the lower particle copy, we argued that it sits in ΣP/FinP. Crucially, we provided support to the idea that the regular position for pre-subject TAM particles is not its base position, but that they are actually generated in the IP domain, where another group of TAM particles, the so-called preverbal particles, is also generated.

Based on empirical support for a connection between the three different positions (Focus, Fin, TP/IP), in which TAM-particles surface, we proposed to decompose TAM particles into several layers, thus arguing for the fact that these particles are actually portmanteaux. While pre-subject particles were analyzed as having a lexical structure that consists of Focus, Σ and FIN in addition to several TAM-related features, the post-subject particles were argued to only consist of IP-related TAM features. Thanks to this decomposition, we move closer to an understanding as to why pre-subject TAM particles must always move to the left periphery, while this option is not available for certain post-subject/preverbal particles. Under a Nanosyntactic approach, the distributional differences between TAM particles arise as a consequence of the size of lexically stored trees. The ability to give rise to a copy follows from the presence of a marked/optional focus feature in the syntax of these TAM expressions. In line with much diachronic work of the Jubilar, we hope to have shown that dead languages with limited data resources answer to questions of current concern in linguistic theorizing and to have demonstrated the strength of theoretically informed approaches to historical syntax.

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