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 tense–aspect–mood [TAM] markers is one of the most complex areas of the cross-dialectal grammar of Coptic Egyptian. As the morphological exponents of fine-grained distinctions in the temporal, aspectual and modal-evidential domain, 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 *Paͧlos* 'Paulus'. The canonical 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-Ṣaʕīd '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	əmmɔ=f	mən	ɔnɛːsiphoros	mən	wan
PERF	Paulus	rejoice.ABS	PREP=CL.3M.SG	with	Onesiphoros	with	one.M.SG

nim

each.M.SG

"Paulus rejoiced himself 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, such as the above-discussed perfect and negative future marker *ha* and *nne* are not restricted to the pre-subject position of SVO sentences but may also appear higher up in the structure of the clausal left periphery (see Rizzi 1997, 2001; Poletto 2014, and much related work). The syntactic context in which this happens is a syntactic variant of *clitic left-dislocation* [henceforth CLLD] (Cinque 1990: chap.2), in which two morphologically identical copies of a TAM particle co-occur within the same sentence. The higher particle copy (TAM$_2$) precedes the CLLDed Topic, while the lower copy (TAM$_1$) follows it in linear order. More precisely, TAM$_1$ is placed in 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-ʃɛːre* 'my daughter', is anaphorically related to the enclitic subject pronoun third person feminine singular *=s* 'she' (as indicated by subscript$_i$).

(3)   PERF$_2$ **ha** > CLLDed Topic$_i$ > PERF$_1$ **ha** > Subject clitic$_i$ > Verb
    ha   ta–ʃɛːre   **ha**   =s   muː   ən–te–unuː
    PERF   DEF.F.SG.POSS.1SG–girl   PERF   =CL.3F.SG die.ABS in–DEF.F.SG–hour
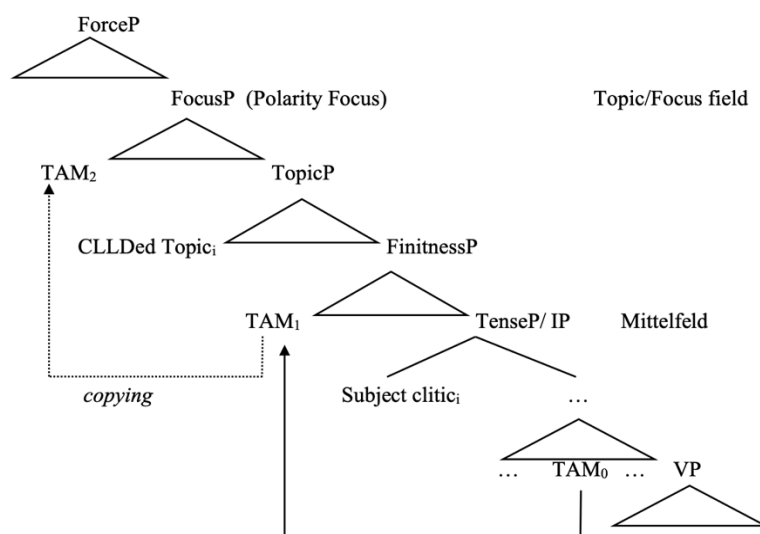   "My daughter has just died." [O] (Matthew 9:18 [Codex Scheide, ed. Schenke])

The joint patterning 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 from a theoretical perspective. In the Oxyrhynchitic Coptic example in (4), the point of interest is that despite the presence of two occurrences of the negative future *ənne*, the clitic left-dislocation 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.FUT$_2$ **ənne** > CLLDed Topic$_i$ > NEG.FUT$_1$ **ənne** > Subject clitic$_i$ > Verb
    ənne   peï–tʃom   peï   **ənne**   =f   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]

In what follows we will present arguments and evidence for a unified syntactic analysis of the Coptic TAM doubling construction as a case of polarity emphasis or "verum" focus (Höhle 1992; Reintges 2011a; Poletto and Zanuttini 2013). The basic ingredients of our proposal are schematically represented in the below tree diagram.[2]

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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.

(5) The cartographic structure of the Coptic TAM doubling construction (first outline)

ForceP

FocusP (Polarity Focus)   Topic/Focus field

TAM₂   TopicP

CLLDed Topicᵢ   FinitnessP

TAM₁   TenseP/ IP   Mittelfeld

copying   Subject cliticᵢ   …

… TAM₀ …   VP

The roadmap of the paper is as follows. The next section (Section 1) takes a closer look at the morphosyntax and distributional behavior of pre-subject and preverbal TAM particles of various kinds. This leads to Section 2, which presents a combined cartographic/nanosyntactic analysis of TAM particle placement in general, and the syntactic derivation of TAM doubling in particular. Section 3 brings in the comparative dimension and calls attention to the similarities and differences in expressing polarity focus that we see between the Coptic TAM doubling and polarity focus constructions in Italian dialects, as discussed in important work by the Jubilar (Poletto 2008, 2010; Poletto and Zanuttini 2013). 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 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 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 that cannot take part 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 some 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 (2009) 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 into a perfect 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 has been taken.

(6)   PERF$_2$ **ʔa** > CLLDed Topic$_i$ > PERF$_1$ **ʔa** > Subject clitic$_i$ > Verb

ʔa	ne–roːme	de	əm=pə–ma	[$_{RC}$ et	___	əmmau̯]
PERF	DEF.PL–man	PCL	LINK=DEF.M.SG–place	REL		there

ʔa	=uː	weh	pə–soːma	əm=pə–makarios	Apa Mɛːna
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 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
PERF	DEF.M.SG.POSS.1SG–silver		with	DEF.M.SG.POSS.1SG–gold

ʔa	=tetən	tˢit	=uː
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 the absolute sentence-initial position, but may be preceded by a range of adverbial modifiers. As pointed out by Bosson (2006: 286–287), the borrowed Greek 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–tˢaei̯s	**ʔa**	=f_i	ʃiːβe
then	PERF	DEF.M.SG–angel	LINK–	DEF.M.SG–lord	PERF	=CL.3M.SG	change.ABS

ən–te=f–morphɛː		əntoot	əm–pə–ma	[_RC et ___
PREP–DEF.F.SG=POSS.3M.SG–form.F.SG		through.CL.1SG	in–DEF.M.SG–place	REL

əmmɔː]
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, as shown by the following Oxyrhynchitic dialect example. As an important detail, it should be observed that temporal adjunct clause [_RC *et ha=ï arkhesthe e–setˢe*] "when I had begun to speak" takes the form of headless ('antecedentless') relative clause, which is introduced by the relative complementizer particle *et* 'that'.

(9) Adjunct clause > PERF₂ **ha** > CLLDed Topic_SU > PERF₁ **ha** > Subject clitic_i > Verb >

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

ha pe–pneuma [_RC_ et ___ weβ]
PERF DEF.M.SG–spirit.NEUT.SG.NOM REL purify.STAT

ha =f iː ehrɛï et͡ʃɔ=uː
PERF =CL.3M.SG come.ABS 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 can be explained from the overall versality of clitic left-dislocation (Reintges 2018: 378 §10.1.3.1d). The combination 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 information-structurally complex construction.

(10) CLLDed Topic_DO > PERF₂ **ha** > CLLDed Topic_SU > PERF₁ **ha** > Resumptive subject pronoun > Verb >> direct object clitic_i

neï de tɛːr=uː **ha** Iɛːsus **ha** =f t͡ʃa =uː
DEM.PL PCL entire=POSS.3PL PERF Jesus PERF =CL.3M.SG say.CS =CL.3PL

e–pə–mɛːʃe hən hen–paraβolɛː
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. 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 *t͡ʃe* 'that', which is morphologically derived from the reportative verb *t͡ʃoː* 'to say'. The quotative complementizer itself has a broad syntactic distribution and is often used to introduce finite adverbial cause/reason clauses. The Sahidic example below illustrates this point.

(11)   Complementizer **t͡ʃe** > PERF₂ **ʔa** > CLLDed Topicᵢ > PERF₁ **ʔa** > Subject cliticᵢ > Verb

muːte	erɔ=ï	t͡ʃe	t–	[RC et	__	saːʃe	(…)]
call.IMP	PREP=CL.1SG	COMP		DEF.F.SG	REL	turn_bitter.STAT	

[t͡ʃe	**ʔa**	pə–hikanos	əm=pə–dynatos	
COMP	PERF	DEF.M.SG–sufficient	LINK=DEF.M.SG–mighty	

ʔa	=f	ti	siːʃe	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." ᔆ (Ruth 1:20, ed. Thompson)

We suspect that the embeddability of the TAM doubling construction is correlated with the general acceptability 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 syntactic characteristics of the TAM doubling construction are summarized in the syntactic template presented below.

(12)   Preliminary template for the TAM doubling construction

Comp	Topic$_{DO}$	TAM₂	Topic$_{SUi}$	TAM₁	Subject cliticᵢ	(…)	VP

Two generalizations emerge from the facts gathered thus 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, given that TAM doubling is permissible in subordinate contexts introduced by the quotative complementizer *t͡ʃe* 'that'.

In order to provide a neat map of the different constituents and their order, we adopt Rizzi's (1997, 2001) cartography of the left periphery, which is demarcated upwards by the Comp/ForceP, which hosts clause-typing and subordinating devices, and downwards by the Finiteness projection, which we propose to 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. The template for the TAM doubling construction in (12) above can straightforwardly be associated 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 clitic left-dislocation, we capitalize on the Rizzian idea that the topic–focus field needs to be activated to project the relevant configurational space for topics and foci. In the case of the TAM doubling construction, the projection of the Focus Phrase contingent on a prior application of CLLD. Although most syntactic properties of the TAM doubling construction can be explained from the 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.

1.2   TAM particle movement out of the IP/TP

With this much about the core syntax of TAM doubling with pre-subject TAM particles in place, we now turn to another positional class of post-subject TAM particles and argue that the distribution of members of this class provides evidence for TAM particle movement out of the IP/TP domain. In terms of word order typology, Coptic can be classified as a subject–verb–object (SVO) language, in which the TAM particle is placed in front of the subject. The order TAM SVO is the word order that occurs in pragmatically neutral declarative clauses, without topicalized or focalized constituents, as seen in the following example form Sahidic.

(14)   TAM initial SVO order with pre-subject perfect particle **ʔa**
TAM	Subject	Verb	Object	Indirect Object
ʔa	tə–sophia	ket	u–ɛi̯	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 in a Mittelfeld position between the subject (post-subject) and the main verb (preverbal). Example (15), again from Sahidic, features TAM-medial SVO order with the epistemic future tense marker *na*.

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

Subject	TAM	Verb	Direct Object		
pə–tʃɔei̯s	**na**	**tʃne**	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 tense-bearing element *na* forms a verbal cluster with the lexical verb *tʃne* 'to examine', with the result that no intervening element can disrupt the syntactic relation between the two verbal elements. This suggests that there must be an additional TAM-related position in the Mittelfeld domain that hosts the epistemic future tense particle *na*. The question that arises now is whether the TP/IP internal TAM position plays a role in the derivation of the canonical TAM SVO 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 tense/aspect 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 in (16).

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

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

[RC **et**	__	**ʔah**	ei̯	**ʔaħu(n)**	ənħɛːt=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 TAM position, as the epistemic future tense particle *na*? The very existence of gapped subject relatives provides the crucial argument. If the *ʔah* allomorph were located in the same finiteness position as the pre-subject allomorphs *ʔa ~ ha*, one would expect two things to be different. For one thing, the perfect tense/aspect particle would switch back to the standard forms *ʔa ~ ha*. For another thing, the fuller form *ʔah* would 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. The way out is to replace the offending relative gap by

the corresponding resumptive pronoun clitic, as predicted by Rizzi's theory. And this is indeed what we find. To see this more clearly, consider example (17), again from Akhmimic Coptic, in which the nominalized resumptive subject relative contains the standard form of the particle *ʔa* that provides the prosodic host for the third person plural resumptive pronoun =*uː* 'they'. In this respect, it contrasts with the nominalized gapped subject relative, which contains the expected *ʔah* variant.

(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	ħən	tə–pe]		mən	n–	[RC et ___	**ʔah**
do.CS	trespass.ABS	in	DEF.F.SG–heaven		with	DEF.PL	REL	PERF

ei̯re	hitꟲəm	pə–kah]
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 104: §42:4–6, ed. Steindorff)

Based on synchronic morphophonology and historical evidence, Sethe (1915) identifies the phonologically fuller form *ʔah* as a stative-inflected auxiliary, deeply entrenched in the lexical-derivational process of stative stem formation, and hence linked to the VP-domain and the position of other lexical verbs, preventing it from moving out of the IP domain (for further details, see Reintges 2011b: 83–87). The allomorphs *ʔa ~ ha*, on the other hand, have no such statival features and can or must therefore move to the FIN projection of the left periphery. The existence of a statival form *ʔah* of the perfect tense/aspect particle, which can only appear in the Middlefield, and the allomorphic variants *ʔa ~ ha*, which surface in pre-subject position favor an analysis in which the latter are not directly merged in FIN but rather arrive there as a result of movement out of the IP/TP.

Strong evidence that this account is on the right track is provided by a syntactic reordering process that the conditional mood *e=f ʃan-sɔːtəm* 'if he hears' and the deontic future *e=f e-sɔːtəm* 'he shall hear' must undergo in the context of full lexical subjects. The conditional mood and the deontic future 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 relative-marked conditional mood appears in the protasis, and deontic future in the apodosis clause.

(18) Conditional construction containing conditional mood construction in the protasis and deontic future 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

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

In the context of nominal subjects, the conditional mood particle *ʃan* is no longer permissible in the Mittelfeld TAM position but rather moves up to the Fin position. The univerbation of the relative complementizer *ere* and the conditional mood particle *ʃan* leads to the shorting of the initial relativizer to *er* (*ere* + *ʃan* → *er–ʃan*).

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

etße	pai̯	er	ʃan	pə–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–	hɛːgɛːmɔn	ɛː	əm–	maːtɔi̯
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.

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

er	**e**	p–	[RC et	__	ər	nɔːße
REL	PREP.COMP	DEF.M.SG–	REL		do.CS	sin

əm–pe–mtɔː	eßɔl	əm=	pe–	[RC nt	**ʔa**	=f
in–DEF.M.SG–presence	PCL	LINK=	DEF.M.SG–	REL	PERF	=CL.3M.SG

tamiɔː	=f]]	ei̭	e–toot=f	əm–pə–saei̭n
create.CS	=CL.3M.SG	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 contention that a distinctive morpheme disappears with a trace is conceptually not very attractive. 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 in much the same way as the conditional mood particle *ʃan*, but is coalesced with the final vowel *e* of the long form *ere* of the relative marker. In other words, the initial form *ere* is bimorphemic, consisting of the phonologically reduced relative marker *er-* and the deontic future particle *e* (*ere* + *e* → *er-e*). Evidence for this alternative analysis comes from marginally attested examples, like (21), 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 phonologically fuller 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–tʃɔei̭s]
REL	DEF.PL–	REL	leave.ABS	behind=CL.3PL	PREP–DEF.M.SG–lord

e	ei̭	e–toot=f
PREP.COMP	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 modal auxiliary *əʃ* 'can, to be able to'. Intriguingly, this movement is only attested in combination with the negative future *ənne* to form the compound form *ənne-ʃ* (Shisha-Halevy 2003: 265–266; Bosson 2009: 289). The below example provides an illustration.

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

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

ənne	ʃ	p–ɛi̯	[RC et	__	əmmau̯]	Ɂahe
NEG.FUT	CAN	DEF.M.SG–house	REL		there	stand.ABS

rat=f

foot=POSS.3M.SG

"And if 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 here argues that there is a specific position in the
Mittelfeld, labelled TAM^0, which is dedicated to the expression of TAM semantics. This is an
obligatory stop-over position in the derivation path of pre-subject TAM particles that cannot be
skipped. In other words, pre-subject TAM particles are not directly merged into the Finiteness
projection but arrive there as a result of movement out of the TP/IP domain, even though this
syntactic operation may partially be concealed. We are now in a position to revise the syntactic
template in (13) above. 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
in AgrSP (going back to Pollock 1989), a position dedicated to establishing agreement between
the subject and the predicate. The TAM$_0$ surfaces in a high position in the IP/TP domain, which
is a rich and detailed domain as well (Cinque 1999; Julien 2002). For now, we remain agnostic
as to what this position exactly is, but we will come back to this issue in section 3.

1.3   A closer look at negative TAM portmanteaux and standard 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 than those formed with affirmative TAM particles. Reconsider in this regard he
Oxyrhynchitic dialect example in (4) above, which is repeated here as (24).

(24) NEG.FUT2 **ənne** > CLLDed Topici > NEG.FUT1 **ənne** > Subject clitici > Verb

ənne	peï–tʃom	peï	**ənne**	=f	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 *əʃ*, 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 Focus projection.

(25) NEG.FUT + CAN2 **ənne-ʃ** > CLLDed TopicSUi > NEG.FUT + CAN1 **ənne-ʃ** > Resumptive subject pronouni > Verb

ənne	ʃ	nə–ʃɛrɛ	əm=pə–nymphon	**ənneu̯**	=uː	ʃ
NEG.FUT	CAN	DEF.PL–son	LINK=DEF.M.SG–bridechamber	NEG.FUT	=CL.3PL	CAN

er	hɛːβɛː	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])

In view of the parallelism between affirmative and negative TAM particles, it does not come as a major surprise to learn that the TAM doubling construction with negative portmanteau morphemes can be embedded under the finite quotative complementizer *tʃe*. The following Oxyrhynchitic example features the negative habitual aspect particle *me=* and its allomorph *merɛː*.

(26) Complementizer **tʃe** > NEG.HAB1 **merɛː** > CLLDed TopicSUi > NEG.FUT2 **me** > Resumptive subject pronouni > Verb

mɛː	**me**	=k	kitɛː	əntak
Q	NEG.HAB	=CL.2M.SG	double_drachma	INDEP.PRON.2M.SG

[tʃe	**merɛː**	pe=ten–she	əntaf
COMP	NEG.HAB	DEF.M.SG=POSS.2PL–master	INDEP.PRON.3M.SG

me	=f	ti	kitɛː]
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 negative TAM , which sits above a topical constituent and can only appear there in the presence of a topical constituent,

contributes polarity focus, while the lower TAM contributes aspect/tense 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 (cf. 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 issue of negation in Coptic, and more in particular to the fact that negative TAM portmanteaux are incompatible with the bipartite negation strategy *nə= … ʔan*, which is illustrated for the Sahidic future tense sentence in (27). Here, the initial negator *nə=* (NEG1) precedes the subject clitic first person plural *=tən* 'we', the epistemic future particle *na*, and the main lexical verb *pot* 'run', while the postverbal negation adverb *ʔan* 'not' (NEG2) follows the lexical verb. The bipartite *nə= … ʔan* construction conforms to the standard pattern of negation crosslinguistically (Miestamo 2005, see also De Clercq 2017a).

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

uːde	anɔn	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)

Now, consider the slightly more complex example of a conditional construction, in which 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 *nə= … ʔan*, but this time the negation adverb *ʔan* is not the final sentence constituent.

(28) Conditional sentences with negated protasis and apodosis clause

er	**ʃan**	**təm**	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 *ʔan* in a position above the verbal domain, which is vacated by the verb and the subject for aspectual or Case-related purposes (for further details on verb raising and argument voiding, see Reintges 2012: 152–155; cf. 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 TAM slot, we would expect a complementary distribution. 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	**mɔːkəh**	de	**ʔan**	ən–hɛt
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–mant–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, behaving in this respect in much the same way as negative portmanteaux. This pattern is illustrated in the following example from Shenoutean Sahidic.

(30) Q-particle **ɛː** > NEG2 **mə**= > CLLDed Topic$_{Subi}$ > NEG1 **nə** > Subject clitic$_i$ > 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

ehrai̯	nəmma=f	ɛː	hitɔːwo=f]	**nə**	=f	na
PCL	with=CL.3M.SG	or	besides= CL.3M.SG	NEG1	=CL.3M.SG	FUT

tˤɔʔɔ	=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 NEG1 doubling further in this paper, we wish to call attention to the correlation between particles that appear in FinP and ΣP and polarity focus. The negation facts discussed so far permits 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 there is yet another position for negation.

(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, there is reason to assume that pre-subject TAM particles originate in the Mittelfeld and lexicalize at least all the features that we shaded in the below table, i.e., Σ, Fin, some flavor of TAM, and Neg. The same reasoning actually applies to pre-subject affirmative TAM particles, of which we repeat the syntactic template here and update it with a ΣP, a projection for polarity, hence also for affirmative polarity, (33). If indeed these particles originate in the TP domain, then these affirmative particles also lexicalize (at least) one TAM-related feature(s), Fin, and ΣP.

(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

It generally appears, then, that just as negative TAM portmanteaux can lexicalize features of the Mittelfeld as well as of the left periphery, so can affirmative TAM particles. Conversely, not all TAM particles have what it takes to lexicalize features related to left periphery. The generalization that emerges from Table 1 below is that only those TAM particles that can appear in the FIN position can also undergo affirmative/negative TAM doubling.

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

	TAM$_0$	TAM$_1$	TAM$_2$
na	+	–	–
ʔah	+	–	–
ʔa, ha		+	+
ənne		+	+
ne(re)	–	+	+
əʃ	+	+	+
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 moved to the TAM^0 position but do not move any further. Although they are complex tenses, the deontic future and the conditional mood are not preverbal/post-subject particles, as the traditional classification would have them, but they form an intermediate class. In the context of lexical subjects, they must move around the NP/DP subject to the Fin position, thereby mimicking the pathway of pre-subject TAM particles. The movement behavior of members of this intermediate class involves additional complications, which are beyond the scope of this paper (but see Reintges 2011a: 567–571 for further details).

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

Affirmative/negative TAM doubling is a multifaceted grammatical phenomenon, where morphological matters and syntactic cartographies are closely intertwined. TAM particles are prosodically light functional categories, often barely meeting a minimal (CV) size requirement on morphosyntactic words, as in the case of the perfect tense/aspect particle *ʔa*. However, when we look at their morphosyntax and distributional behavior, they turn out to be syntactically extremely versatile. The syntactic versality comes forth from a partially concealed internal structural complexity, for which the above-discussed negative TAM portmanteau particles provide illustrative cases in point. In order to see this facet more clearly, we need to shift in theoretical perspective and shift from cartography to nanosyntax. Section 2.1 outlines our proposal in a nutshell. Section 2.2 provides some theoretical background on nanosyntax.

Section 2.3 is on the nano-syntactic structure of Coptic TAM particle. The syntactic analysis of the Coptic TAM construction is developed in Section 2.4.

2.1   The proposal in a nutshell

If pre-subject affirmative and negative TAM particles lexicalize features, such as Σ, FIN, some flavor of TAM, and NEG$_1$, it stands to reason that they are endowed with these features in the lexicon. This is exactly what we will propose, 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 (i) the syntactic distribution and (ii) the phonology of that particle. 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 FINP and ΣP. The lexical structure of a post-subject TAM particle like the Future tense particle *na* would be missing FinP and ΣP as in (35). The smaller-sized lexical structure of some post-subject TAM particles proffers a straightforward explanation of why these particles cannot make it to the left periphery. The double arrow indicates that there is a particular phonology attached to the lexical structure, left unspecified for now, which will lexicalize this entire structure.

(34) Lexical structure of pre-subject TAMs   (35) Lexical structure of post-subject TAMs
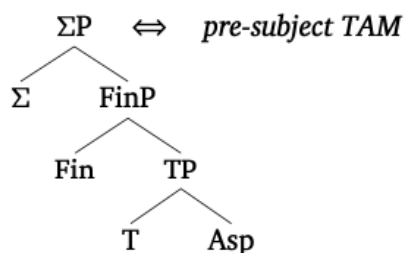
ΣP   ⇔   *pre-subject TAM*

Σ   FinP

Fin   TP

T   Asp

TP   ⇔   *post-subject TAM*

T   Asp
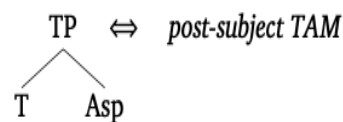
Under this type of proposal, the lexical size of items in the lexicon determines their distribution within one language, and/or across languages (Starke 2014). Moreover, the consequence of this type of proposal is that lexicalization must happen phrasally (and not under terminals), since even small particles are actually portmanteaux, i.e. they consist of several submorphemic syntactic features. Before we develop this proposal further, and

move on to explain how TAM$_2$ (the highest copy in the doubling construction) fits into the story, we need to say something more about the theory that uses this type of decomposed lexical structures, i.e. Nanosyntax.

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 Coptic with the TAM doubling construction. A hypothetical lexical item in Nanosyntax looks as in (36), with the conceptual information (here in capital letters), the phonological information (here between slanted brackets) and the tree structure (here as labelled brackets).[3]

(36)   Structural information associated with a hypothetical lexical item
          < BLA,   [XP [X][YP[Y] [ZP[Z]]], /bla/ >

The consequence of this type 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, i.e. 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 structure in (37) is a candidate for insertion, thanks to the superset principle, defined in (38).

(37) Syntactic structure matching hypothetical lexical item in (40)

ZP
|
Z

---

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

(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)   Structural information associated with another hypothetical lexical item
        < BLI, [ZP [Z]], /bli/ >

If there is no match, lexicalization-driven movements will be tried according to a specific algorithm, the lexicalization algorithm in (40) (Starke 2018: 245), to assure a lexicalization for a given feature. For the purpose of this paper, we will not go very deep into the specifics of the 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 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 more accurate decomposition for the perfect particle *ʔa*, the negative portmanteaux *ənne* and the future particle *na*, explaining why the former two 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 where pre-subject particles and preverbal/post-subject particles can surface 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 must be generated in the Mittelfeld, since they all express properties related to the IP-domain, to wit, tense/aspect/mood/modality. Since it is a core idea in Nanosyntax that lexical structure determines the distribution of lexical items, 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 have a focus feature in their lexical structure, i.e., the structure of the lexical items needs to be updated with a Focus feature, as seen in the tree structure in (41).

(41)   Focus feature in pre-subject TAM particles
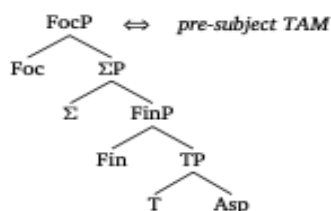
Adding the focus feature to the lexical structure of pre-subject TAM particles makes it possible to connect TAM$_2$ to the lower TAM positions. It also opens the way for this type of TAM particle to appear in different position in the clause, each time contributing another property. And this is what 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 high up in the structure, as TAM$_2$ particles, indicates that there is another layer of meaning inside pre-subject TAM particles in Coptic, which in Nanosyntax is naturally translated as another layer of internal structure. The idea that TAM$_1$ and TAM$_2$ are connected has been proposed before, for instance 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 at least some TAM particles more precise. This is the task ahead of us in this section.

We will focus on three TAM particles: *ʔa, ənne and na*. It is not our aim at this point 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 tense in the TP-domain, which we label for now T(Preterit) > T(Past) > T(Future), in line with Reintges (2011a: 557), and with proposals by Cinque (1999), Julien (2001) for the tense domain. We also adopt the well-accepted idea in the literature that aspectual heads are lower in the structure than tense. 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.)

Since the perfect tense/aspect particle *ʔa* cannot be used with states, but only with events, as opposed to the preterit particle *ne*, which can be used with both states and events (Reintges 2011a: 552), the base of our lexical structure will need to reflect this. Hence, we propose 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 (but nothing crucially hinges on this and we could also just label this Asp_{pf}). We adopt the feature T_{past}, one of the several Tense features in the TP domain to capture the fact that the perfect tense yields past events. The feature Fin is also part of the lexical structure of the particle, allowing it to mediate between the TP domain 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.

(42) The lexical structure of the perfect tense/aspect particle *ʔa*
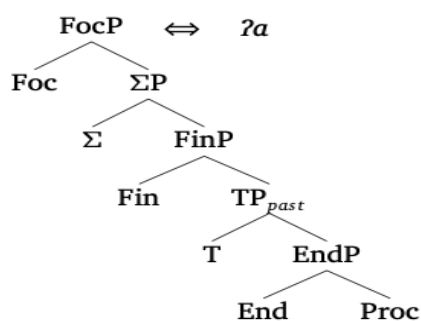
With respect to the lexical structure of *na*, which can also function as an independent verb (Reintges 2011b: 85–86), we want to propose that it consists at least of the aspectual feature Durative [Dur] (Starke 2021) to capture the progressive interpretation typical of
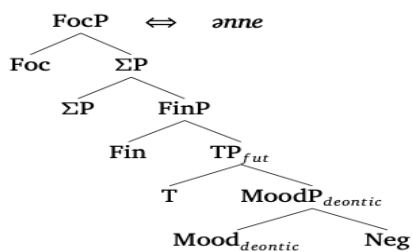
stativized motion verbs, a T_{Future} feature and a $Mood_{Epistemic}$ feature, which in line with Cinque's (1999) hierarchy sits above T_{past} and hence also above T_{fut}.[4]

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

```
        Mood_epistemic P      ⇔    na
           /        \
   Mood_epistemic    TP_fut
                    /    \
                   T     Dur
```
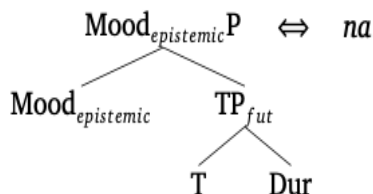
Also for historical reasons, the negative future *nne* is commonly seen as "the isomorphic negation" of the deontic future (Shisha-Halevy 2003: 263). We wish to take the analogy between the negative and the positive deontic future one step further by decomposing the negative deontic future particle *ənn-e* 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* consists of a low NEG head, which captures the incompatibility with NEG2 *ʔan*, a $Mood_{Deontic}$ feature, which captures its deontic modal meaning, and a T_{Future} feature, which captures its future tense reference. We follow Cinque (1999) for the order between $Mood_{Deontic}$ and T_{Future}. The feature Fin is also part of the lexical structure of the particle, allowing mediation between the TP and the CP domain, as well as a Σ feature, accounting for the incorporation of NEG1. Finally, we want to argue that *ənne* also consists of a Focus feature, an optional feature, which can be absent in the 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 *ənne*

```
        FocP      ⇔    ənne
       /    \
     Foc    ΣP
           /   \
          ΣP   FinP
              /    \
            Fin    TP_fut
                  /     \
                 T    MoodP_deontic
                       /        \
              Mood_deontic      Neg
```

---

[4] 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.

With the structures for 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 Nanosyntatic 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 is that it will be generated in a complex specifier, i.e., a separate workspace. That is, there will be no other way to lexicalize the first aspectual feature that is merged after VP has been lexicalized, in this case End. If the syntax needs to open an additional workspace to lexicalize a particular feature, then it continues merging features until it has used 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 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 needed for the lexicalization of *ʔa*. The generation of this particle will happen 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.[5] This yields the structure in (45).

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

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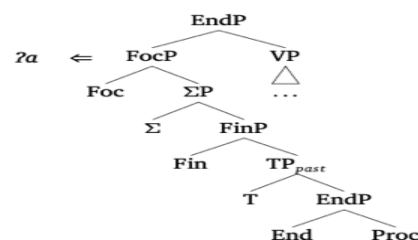
[5] Note that there is no head End° in the main spine. The idea is that this head is provided by the complex specifier and that having it in the main spine would be redundant. This idea goes back to Starke (2004).

As mentioned before, the syntax can either generate all possible layers relevant for the merge of the perfect TAM particle, but it can also stop at ΣP, since 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 these features, hence lexicalizing them 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 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) proposed to update the algorithm with a step that allows for this, and this is shown in (46).

(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 whether there is any lexical item available that can spell the feature out 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 then 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 the particle, freezing

it in place (see Rizzi 1997, 2017 and many others).[6] The derivation in (47) shows the path of the complex specifier through the main clause.

(47) Movement path of the complex specifier through the main clause
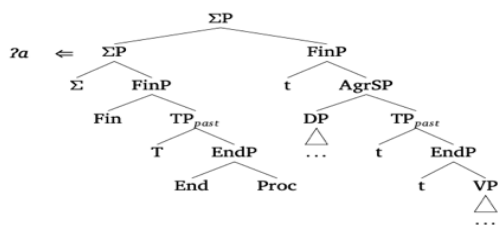
If the optional Focus feature were merged as well in the low complex specifier that lexicalizes *ʔa*, as illustrated in (45) above, then the complex constituent should be able to move further to SpecFocP, over the TopicP that activated this part of the left periphery.[7] However, since the main clause ΣP is a halting position for TAM-particles in Coptic, as we just discussed, 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, as illustrated in (48), thus accounting for the TAM doubling construction.

(48) Copying of the entire complex specifier to SpecFocP

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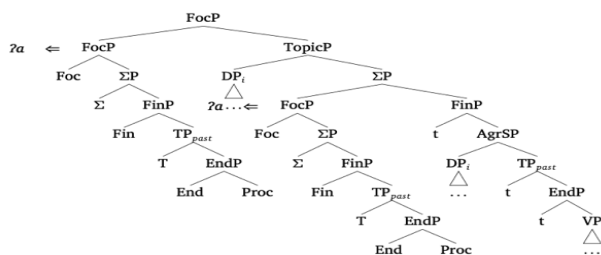
[6] The implications of this proposal, i.e., that the internal structure of lexical items determines what their criterial position will be, go beyond the confines of this paper and need to be considered against the rich literature on Criterial Freezing. We will take this up in future work.

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

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 discussed in 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*.

(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 positive counterpart of this construction also exists, (51), which increases the parallel with the Coptic doubling construction that also features a positive and a negative instantiation.

(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. While the Coptic data involve TAM particles that include polarity features and the Italian data merely polarity particles, the situation is comparable in the sense that in both languages 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'." Moreover, she argues that the polarity particle NO contributes focus, since it is associated with a specific intonational contour. In both in the clause final construction and in the *si/no+ che* construction, the polarity particles *si* and *no* sit in a left peripheral FocP. For the construction with clause final NO/SI, it is furthermore proposed that the entire constituent preceding *si/no* moves to SpecGroundP (Poletto and Pollock 2004), a topic position on top of the left peripheral FocP. As in Coptic, we see that focalization goes hand in with topicalization.

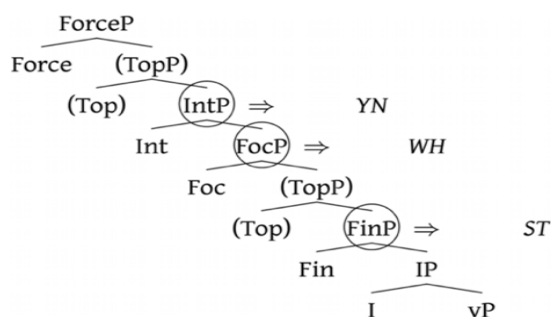(55) The syntax of polarity focus in Italian dialects (Poletto 2010)
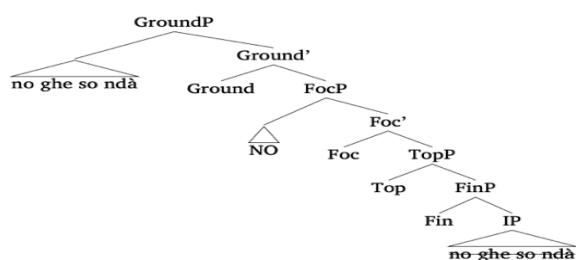
An important piece of evidence for Poletto's analysis comes from the fact that nothing can follow clause-final NO/SI but dislocated constituents, as seen in (56). If *no/si* were located inside the IP, one would expect, contrary to fact, that it could be followed by arguments (57).

(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 be, 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 as well, 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

```
         ForceP
      _____|_____
   Force      (TopP)
           _____|_____
        (Top)    (IntP) ⇒      YN
              _____|_____
            Int      (FocP) ⇒      WH
                  _____|_____
                Foc      (TopP)
                      _____|_____
                    (Top)    (FinP) ⇒      ST
                          _____|_____
                        Fin        IP
                               _____|_____
                             I        vP
```

In conclusion, while the Italian data differ substantially from the Coptic 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 thanks to their rich internal structure, also leading to a situation of negative concord in the presence of NEG-TAM doubling. While negative concord is a well-studied phenomenon for Italian, it is not understudied for Coptic.

4.   Conclusions

We explored a 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 topic. With respect to the lower particle 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, wo 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 to certain post-subject particles. Under this Nanosyntactic approach, the distributional differences between TAM particles are a consequence of the size of lexically stored trees, and the ability to give rise to a copy follows from the presence or absence of a marked/optional focus feature in the syntax of these TAM expressions.

References

Aboh, Enoch (2010). 'C-type Negation Markers on the Right Edge.' In E. Aboh and J. Essegbey (eds.) *Topics in Kwa Syntax*. Dordrecht: Springer, pp. 109–139.

Baunaz, Lena, and Eric Lander (2018). Nanosyntax: The basics. In L. Baunaz, K. De Clercq, L. Haegeman, and E. Lander (eds.) *Exploring Nanosyntax*, Oxford: Oxford University Press. pp3-56.

Bosson, Nathalie (2006) 'Remarques sur la « structure (ϩ)ⲁ … (ϩ)ⲁϥ ».' *Lingua Aegyptia* 14: 281–300.

Caha, Pavel (2009). *The nanosyntax of case.* Tromsø: University of Tromsø dissertation.

Cinque, Guglielmo. (1990). *Types of Ā-dependencies* [Linguistic Inquiry Monograph 17]. Cambridge, Massachusetts: MIT Press.

Cinque, Guglielmo (1999). *Adverbs and Functional Heads: A Cross-linguistic Perspective* [Oxford Studies in Comparative Syntax]. Oxford: Oxford University Press.

Crum, Walter E. (1939). *A Coptic Dictionary*. Oxford: Clarendon Press.
De Clercq, Karen (2013). 'A unified syntax of negation.' Ghent: Ghent University dissertation.

De Clercq, Karen (2017). 'Prosody as an argument for a layered left periphery.' *Nederlandse Taalkunde* 22 (1): 31–38.

De Clercq, Karen (2017a). 'The nanosyntax of French negation.' In S. Cruschina, K. Hartmann and E.-M. Remberger (eds.), *Studies on negation: Syntax, semantics, and variation.* Vienna: Vienna University Press, pp. 49–80.

De Clercq, Karen (2019) 'French negation, the Superset Principle and feature conservation.' In M. Bouzouita, A. Breitbarth, L. Danckaert and E. Witzenhausen (eds.) *Cycles in Language Change* , Oxford: Oxford University Press, pp. 199–227.

De Clercq, Karen (2020) *The morphosyntax of negative markers. A nanosyntactic account*. Berlin: Mouton de Gruyter.

De Clercq, Karen (2022) 'Perfective allomorphy and negative neutralisation in Bambara: A (nano) syntactic account'. Invited talk at Morphology as Syntax 2, UCLA, 10-11 June 2022.

Funk, Wolf-Peter (1988) 'Dialects wanting homes: A numerical approach to the early varieties of Coptic.' In J. Fisiak (ed.) *Historical dialectology*: *regional and social*. Mouton De Gruyter: Berlin and New York, pp. 149–192.

Gutzmann, Daniel, Katharina Hartmann, and Lisa Matthewson. (2020). 'Verum focus is verum, not focus: Cross-linguistic evidence.' Glossa: A Journal of General Linguistics 5(1): 51. 1–48.

Höhle, Tilman N. (1992). 'Über Verumfokus im Deutschen.' In J. Jacobs (ed.) *Informationsstruktur und Grammatik* [Sonderheft der Linguistischen Berichte 4], Opladen, Westdeutscher Verlag pp. 112–141.

Julien, Marit. (2001). 'The syntax of complex tenses.' *The Linguistic Review* 18(2). 125–167.

Kiparsky, Paul. (1973). ''Elsewhere' in phonology.' In P. Kiparsky and S. Anderson, *A Festschrift for Morris Halle*, Holt, Rinehart and Winston, New York.

Klima, Edward. (1964). 'Negation in English.' In J. Fodor & J. Katz (eds.), *The structure of language*, Englewood Cliffs, NJ: Prentice-Hall, pp. 246–323.

Laka, Itziar. (1990). *Negation in syntax: On the nature of functional categories and projections*. Cambridge Massachusetts: MIT dissertation.

Layton, Bentley (2000) *A Coptic Grammar with Chrestomathy and Glossary*: *Sahidic Dialect* [Porta Linguarum Orientalium 20]. Wiesbaden: Harrasowitz Verlag.

Miestamo, Matti. (2005). *Standard negation. The negation of declarative verbal main clauses in a typological perspective*. Berlin: Mouton de Gruyter.

Moscati, Vincenzo (2006). *The scope of negation*. Siena: University of Siena dissertation.

Moscati, Vincenzo (2010). *Negation raising: Logical form and linguistic variation*. Cambridge: Cambridge Scholars Publishing.

Moscati, Vincenzo (2012). 'The cartography of negative markers: Why negation breaks the assumption of LF/PF isomorphism.' In V. Bianchi and C. Chesi (eds.) *Enjoy linguistics! Papers offered to Luigi Rizzi on the occasion of his 60th birthday*. Siena, Italy: CISCL Press, pp. 1–7.

Poletto, Cecilia. (2008). 'On negative doubling.' *Quaderni di Lavoro* ASIt 8: 57–84.

Poletto, Cecilia. (2010). 'The syntax of focus negation.' *Quaderni di Lavoro* ASIt 10: 39–61.

Poletto, Cecilia. (2014). *Word Order in Old Italian* [Oxford Studies in Diachronic & Historical Linguistics 7]. Oxford: Oxford University Press, pp. 144–169.

Poletto, Cecilia and Raffaella Zanuttini (2013). 'Emphasis as reduplication: Evidence from *sì che/no che* sentences.' *Lingua* 128: 124–141.

Pollock, Jean-Yves. (1989). 'Verb movement, Universal Grammar and the structure of IP.' *Linguistic Inquiry* 20(3): 365–424.

Polotsky, Hans Jakob. (1960). 'The Coptic conjugation system.' *Orientalia* 27: 392–422.

Polotsky, Hans Jakob. (1987/1990). *Grundlagen des koptischen Satzbaus* [American Studies in Papyrology 28/29]. Decatur, Georgia: Scholars Press.

Ramchand, Gillian. (2008). *Verb Meaning and the Lexicon*: *A First Phase Syntax* [Cambridge Studies in Linguistic 116]. Cambridge: Cambridge University Press.

Reintges, Chris H. (2001). "Code-mixing Strategies in Coptic Egyptian". *Lingua Aegyptia* 9: 193–237.

Reintges, Chris H. (2011a). 'High analyticity and Coptic particle syntax: A phase-based approach.' *Linguistic Review* 38(4): 533–599.

Reintges, Chris H. (2011b). 'The evolution of the Ancient Egyptian Stative: Diachronic stability despite inflectional change.' *Folia Orientalia* 48: 7–97.

Reintges, Chris H. (2012). 'Macroparametric change and the synthetic–analytic continuum: The case of Ancient Egyptian. In Ch. Galves, S. Cyrino, R. Lopes and J. Alvelar (eds.) *Parameter Theory and Linguistic Change* [Oxford Studies in Diachronic & Historical Linguistics 2]. Oxford: Oxford University Press, pp. 144–169.

Reintges, Chris H. (2018). *Coptic Egyptian (Sahidic dialect)*: *A learner's grammar*. 2nd Revised Edition [Study books of African languages 15]. Cologne: Rüdiger Köppe Verlag.

Reintges, Chris H. (2022). 'Coptic Language [eaahaa00423]' In D.T. Potts, E. Harkness, J. Neelis and R.J. McIntosh (eds.) *The Encyclopedia of Ancient History: Asia and Africa*. John Wiley & Sons, 1–29.

Rizzi, Luigi (1990). *Relativized Minimality*. Cambridge, Massachusetts: MIT Press.

Rizzi, Luigi (1997). 'The fine structure of the left periphery.' In L. Haegeman (ed.) *Elements of grammar: Handbook of generative syntax*, Kluwer, Dordrecht, pp. 281–337.

Rizzi, Luigi (2001). 'On the position "Int(errogative)" in the left periphery of the clause.' In: G. Cinque and G. Salvi, *Current studies in Italian syntax: Essays offered to Lorenzo Renzi*. Amsterdam: Elsevier, pp. 267–296.

Sethe, Kurt (1915). 'Das perfektische Hilfsverbum w3ḥ im Demotischen und Koptischen' *Zeitschrift für Ägyptische Sprache und Altertumskunde* 52(1) : 112–116.

Shisha-Halevy, Ariel (1986) *Coptic Grammatical Categories*: *Structural Studies in the Syntax of Shenoutean Sahidic* [Analecta Orientalia 53]. Rome: Pontifical Institute.

Shisha-Halevy, Ariel (2003). 'Future, present, narrative past: A triple note on Oxyrhynchite Tempuslehre.' In W. Beltz, U. Pietruschka and J. Tubach (eds.) S*prache und Geist: Peter Nagel zum 65. Geburtstag* [Hallesche Beiträge zur Orientwissenschaft 35/03]. Martin-Luther-Universität Halle-Wittenberg: Halle, Saale, pp. 249–309.

Starke, Michal. (2004). 'On the inexistence of specifiers and the nature of heads.' In A. Belletti (ed.), *Structures and beyond*, vol. 3 The Cartography of Syntactic Structures, Oxford: Oxford University Press, pp. 252–268.

Starke, Michal. (2009). 'Nanosyntax: A short primer to a new approach to language.' *Nordlyd* 36. 1–6.

Starke, Michal. (2014). 'Towards elegant parameters: Language variation reduces to the size of lexically-stored trees'. In M. Carme Picallo (ed.) *Linguistic Variation in the Minimalist* Framework [Oxford Linguistics] Oxford: Oxford University Press, pp. 140-152.

Starke, Michal. (2018). Complex left branches, spellout, and prefixes. In Baunaz et al., pp. 239–249.

Starke, M. (2021). Nanosyntax seminar. Spring 2021. Brno University, Czech Republic. [Online].

Swart de, Henriette. (2010). *Expression and Interpretation of Negation: An OT typology*. Dordrecht: Springer.

Till, Walter. (1928). *Achmîmisch-koptische Grammatik*. Mit Chrestomathie und Wörterbuch. Leipzig: J.C. Hinrichs'sche Buchhandlung.