Negative Concord and TAM:
a new perspective*

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Abstract

It has been proposed in the syntactic literature on Negative Concord (NC) that Negative Concord Item(s) (NCIs) move to a particular position in syntax, i.e. SpecNegP (Haegeman 1995, Zanuttini 1997), to give rise to concord. SpecNegP is also the position for (some) Standard Negators (SN). Under another theory, the syntactic agreement approach to NC (Zeijlstra 2004), NCIs are licensed by an abstract negative operator that also licenses the standard negator. In other words, in both accounts NCIs and SNs seem to be related, either because they end up in the same position, or because they share the same licenser. This raises the question whether the allomorphy that arises due to the conditioning between TAM (tense, aspect, mood/modality) and the standard negator (SN), also arises between TAM and NCIs. This paper explores this question by focusing on Quebliyeen Tamazight (Ouali 2012) and Egyptian Arabic (Benmamoun et al. 2013), two Semitic languages from the Afro-Asiatic phylum. The investigation shows that, while both languages display allomorphy conditioned by the interaction between TAM and SN, NCIs are not conditioned by TAM or do not condition TAM. On the basis of this, I conclude that theoretical accounts that make use of the same mechanism to capture the sentential negativity of NCIs and SNs may be in need of revision. I show how Nanosyntax can account for why the interaction between TAM and NCIs differs from the interaction between TAM and SNs, and how NC is a byproduct of the size of lexically stored trees, phrasal lexicalisation and the Superset Principle.

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1 Introduction

1.1 NEG-TAM allomorphy

There[1] are at least four logical ways in which TAM-morphology and Standard Negators[2] (henceforth SN) may morphologically interact, summarised in (1).

(1) **Type A** TAM ⟺ SN Bengali
     Type B TAM ⟹ SN Albanian
     Type C TAM ⟸ SN Abkhaz
     Type D TAM   SN English

A first possible situation is one in which TAM and the SN mutually condition each other (Type A). This is the situation in Bengali (Ramchand 2004, Ullah 2007, Banerjee 2021). The Standard Negator (SN) *na* (2), becomes *ni* in the context of the perfective (3).

(2) Ami   amṭa   kha- cch-   i   **na**
     I.NOM mango.CLF eat   PROG/PRS 1SG NEG
     'I am not eating the mango.'

(3) Ami   amṭa   kha- i   **ni**
     I.NOM mango.CLF eat   1SG NEG
     'I didn't eat the mango.'

However, not only the negator changes, the verbal morphology also changes. While the root in the negated perfective is the default root *kha*, without negation, the root in the perfective is *kheye* (4), showing that there is a bidirectional conditioning between SN and TAM.

(4) Ami   amṭa   kheye- ch- i
     I.NOM mango.CLF eat.PFV PRS 1SG

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[2]I adopt the term from Miestamo (2005), referring to the main negator a language has, and if there are several negators, it refers to the negator used in simple present declarative clauses.

'I have eaten the mango.'

Type B is the type of languages where TAM-morphology conditions the SN (Dahl 1979, Kahrel 1996, De Clercq 2020b), (Horn 2001:367/446-452). This is the case in Albanian, which has *'s/nuk* as a SN (5)[3], but the suppletive marker *mos* in the context of the subjunctive, optative and imperative mood (Turano 2000).[4] I refer to this type of negator, as well as to the negative allomorph *ni* that appears in the perfective in Bengali, as **A**llomorphs **I**n Sentential **N**egation conditioned by **T**ense, Aspect, and Mood/Modality, henceforth AINTs.

(5) **'S/Nuk** vajta   (më)   në bibliotekë.
     NEG   went-1s (anymore) in library
     'I didn't go to the library (anymore)'

(6) a. Merr   çadrën që të   **mos** lagesh
         Take.2s umbrella that MOOD NEG wet.2S.SUBJ
         'Take the umbrella, so that you don't get wet'
     b. **Mos** lexo   këtë libër.
         NEG READ.2S.IMP this book
         'Don't read this book!'
     c. **Mos** vdeksh   kurrë.
         NEG die.2S.OPT never
         'May you never die'

In Type C languages, the presence of the SN conditions the TAM-marking on the verbal predicate, a topic studied extensively in Miestamo (2005). This is the case in Abkhaz (Hewitt 1979), where the SN *-m* has an impact on how the different tenses and aspects are morphologically expressed. For instance in the 1SG.PRS.AFF of the verb 'stand up' *s'gəlojt'* becomes *s'gələm*, with the negative marker *m* not only adding negation but also replacing the finite ending *-(y)t* (Miestamo 2005:120)

A last logical option is one in which neither TAM nor the SN seem to interact morphologically, as is the case in English (Type D): (7) shows clearly how regardless of TAM the same negator can be used in Standard English. Moreover, the TAM-marking is the same with or without negation.[5]

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[3]Both *'s/nuk* are treated in Miestamo (2005), Turano (2000) as if they are interchangeable, with no meaning differences or other distributional differences associated to them. This was confirmed to me by Bujar Rushiti.

[4]*Mos* also negates gerunds and infinitives. See Turano (2000) for more details on Albanian negation.

[5]The example here is about Standard English and does not include substandard varieties which

(7) a. He is not talking to her father.   PROG
     b. He has not talked to her father.   PFV
     c. He did not talk to her father.   PST
     d. He would not talk to her father.   MOD
     e. . . .

The typological hypothesis in (1) has been checked for 50 languages picked from
Miestamo (2005) sample (see De Clercq 2020a for more explanation), yielding—
after some recent updating and fine-tuning—the tentative result in (8) for the
different types.[6]

(8)

	TAM	NEG$_{AINT}$	
Type A	+	+	14
Type B	−	+	5
Type C	+	−	12
Type D	−	−	19

The question that arises at this point is whether this typology also holds when
negative concord items (henceforth NCIs) are involved.[7] Do we expect NCIs to
interact with TAM, i.e. can their presence condition the TAM-domain, or can
they be conditioned by the TAM-domain? As far as I know, this question has not
yet been explicitly addressed in the literature. One can come up with multiple
reasons for this: this connection has not been mentioned in the typological lit-
erature on negative indefinites that looked for any parameter that may impact
negative indefinites (Alsenoy 2014, Van der Auwera & Van Alsenoy 2016, Van
der Auwera 2017, Van der Auwera & Alsenoy 2018); argumental NCIs and SNs
have a very different merge position; the allomorphy between SN and TAM is in
general understudied; the semantic problems related to NCIs are considered far
more important than the morphosyntactic issues, etc...

   In spite of this, it is not unthinkable that there is conditioning between NCIs
and the TAM domain. Both under the negative quantifier-approach to NCIs (Zanut-
tini 1991, Haegeman & Zanuttini 1991, Haegeman 1995, Zanuttini 1997) and the
syntactic agreement approach to NCIs (Zeijlstra 2004, 2008, Penka 2011, and

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definitely include all kinds of allomorphy conditioned by NEG or by TAM, like the use of *dontcha*
(Van der Auwera 2006), the use of *aint* (Yang 2016) and *amn't* (Bresnan 2001) to name just a few.

[6]While De Clercq (2020a) still distinguished between 6 types, the current paper makes use of
a simplified typological hypothesis to get a less fine-grained, but clearer picture of the available
patterns in the languages of the world.

[7]For an introduction to negative concord items I refer the readers to the introduction of this
volume, and to the references cited there.

many others), the SN and NCIs are at some point in the derivation either in the same position or treated equally. In order to investigate this question in more detail we will first discuss the aforementioned syntactic theories for NC in more detail, and the two core types of NC, i.e. Strict and Non-Strict Negative Concord (Giannakidou 1997).[8] Next, we will move on to the empirical study of the question that we just raised.[9]

1.2 Syntactic Theories of Negative Concord

Before we move on to the data that are crucial to the investigation at hand, we need to zoom in on the two syntactic theories mentioned in the previous section, and discuss the issue relevant for the current paper in a bit more detail.

The first approach that we zoom in on is the NEG-criterion approach (Haegeman & Zanuttini 1991, Zanuttini 1991). Under this approach, NCIs are negative quantifiers, i.e. they are inherently negative. They need to move (overtly or covertly) to the specifier of a Neg° for concord to arise. The idea is that thanks to the movement to this position NEG-absorption can take place, leading to concord. The absorption is a consequence of the NEG-criterion: a head has only one specifier (in line with Kayne 1993) and hence movement to this one specifier will bring all NCIs/SNs in a position in which the head Neg° absorbs or factors out all other NEGs. If this movement does not take place, then the NCIs, which are negative quantifiers, each contribute their own negation. Crucially for our present purposes, the SN may also sit in Spec,NegP, like for instance French *pas* or West Flemish *nie*.[10]

(9)   NegP
      /   \
    NCI   Neg′
            |
           Neg°

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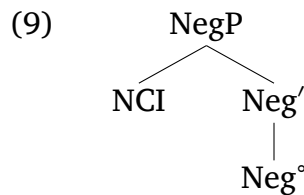
[8]We will not discuss less well-known patterns of non-strict negative concord, as described for Persian in Van der Auwera & Koohkan (2022). In Persian the non-strict pattern is different in the sense that the negator always needs to be present, but the indefinite can vary from being a negatively polar indefinite to a neutral indefinite.

[9]While this study focuses only on NCIs due to the scope of the volume, it would be relevant to investigate this question also on the basis of languages that have negative quantifiers of the English type, i.e. *no* and *nothing*. I leave this issue for future research.

[10]Italian *non* would be in Neg°, as well as Flemish *en*, and French *ne*. I refer the reader to the aforementioned works for more details.

Given that NCIs and SNs can sit in the same position under the NEG-criterion approach, to be licensed by the same [NEG] feature, and given the idea that NCIs are intrinsically negative quantifiers, it seems a valid question to ask whether NCIs can condition TAM or be conditioned by TAM, and if they can, whether this conditioning happens in the same way as with SN.

The other syntactic theory that we want to consider is the syntactic agreement approach (Zeijlstra 2004, 2008). Under this approach NCIs are negative indefinites, i.e. they are semantically non-negative, but syntactically marked for negation by means of a feature [uNeg]. In order to explain how concord is derived in this system, we need to make a distinction between two types of Negative Concord: Strict and Non-Strict NC (Giannakidou 1997, 2001.

If a language has Strict Negative Concord (henceforth SNC), like Czech for instance, NCIs need to be accompanied by the SN regardless of whether the NCI is in pre- or post-verbal position, as illustrated for Czech in (10).

(10)   a.   **Nikdo** ženě   peníze   **ne**-dal
                nobody woman.DAT money.ACC NEG-gave
                'Nobody gave the money to the woman'
    b.   Ženě   **ne**-dal   **nic**
                woman.DAT NEG-gave nothing
                He gave nothing to the woman. [Czech] (p.c. Lucie Janků)

Zeijlstra (2004) captures the SNC pattern by proposing that all NCIs and the SN are marked as [uNeg] and a covert (semantically) negative operator (OP in table (11)) licenses all [uNeg]-marked constituents in its scope. This is visualized in line (a) of the table in (11).

(11)

	OP	SN	NCI
a. SNC	iNeg	uNeg	uNeg
b. Non-SNC	—	iNeg	uNeg
c. Non-SNC	iNeg	—	uNeg

If a language has non-strict negative concord, like Standard Italian for instance, a NCI in post-verbal position requires the presence of the SN (12a), but cannot be combined with it when in preverbal position (12b) (unless double negation is aimed for). [11]

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[11]The fact that there is the requirement to have SN present with the NCI in postverbal position in Italian is not equally strict in all substandard varieties of Italian. See the introduction to this volume by Van der Auwera and Gianollo.

(12) a. **Non** ha telefonato **nessuno**
          NEG has called   nobody
          'Nobody called'
      b. **Nessuno** (***non**) ha telefonato
          nobody   NEG   has called
          'Nobody called'

For this pattern Zeijlstra (2004) proposes that the SN comes with an interpretable [NEG], i.e. [iNeg], thus licensing the [uNeg] on the NCI in post-verbal position. This is illustrated in line (b) of the table in (11). However, when the NCI is in preverbal position, Zeijlstra (2004) argues that the presence of [uNeg] on an NCI allows for a self-licensing mechanism, i.e. the uninterpretable syntactic negative feature allows for the appearance of a negative operator that licenses the [uNeg] on the NCI (see also Penka 2011). This is shown in line (c) of the table in (11).

Crucial for our purpose is the fact that the NCI and the SN are licensed by the same negative operator in a SNC language, raising the issue of whether these elements share other properties, like the way they interact with the TAM-domain. For non-SNC languages, the syntactic agreement approach suggests that NCIs and SNs are different: SNs are self-licensing and really negative, while NCIs are not negative.

In the next section, we will dive into the question of how NCIs interact with TAM on the basis of two languages, Berber and Egyptian Arabic.

2 The data

De Clercq's (2020b) 50 language sample consists of 31 languages which are of type A/B/C with respect to the SN marker. The 19 languages of type D were not considered in this paper, since there is no clear NEG-TAM interaction with the SN. Eleven languages of the A/B/C type seem to have some type of Negative Concord (NC), as shown in table 1. For some languages in the sample the data at my disposal were insufficient to establish whether there is NC, or what type the NC is. If there is *NC?* in the table, then this means that I am not sure about the type of concord, but that it looks as if there is negative concord. For the full overview of the 50 languages with the type and concord pattern, see section 4.

Most languages for which I have access to good data are SNC languages. In SNC languages, as outlined in section 1.2, the SN is argued to be always present when a NCI is used, making these languages—at first sight—less suitable to investigate the research question at hand, i.e. investigate the interaction between NCIs and

	Genus	Type	NC
Abkhaz	West caucasian	C	SNC
Albanian	Indo-European	B	SNC
Armenian (Eastern)	Indo-European	A	SNC
Awa Pit	Barbacoan	A	SNC
Aymara	Aymara	C	(optional) NC
Bagirmi	Nilo-Saharan	C	NC, type?
Bambara	Mande (Niger-Congo)	A	SNC
Berber (Middle Atlas)	Berber	C	SNC
Burmese	Burmese (Sino-Tibetan	C	NC
Comanche	Numic	C	NC?
Egyptian Arabic	Semitic	B	Non-SNC

Table 1: Negative concord in the sample

TAM. If the interaction or effect of the NCI on TAM would be the same as the effect of SN, then these languages would not be revealing anything, since the SN would also always be present and prevent us from knowing what the effect of the NCI is. The effect can therefore be best studied in Non-SNC languages. However, if TAM were able to condition allomorphy on the NCI, then both SNC and Non-SNC languages should be equally good to show this effect. Therefore, we will look at one language of the SNC type and one language of the Non-SNC type. For SNC languages, we will look at Berber, and for Non-SNC we will look at Egyptian Arabic. We will start the discussion with the SNC language.

2.1 Berber

Berber is a continuum of dialects or languages, some not mutually intelligible, which are spoken in Morocco, Mauritania, Algeria, Tunisia, Libya, and the Oasis of Siwa in Egypt. This paper focuses on one dialect group, Tamazight, and more in particular on Quebliyeen Tamazight Berber (QTB), a Zemmour dialect spoken in the Middle Atlas Mountains in Central Morocco. The data are mainly drawn from Ouali (2012:ch. 8).

QTB is a Type C language (cf. table (1)), which means that the SN conditions TAM: under negation the perfective form of the verb, which denotes past tense, changes from what we see in a positive environment. While *idda* 'he left' is the form in a positive clause (13a), *iddi* is the form used under negation (13b).

(13) a. **Idda** ʕli.
  go.PFV.3.SG.M Ali
  Ali left.'

b. ur **iddi**
    NEG go.NEG.PFV.3.SG.M
    'He didn't leave.' (Ouali 2012:160-161)

QTB uses *ur* as a SN, but the SN often co-occurs with an optional additional marker, as illustrated in (14). Because of this marker, Berber is often described as having a bipartite negation system. However, for the dialect under investigation this marker is optional (cf. Ouali 2012:146), and so we will not discuss the optional bipartite status of QTB further in this paper.

(14)   **ur**   swix   (**sha**)
       NEG1 drink-pfv.1s NEG2
       'I didn't drink.'

QBT is traditionally considered a SNC language, since the SN *ur* needs to be present with NCIs (15), regardless of whether the NCI is in postverbal (15a), or preverbal position (15b). [12]

(15)   a. **ur** iddi   **agidʒ**
           NEG go.3SM.NEG.PFV no.one
           'No one left.'
       b. **agidʒ ur** iddin   γərskeela
           no.one NEG go.3SM.NEG.PFV.PART to.school.
           'Nobody went to school.'

These SNC data do not seem to show us any interesting changes compared to what we see under SN: just as with SN, the verb takes the negative perfective form *iddi(n)*.

Before we move on, I want to point out that *agidʒ* can be used in fragment answers as in (16) (from Ouali 2012:152), supporting the idea that *agidʒ* really is a NCI and not a NPI. For more tests in support of this claim I refer the reader to Ouali (2012:150-155)).

(16)   a. Q: Ma ag   didan?
              Who COMP come.PFV.PART
              'Who came?'

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[12]When the subject is extracted across the verb, the marking on the verbal form is different, taking an -*n*. Ouali (2012) considers this an Anti-Agreement effect, and glosses this as Part, referring to Participle, in line with the traditional grammars on Berber. I follow his example, but I do not analyse the Anti-Agreement Effect in this paper.

b.   A: agidʒ
      no-one
   'No one'

Concerning the interaction between NCIs and TAM, an important piece of data can be observed in QTB. While (15b) is described as the neutral pattern in Ouali (2012), it is also possible to drop the SN when *agidʒ* is in preverbal postion. Crucially, in that case the regular TAM-allomorphy on the verb is not visible (17).

(17)   **agidʒ** (ag) iddan   / *iddin
       no.one COMP go.3SM.PFV.PART / go.3SM.NEG.PFV.PART
       'Nobody left.'

While the examples in (15a) and (15b) do not allow us to see what the role is of the NCI, because the SN is also present, the example in (17) shows that when the SN is no longer present there is no negative allomorphy on the verb. In other words, QTB shows that it is not just any [NEG] that can condition verbs in the perfective, but that only the [NEG] present in the SN can condition the perfective form of the verb. Moreover, QTB also shows that *agidʒ* 'no-one' remains unaltered regardless of when the SN is present or not.

2.2   Egyptian Arabic

We will now take a closer look at the only Non-SNC language in the sample, Egyptian Arabic. Egyptian Arabic (also discussed in Miestamo 2005, Benmamoun et al. 2013, Ouali & Soltan 2014, Alqassas 2021) is a type B language ((1)), which means that in the context of particular TAM the SN changes to an allomorph, a so-called AINT (cf. sect. 1.1 above). For Egyptian Arabic this AINT is *miʃ*, which is the only possible negator in the context of the future tense (also called the *ha*-imperfect) (19), instead of the SN *ma... ʃ* (18b), which is the SN used for the past tense (also referred to as the perfect) (18a).[13]

(18)   a. katab
          write.PST.3SG.M
          'He wrote.'

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[13]I am simplifying the picture here, because *miʃ* is also used in questions and is optionally used in the imperfect. However, due to the optional nature of its appearance under imperfect aspect I decided to focus on its obligatory appearance in the future tense.

b. **ma**-katab-ʃ
NEG-write.PST.3SG.M-NEG
'He didn't write.'

(19) Howa **miʃ** ha-yroh el welayat el motaheda
he NEG FUT-go the states the united
'He will not go to the United States.' (p.c. Dia Awaad and Amgad Farrag)

Egyptian Arabic is Non-SNC, which means that the NCI needs to be accompanied by the SN when the NCI is in postverbal position (20a), but cannot be accompanied when the NCI is in preverbal position (20b).

(20) a. **ma**-šuf-t-i-ʃ **walaa waaħid**.
NEG-saw-1SG-EV-NEG no one
'I didn't see anyone.'
b. **walaa waaħid** gih.
no one came.3SG.M
'Nobody came.' (Ouali & Soltan 2014:162)

When the AINT is used with the future tense, the exact same pattern can be observed: the same AINT is present in the context of postverbal NCIs, (21) and the AINT disappears in the context of preverbal NCIs (22).

(21) Howa **miʃ** ha-yeʕzem **walaa waaħid**.
he NEG FUT-invite no one
'He will not invite anybody.'

(22) **Walaa waaħid** ha-yroh el welayat el motaheda.
no one FUT-go the states the united
'Nobody will go to the United States.' (p.c. Dia Awaad and Amgad Farrag)

Crucial for our present purposes is the observation that the absence of *miʃ*, the AINT that was needed in the context of the future tense, does not need to be compensated for in any possible way by any marking on the NCI or anywhere else in the sentence. This suggests that the allomorphy that arises in the context of future tense does not affect all types of NEG, but only the NEG associated with the SN. The Egyptian data hence show that the NCIs themselves are not conditioned by the future tense, unlike the SN. Conversely, the NCI also do not condition tense.

2.3 Discussion

Both QTB and Egyptian Arabic suggest that the interactions that we see between the SN and the TAM-domain disappear in the context of NCIs: NCIs are not conditioned by TAM nor do they condition TAM. It thus seems that on the basis of the morphosyntactic properties it is very important to keep SNs and NCIs apart and to treat them differently, unlike what is done under the NEG-criterion approach or the syntactic agreement approach (with respect to the treatment of SNC). The Berber data also suggested that even in SNC languages NCIs can give rise to semantic negation, outside the context of fragment answers ((16)), as in (17). For the latter it could be argued that the NCI can get licensed due to the presence of a negative operator in the ellipsis site, but this option is not available for the fronted NCIs in the Berber data. One could of course propose—in line with Zeijlstra (2004, 2008)—that this type of fronted NCIs are self-licensing, i.e. that the presence of a [uNeg] presupposes the presence of a semantic negative operator that licenses it. If there is no overt one, a covert one will appear. But would this not boil down to saying that NCIs are semantically negative after all? How else could the presence of a semantically non-negative indefinite (a [uNeg]) give rise to the appearance of a covert, semantically negative operator ([iNeg])?

Summarizing, the data from Berber and Egyptian Arabic support the idea (i) that NCIs are really intrinsically negative (as under the Neg-criterion approach), and (ii) that the [NEG] of NCIs and SNs cannot be the same [NEG]. The question that we want to address next is whether it is feasible to set up a proposal that captures (i) the allomorphy that we see between SN and TAM, (ii) the absence of allomorphy between NCIs and TAM, and (iii) the schizophrenic behaviour of NCIs in Strict and Non-Strict Negative Concord Languages. We will argue in the next section that this is feasible and that this can be done within Nanosyntax. We will illustrate this for the Berber data that we discussed in section 2.1.

3 A Nanosyntactic view on allomorphy and NC

In this section we will explain how the conditioning between SN and the TAM-domain in Berber can be captured in Nanosyntax, and why we do not see this interaction with NCIs. In the meantime, the proposal will also account for the ambiguity NCIs give rise to in different positions in the clause, more concretely for the concord puzzle that we described in section 1.2 in general, and in section 4 with respect to Berber and Egyptian Arabic. Before we embark on this, we will briefly explain Nanosyntax.

3.1 Nanosyntax: the basics

Nanosyntax (Caha 2009, Starke 2009) is a late-insertion theory that lexicalizes the output of Syntax after each step of Merge, making use of phrasal lexicalisation. The consequence of the extremely cyclic nature of lexicalisation is that Syntax interfaces with the lexicon at every Merge step, allowing for an immediate interaction between the two. Thanks to this, there is no need for post-syntactic operations, nor for an independent morphological component. The lexicon consists of lexical items that not only come with phonology (between slanted brackets) and conceptual information (in capitals), but also with stored lexical tree structures, as illustrated for the noun *sheep* in (23).[14]

(23)   /ʃiːp/,   PlP   , SHEEP

Pl   N*P
|
N*
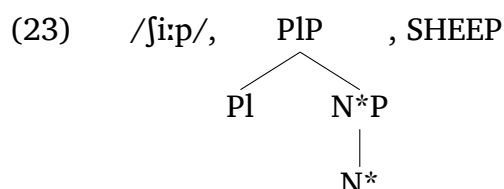
After each Merge step, the syntax is checked against the lexicon and a matching lexical item is searched for. The matching condition[15] that mediates between the Syntax and the Lexicon is informally referred to as the Superset Principle, and its definition is in (24).

(24)   A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node. (Starke 2009:3)

To understand what (24) can do, consider the lexical item in (23) again. Thanks to (24), (23) is a candidate for insertion both for the syntax in (25), without the plural, and for the syntax in (26), when syntax merged the [Pl] feature.

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[14]The * in the lexical structure indicates that we assume that the nominal structure is internally more fine-grained. However, for the purpose of this explanation, we do not go deeper into that.

[15]The matching condition can be defined as in (i).

(i)   A lexically stored constituent L matches a syntactic phrase S iff S is identical to L.

The Superset Principle in (24) is actually a theorem that follows from the matching condition. If a syntactic tree is identical to a stored L tree, then the consequence of this is that the S tree may also be contained in the L tree, with the L tree being bigger in structure. This is explained in detail in Caha et al. (to appear).

(25)

```
    N*P
     |
    N*
```
sheep

(26)

```
      PlP
     /   \
   Pl    N*P
          |
         N*
```
sheep
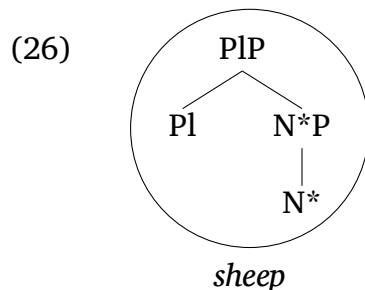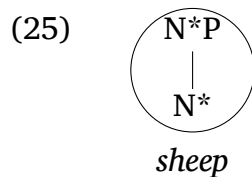
With this much in place about NS, we continue our discussion of the Berber data under consideration. More technicalities about Nanosyntax will be explained as we go along. For a more detailed introduction to Nanosyntax I refer the reader to Baunaz & Lander (2018), Starke (2018), Caha et al. (2019, to appear).

3.2 Berber

The first thing we want to take a look at is how we can understand the fact that SN conditions the TAM categories on the verb, and why this is not the case with NCIs. Second we want to have a closer look at the structure of NCIs.

In order to capture the fact that SNs can condition TAM and vice versa, a functional category NEG and the relevant TAM category must be in an extremely local relation in Nanosyntax, i.e. they must be contiguous in the structure.[16] The table in (27) is a lexicalisation table illustrating in an informal way phrasal lexicalisation for the lexical items relevant to our discussion of Berber. The top line is a simplification of what we assume are the relevant parts of the functional sequence (henceforth fseq): what is most to the left in the table is the top of the syntactic tree. For the discussion of the contrast between *idda* 'he left' and *ur iddin* 'he didn't leave' it suffices to assume a simplified fseq.

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[16]Nanosyntax differs in this way from other approaches to allomorphy and suppletion, in which strict contiguity is not required and looser implementations of locality are proposed. I refer the reader to Choi & Harley (2019) for an overview of different morphosyntactic approaches to allomorphy and suppletion.

(27)

	NEG	T	ASP$_{PFV}$	INIT	PROC
a.			idda		
b.	ur		iddi		

We follow Ouhalla (1991) and Ouali (2012:67-68) in proposing that the position for the SN must be higher than tense in the syntax of Berber. One of the reasons for this is the fact that the SN always precedes the auxiliary, as illustrated in (28).
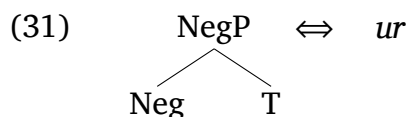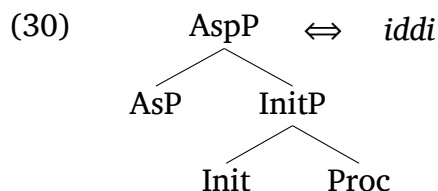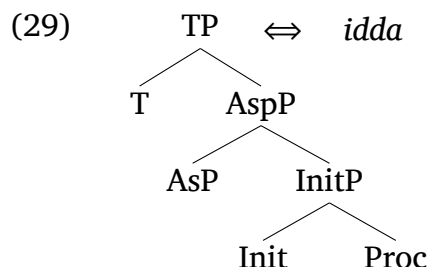
(28) **ur** dað aɣəx ibəttan
NEG FUT buy.1SG clothes
'I will not buy clothes'

The idea that NEG is higher than Tense is also present in the work by Holmberg & Platzack (1988), Haegeman (1995), Zanuttini (1996), De Clercq (2020b) and many others. TP then is higher than the features related to viewpoint Aspect, in this case the perfect, and viewpoint aspect is higher than the features relevant to the lexical aspect of the verb, captured here by means of Init, which stands for the Initiator of the Process, which is abbreviated by PROC (Ramchand 2008).

What the table shows is that we assume that the form *idda* cannot only lexicalize features relevant to the verbal domain, but also features relevant to the aspectual and the tense domain. The reason for adopting this idea is not far-fetched: *idda* gives rise to a past tense reading, as was illustrated in section 4. When it comes to line (b) in table (27), it is shown how we can capture the allomorphy that we see under the SN if we adopt the idea that there is another lexical item stored in the lexicon, *iddi*, which is smaller in structure, and a negator which is not only lexicalizing [NEG], but also T. The reason that *iddi* will only be used in the context of the negator is that if there is no negation present and you want to lexicalize *he left*, *iddi* will not be able to lexicalize the Tense layer, but will only reach up to perfect aspect, it being insuffiently big to lexicalize a fully inflected positive verb. Consequently, *idda* will be called for. However, in the context of negation, *iddi* will be the best possible match at the level of perfect aspect, since the SN *ur* will lexicalize the relevant T-layer together with NEG. In other words, if we adopt the idea that *ur* is a portmanteau lexicalizing tense and negation, then root conditioning under perfect aspect follows naturally. While the idea to look at *ur* as a portmanteau is new, the idea that Negation interacts with Tense (and Agreement) in Arabic and Berber is not new (see Ouali 2012).

What is intuitively captured by the lexicalisation table boils down to having the lexical items (29)-(31) in the lexicon of Berber (phonology and conceptual

information are left out for simplicity's sake):[17]

(29) TP ⟺ *idda*

```
        TP
       /  \
      T   AspP
         /    \
        AsP   InitP
             /     \
           Init    Proc
```

(30) AspP ⟺ *iddi*

```
      AspP
     /    \
   AsP   InitP
        /     \
      Init    Proc
```

(31) NegP ⟺ *ur*

```
     NegP
    /    \
  Neg    T
```

Our next task is to explain why NCIs in Berber do not interact with TAM. However, we can only understand this by addressing another issue first. We first need to find an answer to the question how it is possible that an NCI in a SNC language can give rise to what looks like real negation when it is in clause-initial position (see (17) above).

In order to answer this question, we will have another look at a lexicalisation table. This time the table we started out with in (27) is slightly modified to also host the NCI in preverbal position. In (32) this position is uninformatively labelled NCI (the brackets around *agidʒ* 'no-one' indicate that it can occur both pre- and post-verbally). The table shows the two patterns that we were confronted with in (15)-(17). Even though we understand now why the presence of *ur* leads to the presence of *iddi*, it still remains a mystery why *ur* needs to be present in line (b), but can be absent in line (a).

(32)

	NCI	T	NEG	ASP	INIT	PROC
a.	agidʒ			idda		
b.	(agidʒ)	ur		iddi		

This issue takes us to the heart of the NC-puzzle. As we explained before, it is not

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[17]One idea that is present in the way the lexical items are set-up is that we—for now at least—assume that roots are not lexicalized independently, but together with their vowels. So instead of having the root *k-t-b* in the lexicon of for instance Arabic, the idea would be that there are different lexical items for *kitab* 'book' and *kataba* 'he wrote'. This idea is not new for Semitic nor for Berber and is present in the work of Moktadir 1989, Dell & Elmedlaoui 1991, Bensoukas 2001. However, this proposal is by no means a final stance on how I think root and pattern morphology (McCarthy 1979) should be dealt with in NS.

only in this particular context for QTB that NCIs can give rise to real negation: they can also give rise to negation in the context of an elliptical answer, as in (16), repeated here in (33) (Ouali 2012:152).[18]

(33)   a.   Q: Ma   ag   didan?
               Who COMP come.PFV.PART
             'Who came?'
       b.   A: agidʒ
               no-one
             'No one'

In order to understand why NCIs in QTB can give rise real sentence negation in these environments, we need to take a closer look at example (17) again, repeated here in (34).

(34)   **agidʒ** (ag)   iddan   / *iddin
       no-one COMP go.3SM.PFV.PART / go.3SM.NEG.PFV.PART
       'Nobody left.'

What we did not pay attention to in section 2.1 is the presence of the complementizer *ag*. Upon careful consideration of Ouali's (2012)'s data it seems that the pattern without *ur*, shown on line (a) of (32), is only possible when the (optional) complementizer follows the NCI, while with the regular concord patterns, the NCI is below the complementizer, (35). [19]

(35)   a.   **agidʒ** (ag)   iddan
              no-one   COMP   go.PFV.PART
             'Nobody left.'
       b.   (ag)   **agidʒ**   ur   iddin   ɣərskeela
                    COMP   no.one   NEG   go.PFV.PART   to.school.
             'Nobody went to school.'

This means that we can now update the table in (32) to the table in (36), where we see that the disappearance of the SN is linked to the appearance of the NCI in a position above a complementizer.

---

[18]See also the introduction for discussion of NCIs in elliptical answers.

[19]One cannot argue that *agidʒ* in (34) is part of a cleft sentence, with the negative reading of the NCI following from the deletion of a regular SN, because the Anti-Agreement effect (see footnote 12) on the main verb shows that *agidʒ* must have been fronted.
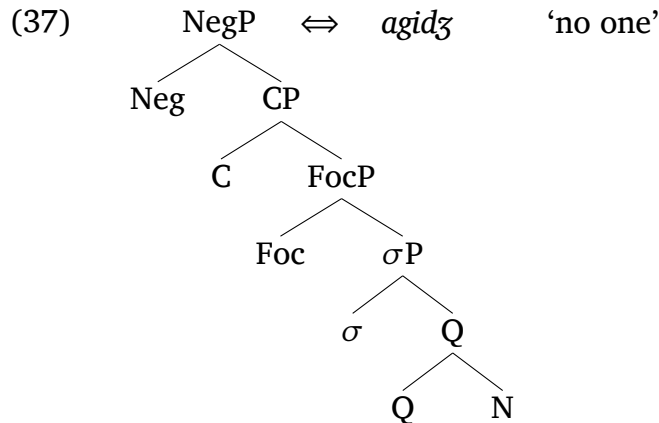
(36)		NCI$_1$	C	NCI$_2$	NEG	T	ASP	INIT	PROC
	a.	agidʒ	(ag)		■	idda			
	b.		(ag)	(agidʒ)	ur		iddi		

Since (i) it must be clear that NCIs have more internal features than just [N], and since (ii) we have already seen when we determined the inner structure of *ur* 'not' that the position of a morpheme in the functional sequence is indicative of the feature structure of this morpheme, we are now at a point to propose that the different positions of *agidʒ* go hand in hand with the fact that the NCI is lexicalizing different amounts of structure in different positions in the fseq.
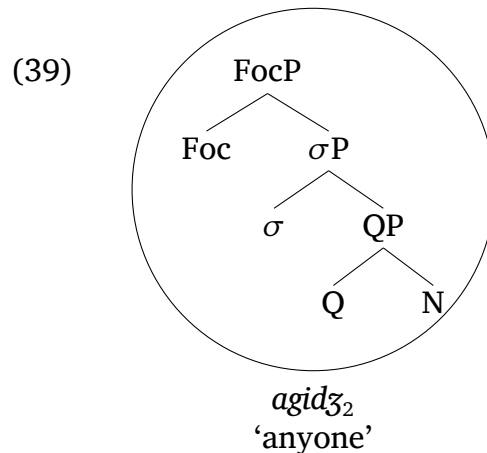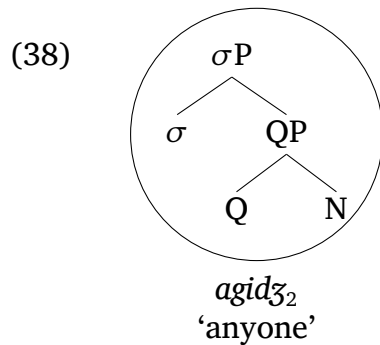
To make this idea more explicit we first take a look at what the feature structure of NCIs could be like. A first component is, in the case of *agidʒ,* definitely a nominal element, N. In order to capture the idea that this nominal is a quantifier of some sort, we assume that the feature Q will also be needed. This feature structure will allow for the lexicalisation of a positive indefinite (like for instance *some(one)*). However, we also need an ingredient that will allow the lexicalisation of a negative polarity item (like for instance *any*). We will use the feature σ for that (in line with work by Chierchia (2006) and the syntactic implementation by Labelle & Espinal (2014)). [20] Next, we want to propose, in line with work by Watanabe (2004), that a Focus feature is an inherent and necessary part of the internal structure of NCIs (as opposed to NPIs), forcing it to be in the scope of a [NEG]. Ouali (2012:157) shows for Berber—in line with Watanabe (2004)—that *ag-idʒ* literally means 'not even-one', and that hence focus is morphologically contained inside the NCI. Finally, I want to propose that the morpheme responsible for Focus, i.e. *ag-*, is also syncretic with the complementiser *ag*. We know from Baunaz & Lander (2018) that cross-categorial syncretisms between nominal elements and complementizers is typologically widespread. We take this syncretism to be meaningful and propose that NCIs must consist of a property shared with complementisers. For convenience sake, I will refer to this feature by means of [C]. Since the data in (34) clearly show that the NCI can give rise to negation on its own, in spite of the fact that the language is SNC, I propose that the NCI also consists of a NEG at the top of its internal structure. All these ingredients, that are all based on fairly regular assumptions in the literature and the empirical properties of NCIs in Berber, yield the lexical structure in (37). [21]

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[20]We realize that σ (and the associated mechanism of exhaustification) can probably not do justice to the complex distribution and behaviour of NPIs (Giannakidou 2018). However, we adopt σ to capture the fact that positive indefinites are different from NPIs and to be able to regulate the competition between them. We hope to come back to this in future work.

[21]One could also imagine decomposing *agidʒ* in *idge* 'one', which lexicalizes the structure up

18

(37) NegP ⟺ *agidʒ* 'no one'

```
        NegP
       /    \
    Neg      CP
            /   \
           C    FocP
               /    \
            Foc      σP
                    /   \
                   σ     Q
                        / \
                       Q   N
```

Thanks to the Superset Principle (24), the lexical item (37) can also lexicalize the structures in (38)-(39):

(38)

```
        σP
       /  \
      σ    QP
          /  \
         Q    N
```

agidʒ₂
'anyone'

(39)

```
        FocP
       /    \
     Foc     σP
            /   \
           σ     QP
                /  \
               Q    N
```

agidʒ₂
'anyone'

Crucially, when NCIs are merged in postverbal position, they will have a syntax as in (38): only a subset of the features of the lexical structure of the NCI will be present in the derivation at that point. FocusP will only be merged with the NCI when the NCI moves to a position above the vP-domain. This proposal is in line with syntactic approaches to Focus that argue for a FocusP for New Information Focus in a low left periphery, above vP (Belletti 2004), and one for Contrastive Focus in the high left periphery (Rizzi 1997). NEG will not be part of the internal syntax of the NCI when (38) is merged in syntax, accounting for why *ur* needs to be present to give rise to Sentential Negation. However, thanks to the Superset Principle, the lexical item in (37) will be able to lexicalize this structure. Also

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until QP, and *ag-* which lexicalizes the rest of the feature structure.

when the NCI appears in preverbal position, below the complementizer, as shown in (40), the syntax of the NCI will not reach up to the NCI-internal NEG and hence again the SN will be needed to project a NegP in the clausal syntax. The internal syntax may reach up to FocP in this case, but given the internal structure of NCIs in Berber, this structure will not be able to project a NegP in the main spine.

(40)
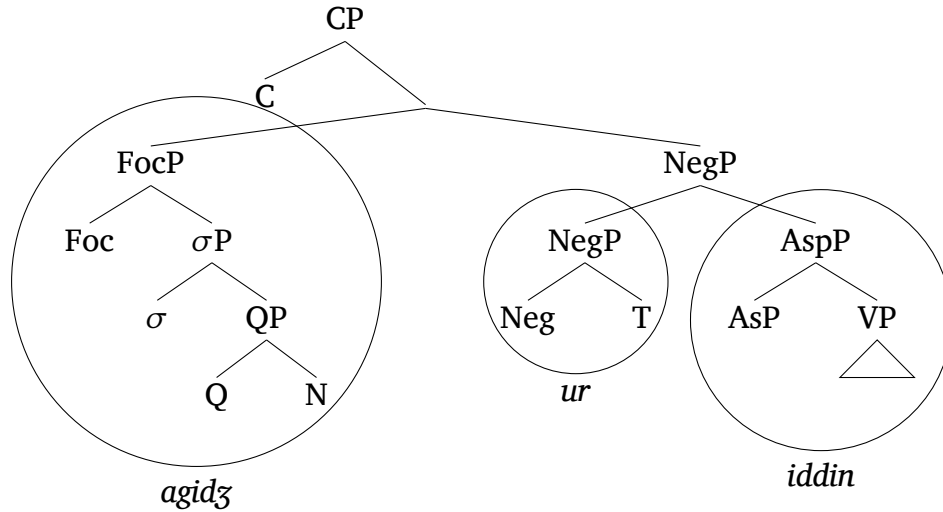
However, when the NCI appears in a position before the complementizer, the syntax of the NCI can grow to its full potential, as illustrated in (41), and hence the LI in (37) will be a perfect match. This time however the NCI can also project a Neg, higher in the structure, and hence the SN is not needed to give rise to Sentential Negation, giving rise to the unexpected pattern that we discussed for QTB.
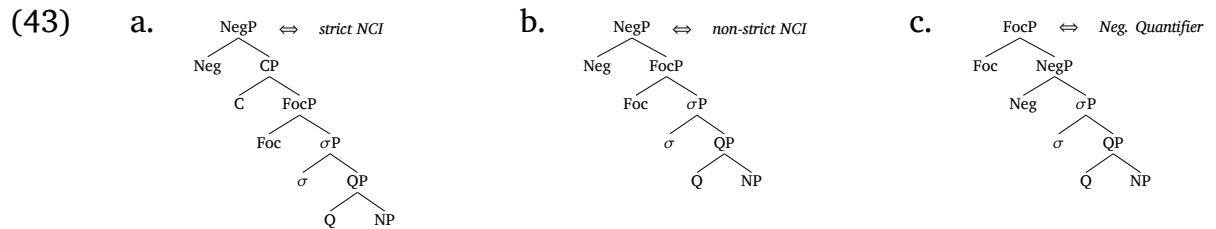
(41)

agidʒ ... *iddan*
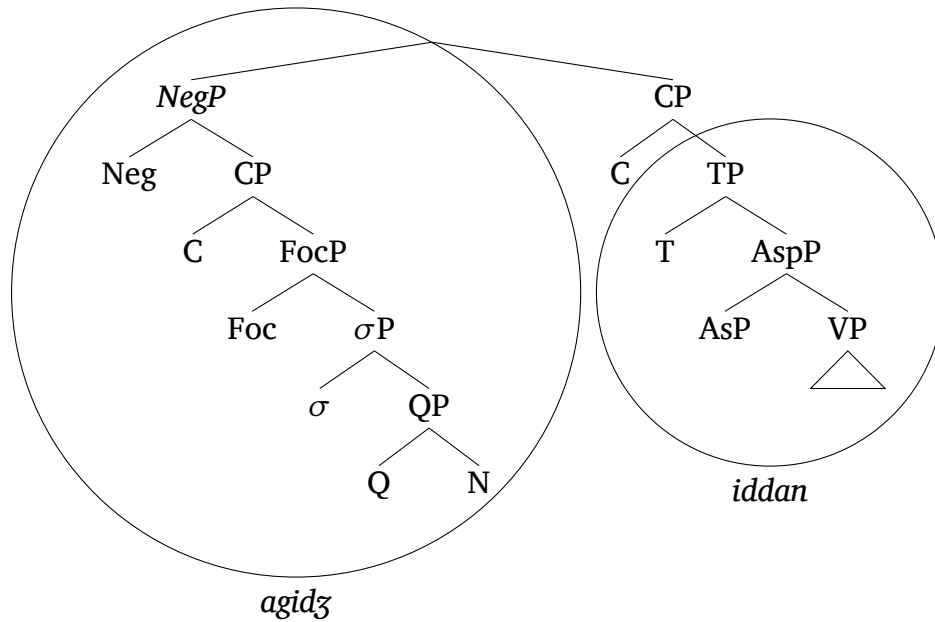
The underlying idea in the current proposal is that for a language like Egyptian Arabic, which is Non-SNC, the internal structure of the NCI differs in the sense that the NCI-internal NEG feature takes a different position, below the C-element, just above the Foc-element, accounting for why Egyptian Arabic does not need a SN as soon as the NCI is in a position above vP. The structure for Egyptian Arabic *walaa waaħid* is in (42).[22]

(42)

NegP ⟺ *walaa waaħid* 'no one'

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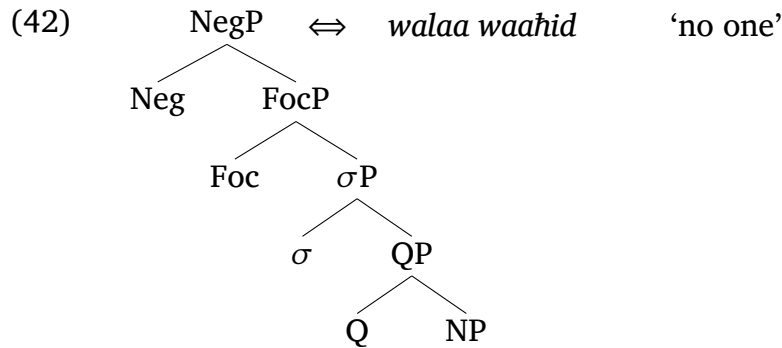
[22]As with *agidʒ* in Berber it would be an option to argue that the NCI is not stored as one chunk in the lexicon, but that the sequence in (42) is lexicalised by multiple lexical items. One could namely further decompose *walaa waaħid* into the positive indefinite *waaħid,* that could possibly lexicalize the structure up until QP, and then *walaa,* which literally consists of a coordinator *wa* and a negator from Classical Arabic *laa,* which could be argued to lexicalize the upper part of the structure. We will not decide on this, since nothing crucially hinges on it.

In other words, the current proposal suggests that NC is a side-effect of an interaction between the Superset Principle and how lexical items are stored in the lexicon of a particular language. If the NCI-internal NEG sits high in the lexical structure of an NCI, as we saw for Berber, then it is only in the context like (34) or the elliptical contexts, typical of SNC languages, that the NEG can project in the main spine (tree structure (43a)). However, if the NCI-internal NEG sits lower, below the C-layer, then the NCI will be able to project its own NEG as soon as it moves to a position higher than vP (43b). Finally, when a language has quantifiers that have a structure in which NEG sits just above QP, as in (43c), then the system will not be Negative Concord, but will be of the Negative Quantifier type, like English.

(43) a.

```
        NegP   ⇔   strict NCI
       /    \
     Neg     CP
            /  \
           C   FocP
               /  \
             Foc   σP
                  /  \
                 σ    QP
                     /  \
                    Q    NP
```

b.

```
        NegP   ⇔   non-strict NCI
       /    \
     Neg    FocP
            /  \
          Foc   σP
               /  \
              σ    QP
                  /  \
                 Q    NP
```

c.

```
        FocP   ⇔   Neg. Quantifier
       /    \
     Foc    NegP
            /  \
          Neg   σP
               /  \
              σ    QP
                  /  \
                 Q    NP
```

The advantage of this hypothesis for concord is that it does not require us to postulate two different lexical items for the NCI in the lexicon of a particular language to capture the ambiguity that NCIs give rise to (see amongst others (Herburger 2001)).[23] Under the current proposal, the ambiguity arises as a natural consequence of the Superset Theorem, a matching principle that is independently needed to guarantee lexicalisation. The current proposal for concord also brings us back to the issue this paper started out with, i.e. the question whether NCIs can condition TAM and be conditioned by it. If allomorphy in SNs and TAM arises due to what we proposed for Berber, i.e. as a consequence of SN "eating" into the structure of the TAM domain, and if the structure that we just proposed for NCIs is on the right track, then it follows why NCIs and the TAM domain do not condition each other: their functional sequences simply do not share features, apart from the feature NEG. The only interaction that we see therefore, is that the NCI can replace the SN, because both can satisfy the need of projecting a NEG in the main spine.

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[23]See also the introduction of this volume for an elaborate discussion of ambiguity in various proposals for NCIs.

4 Conclusion

This paper started from two mechanisms - proposed in the syntactic literature - to capture NC: 1) moving the NCI to the same position as the position for SN in syntax (NEG-criterion approach), or 2) licensing NCIs and SNs by the same semantic operator (syntactic agreement approach for SNC). The observation related to the discussion of these mechanisms was that in both approaches SN and NCIs are - in terms of negativity - treated similarly and associated with the same position. This led to the question whether there are also morphosyntactic reasons from the domain of allomorphy to treat NCIs and SNs in the same way. On the basis of a small crosslinguistic investigation, and a more detailed discussion of Egyptian Arabic and Berber we concluded that it does not seem to be the case that NCIs condition TAM or are conditioned by TAM in the way SNs do this. This conclusion supports the typological work by Alsenoy (2014), Van der Auwera & Van Alsenoy (2016), Van der Auwera (2017), Van der Auwera & Alsenoy (2018), which considered any parameter that could be related to (negative) indefinites, and didn't find any. Since the SNC language Berber provided us with a strong argument to consider NCIs as intrinsically negative (in line with the NEG-criterion approach), we concluded that the [NEG] in SNs and the [NEG] in NCIs must be a different [NEG]. We developed a Nanosyntactic account to capture (i) the allomorphy that arises between SN and TAM, (ii) the absence of allomorphy in the presence of NCIs, and (iii) the fact that NCIs in SNC languages can give rise to negation. The current paper gave rise to a new perspective on NC: under this approach NC is a side-effect that arises due the interaction of the Superset Principle with stored lexical items. It goes without saying that this new perspective is also a research hypothesis that needs to be tested against more languages.

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Appendix

The table below shows the first 50 languages from Miestamo (2005), which De Clercq (2020a) used for her pilot study. The 'type' label is based on the hypothesis developed in the introductory section of this paper, and deviates somewhat from the pilot study. Only the negative concord patterns for types A/B/C are provided (see discussion in section). For the determination of the types and the negative concord patterns the main resources are: Miestamo (2005), reference grammars of the relevant languages and native speakers if available. To determine the concord pattern for Aymara I want to thank Roger Gonzalo Segura, my Aymara informant, whom I was able to consult via Gabriel Martinez Vera, whom I also want to thank. The variety of Aymara in the table is Southern Aymara, as spoken in the Peruvian side of Lake Titicaca.

Concerning the abbreviations in table 2: **?** means that I am not sure whether there is concord or not, **No NC** means that the language does not have Negative Concord, **SNC** means that the language has Strict Negative Concord, **Non-SNC** stands for Non-Strict Negative Concord, **NQ** stands for Negative Quantifier. If the cell is **empty** I did not look into the concord pattern, because the language is of Type D . If I added ? to one of the abbreviations, then it means that I am not entirely sure.

	Genus	Type	NC
Abipon	Guaicuruan	D?	
Abkhaz	West caucasian	C	SNC
Achumawi	Palaihnihan	A	No NC?
Acoma	Keresan	D	
Ainu	Ainu	D	
Alamblak	Sepik	A?	?
Albanian	Indo-European	B	SNC
Amele	Trans New Guinea	A	No NC
Andoke	Andoke	D	
Apala\'i	Cariban	C	No NC
Apurina	Maipuran	D	
Araona	Pano-Tacanan	D	
Armenian (Eastern)	Indo-European	A	SNC
Asmat	Central and South New Guinea	C	?
Awa Pit	Barbacoan	A	SNC
Aymara	Aymara	C	NC
Bafut	Niger-Congo (Eastern Grassfield)	A	No NC
Bagirmi	Nilo-Saharan	C	NC, type?
Bambara	Mande (Niger-Congo)	A	SNC
Barè	Tucanoan	B	NQ
Barasano	Arawakan	D	
Basque		C	No NC
Batak	Sundic	D	
Bawn	Sino-Tibetan	B	No NC
Beja	Northern Cushitic	A	No NC?
Bella Coola	Bella Coola (Salish)	D	
Berber (Middle Atlas)	Berber	C	SNC
Birom	Niger Congo	D	
Boko	Mander (Niger-Congo)	C	?
Bororo	Macro-Ge/Bororoan	A	No NC?
Brahui	Dravidian	A	No NC
Bukiyip (Arapesh)	Torrcelli	A	NQ
Burara	Burarran	C	NQ
Burmese	Burmese (Sino-Tibetan	C	NC
Burushaski	Burushaski	D	
Canamarì	Katukinan	?	
Candoshi	Candoshi	B	?
Canela-Krah	Carib	D	
Cantonese	Sino-Tibetan	A	No NC
Carib	Carib	D	
Cayuvava	Cayuvava	D	
Chamorro	Chamorro	D	Non-SNC
Chechalis (Upper)	Salishan (Coast)	A	NQ
Chinantec (Lealao)	Oto-Mangue	A?	
Chinook (Lower)	Chinookan	D	
Chorote	Mataco	C	?
Chukchi	Chukoto-Kamchatkan	A	No NC
Chumash	Chumash	D	
Comanche	Numic	C	NC?
Egyptian Arabic	Semitic	B	Non-SNC

Table 2:   The sample