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Innovating postverbal negation in North Africa

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The present study investigates the grammatical origin of the postverbal negator *bu* in Rif Berber (Afroasiatic, Berber; North, Northeast, and Northwest Morocco) and in Moroccan Arabic of Oujda (Afroasiatic, Semitic; Northeast Morocco), the only languages in which it is commonly attested up till now. Based on new data obtained from recent fieldwork in Morocco, the study will demonstrate that this negator is most probably of Berber origin and has been construed out of an existential by system-internal grammaticalization. The study will also provide evidence for quadruple negation marking in Rif Berber, relating to a reduplication of the *bu*-negator. Moreover, it will show how Berber constantly innovates its cyclical negation system, in which, in this case, different Jespersen Cycles and a Negative Existential Cycle are interlaced. Accordingly, the study will prove that *bu* in Moroccan Arabic is an innovation phenomenon induced by contact with Rif Berber and instantiated through the processes of pattern replication and matter borrowing.

Keywords: interlaced negation cycles, quadruple negation, Jespersen Cycle, Negative Existential Cycle, system-internal and contact-induced grammaticalization, Berber, Arabic

1. Introduction

Negation is subject to a great deal of contact-induced change in North Africa, in which the development of postverbal negation marking plays a significant role. Postverbal negation is attested all over North Africa, including its Arabic speaking zones, where it has most likely been engendered by contact with Berber (language family and branch of the Afroasiatic phylum), in which it is common and strongly developed since remote times (Lafkioui 2013a, 2013b; Lafkioui & Brugnatelli 2020). Although post-verbal negation does also occur in colloquial Arabic outside Berber-speaking areas, mainly in some Egyptian and Levantine

varieties, the data provided by Diem (2014) clearly show that Arabic negation has developed postverbal-marking starting from the 11th century onwards, and hence much later than its first contacts with Berber in the 7th century. Consequently, it is highly questionable to assume that Berber has developed postverbal negation marking by contact with Arabic, as is claimed in Lucas (2013: 402 ff.). On the contrary, it is more reasonable to regard Berber as a substrate in the development of postverbal negation in North African Arabic, not only because postverbal negation probably goes back to very ancient stages of Berber but also because its geolinguistic spread is of such a scale that it involves the majority of the Berber languages, which forms a huge core area covering most parts of North Africa (see diagonally striped areas in Figure 1).¹

On the basis of recent fieldwork data, the present study will prove, from a typological and diachronic perspective, that the *bu*-negator results from a system-internal development out of an existential in Rif Berber (North, Northeast, and Northwest Morocco). For the first time, these data not only testify to the occurrence of this negator in preverbal position but also to its double occurrence, in both preverbal and postverbal position, leading to the remarkable phenomenon of quadruple negation. In accordance with these findings, the study will demonstrate that the occurrence of the *bu*-negator in Moroccan Arabic of Oujda (henceforth MAO; Northeast Morocco) is an innovation produced by contact with Rif Berber through grammaticalization involving both pattern replication and matter borrowing from the model language, i.e., Rif Berber, to the replica language, being MAO.

The focus of the article is put on standard negation, i.e. the negation of a main clause declarative verbal predicate, corresponding to the context in which the postverbal negator *bu* commonly appears in Rif Berber and in MAO.

In what follows, Section 2 presents a comparative analysis of the standard negation system of both Berber and North African Arabic. Section 3 deals with the synchrony of the *bu*-negator in Rif Berber, as well as with its diachrony and typology by focusing on the grammaticalization phenomena at work. Section 4 addresses the same negator and its diachrony in MAO, where it relates to the phenomenon of contact-induced grammaticalization. A general conclusion about the *bu*-negator and its implications on negation in North Africa ends the article.

1. The area indicated by the dashed contour line is the area where the *bu*-negator occurs, which involves both the Rif Berber-speaking area and the Oujda region, which is mainly Arabic-speaking. Note that the Sahara area is vast compared to the other North African areas, but the number of Berber speaking people there is much lower than in the more northern zones.

2. Standard verbal sentential negation in Berber and North African Arabic

The primary feature of standard negation that distinguishes Berber from Arabic is that the latter mainly possesses single preverbal negation marking (NEG₁ + V), and in the case of North African Arabic, also double negation marking (NEG₁ + V + NEG₂). In Berber, on the other hand, standard negation is conveyed through a predominantly “triple negation” marking system, involving not only concatenative negators (NEG₁/NEG₄ + V + NEG₂) but also dedicated “negative verb stem alternations” (NEG₃) – a feature that is attested in almost the entire Berber-speaking area (Bensoukas 2015; Brugnatelli 2002; Mettouchi 2009; Lafkioui 2013a; Lafkioui & Brugnatelli 2020, among others).² The case examined in this study is exceptional in that it proves the existence of quadruple negation marking in Berber, i.e. [NEG₁ + NEG₄ + V_{NEG₃} + NEG₅]. This case of quadruple negation is generally restricted to Rif Berber of the Nador region (North and Northeast Morocco), where it is attested among both the older generations (rather irregularly) and the younger generations, who use it often lately.

Furthermore, Berber distinguishes the so-called Jespersen Cycle (1917: 4) – henceforth JC – which corresponds to the following three-fold diachronic pathway of clausal negation marking: (1) it starts with one sole negator, which is weakened in time (NEG₁; Stage I); (2) the weakened negator is strengthened by means of a component (e.g., ‘thing’), which is reanalysed as a new negator (NEG₁ + NEG₂; Stage II); (3) the new reanalysed component becomes the sole negator (NEG₂; Stage III). In Berber, JC has evolved from single to triple negation and back to single negation and includes many in-between and overlapping stages. Indeed, five negation stages with their respective bifurcations are found in Berber and make up the “Extended Jespersen Cycle for Berber” (Lafkioui & Brugnatelli 2020). Starting from stage II of the JC, the Berber verb may or may not display a negative verb stem, which is coined here as NEG₃, because it follows NEG₂ in the Berber negation diachrony. NEG₄, on the other hand, represents the innovated preverbal negators, while NEG₁ corresponds to the ancient variants, such as the pan-Berber **wər*. The innovated NEG₄ variants are thus part of a negative cycle distinct from the Extended JC for Berber. NEG₅ stands here for the cognates of the existential **iba* (in this case *bu*), which were reanalysed as postverbal negators and which are part of a JC distinct from the Extended JC for Berber, to which belongs the ancient NEG₂ (**šra/kra* ‘thing’). NEG₆ represents the newly developed preverbal *bu*-negator.

2. The numbers 1 to 6 that go with NEG indicate the diachronic negation stages of the respective languages.

The preverbal NEG₁ is obligatory in the majority of the Berber languages. Its principal variant is most likely of Berber origin and pertains to **wəɾ*, a grammaticalized verbal form composed of the negation element **w* or **u* and the verbal root **r* (modal auxiliary): **wəɾ* = NEG = [NEG **w* or NEG **u* + V **r*].³

The postverbal negator NEG₂ may be optional – as an intensifier – or required, depending on the negation context, except in some cases where only the postverbal negator is used (mainly in Berber of Libya, of Tunisia, and of the western Rif area-Senhaja in Northwest Morocco). The post-verbal negator may also be absent for discursive or expressive purposes, or may be replaced by other elements (i.e., adverbs, indefinite pronouns), which are considered to be semantically or pragmatically more adequate or more emphatic, but these cases do not belong to standard negation and will therefore not be dealt with here.

NEG₂ in Berber generally stems from an expression signifying ‘thing’, ‘something’, or ‘someone’ (e.g., the ancient **šra/kra* ‘thing’ and cognates such as *ša* and *š*) and was originally an element of intensification (emphasis) and still is to a different degree in various Berber languages. With time, the ancient pan-Berber NEG₂ lost some of its marking strength and therefore other forms were used instead. Among these forms, there are also quantifiers and negative polarity items, the diachrony of which is not within the scope of this paper. The grammaticalization of NEG₂ has reached various stages and its precise functional roles differ from one Berber language to the other. As a matter of fact, changes affecting NEG₂ are visible in various Berber languages. A very particular case is the one examined here, which testifies to the replacement of the most widespread postverbal Berber negator (NEG₂) by the more “local” but very productive variant *bu* (NEG₅) in specific grammatical contexts, as will be demonstrated in Section 3.

Another significant trait that distinguishes Berber negation from Arabic negation is that in Berber the presence of preverbal negators generally triggers a fronting of the postverbal clitics. Pronominal and ventive clitics precede the verbal head (but follow the negator), usually without changing their respective order, namely [indirect clitic + direct clitic + ventive clitic]. Arabic, on the other hand, does not distinguish this phenomenon.

In terms of synchrony, the typology of negation in Berber differentiates three main types, each subdivided into two subtypes, as is shown in what follows:

3. More details about the etymological origin of NEG₁ and NEG₂ in Berber can be found in Brugnatelli (2011), Chaker (1996), and Galand (1994).

- **Type 1:** NEG + V/V_{NEG}; without postverbal negators.
 - Subtype 1a: NEG + V; without negative verb infixes, as in Example (1).
 - Subtype 1b: NEG + V_{NEG}; with negative verb infixes, as in Example (2).
- **Type 2:** NEG + V/V_{NEG} + NEG; with preverbal and postverbal negators, the most widespread negation pattern.
 - Subtype 2a: NEG + V + NEG; without negative verb infixes, as in Example (3).
 - Subtype 2b: NEG + V_{NEG} + NEG; with negative verb infixes, as in Example (4).
- **Type 3:** V/V_{NEG} + NEG; without preverbal negators.
 - Subtype 3a: V + NEG; without negative verb infixes, as in Example (5).
 - Subtype 3b: V_{NEG} + NEG; with negative verb infixes, as in Example (6).

Intermediate stages, wherein languages mainly belong to one type but residually or innovatively also display features of another type are also found in the Berber language family. Examples of the different negation types in Berber are presented in (1) to (6).⁴ All post-verbal negators of these examples stem from the ancient variant *šra/kra ‘thing’.

- (1) *nək ssəṇay ummi ab=is*
 NEG know.PFV.1SG who father=3SG
 ‘I do not know who is his father.’
 (Paradisi 1963: 95, El Fogaha Berber, subtype 1a)
- (2) *ak yutif*
 NEG enter.PFV_{NEG}.3M.SG
 ‘He did not enter.’ (Lanfry 1968: 339, Ghadames Berber, subtype 1b)
- (3) *ud idda š*
 NEG go.PFV.3M.SG NEG
 ‘He did not go.’ (Author’s corpus, Rif Berber, Senhaja, subtype 2a)
- (4) *ur iffih ša*
 NEG go.out.PFV_{NEG}.3M.SG NEG
 ‘He did not go out.’ (Author’s corpus, Middle Atlas Berber, subtype 2b)

4. The original transcription of the cited Berber examples is maintained, with minimal adjustments in order to enhance the examples’ intelligibility. The morphosyntactic analysis and the English translation of most of the examples cited here are mine.

- (5) *akellim iššen* *ká amakân*
 servant know.PFV.3M.SG NEG place.M.SG.FRS
 ‘The servant did not know the place.’
 (Paradisi 1960: 82, Augila Berber, subtype 3a)
- (6) *ttusí* *š*
 come.PFV_{NEG}.3F.SG NEG
 ‘She did not come.’(Mitchell 2009: 101, Zuara Berber, subtype 3b)

As for North African Arabic, verbal predication is primarily negated by means of the required double negator *ma* + V + *š* (*ši/šay*) and its optional or conditioned (modal and expressive) variants (for an overview, see Caubet 1996; Lafkioui 2013a). Hassaniyya (South Morocco and Mauritania) forms an exception to the general double negation marking rule, since it merely uses the preverbal negator *ma* + V (Taine-Cheikh 1995–96); a residual use of this pattern is also retrieved in Skura Arabic (South Morocco; Aguade & Elyaacoubi 1995; Lafkioui 2013a). Negation does not engage any morphological modification of the verbal stem in North African Arabic. Examples to support this are given in (7) and (8):

- (7) *ma mšit* *š* *tamma*
 NEG go.PFV.1SG NEG there
 ‘I did not go over there.’(Author’s corpus, Tunisian Arabic)
- (8) *ma tɛarf=hum* *š*
 NEG know.PFV.2M.SG=3M.PL NEG
 ‘You do not know them.’(Boucherit 2002: 288, Algerian Arabic)

The preverbal negator *ma* (and variants) is the primary negator. This negator has a generalized and highly frequent usage in colloquial Arabic, especially in comparison to Classical Arabic, where it is more confined to certain syntactic and semantic contexts.⁵ It cannot be omitted under any circumstances but can be substituted by its conditioned variant *la*, which may also be used as an isolated sentential negation particle and in certain particular negation constructions (e.g., iterative, constituent, and expletive negation). Most of all, the preverbal negator *la* appears in verbal non-standard negation (i.e., verbal negation types other than the negation of a main clause declarative verbal predicate; e.g., emphatic negation, injunctions), which is out of the scope of the article.

Like in Berber, the most common postverbal negator *š* (*ši/šay*) in North African Arabic – including Moroccan Arabic – may be absent for reasons of discursiveness and heightened expressiveness and may be replaced by other ele-

5. This morpheme is not only employed for negation but also as an interrogative, a relative, an exclamatory, and even an indefinite pronoun, which may point to a common origin (Pennacchietti 1967).

ments (e.g., adverbs, indefinite pronouns, relative markers, interrogative markers) that fit the semantic or pragmatic context at hand. In fact, the postverbal negator *š*, resulting from *šay?* ‘thing’ of Classical Arabic, was originally also an element of intensification (emphasis), whose grammaticalization has reached different stages according to region; its precise functional roles differ from one Arabic variety to another. The postverbal *š* is principally used for standard negation, whereas its variants *ši*, *šay*, and *šayn* also play the role of negation intensifier.

Compared to the preverbal negator, the postverbal negator has a certain distributional flexibility in North African Arabic, as its position in the sentence depends on the scope of the negation, which means that it can be used for both wide-scoped (sentential level) and narrow-scoped (constituent level) negation. This innovation phenomenon is absent from Classical Arabic but abundantly observed in colloquial Arabic, mainly of North Africa (Marçais 1977; Taine-Cheikh 1995–96), where the data show a remarkable parallelism with the observed phenomena in the current Berber languages, which may have triggered this transformation in North African Arabic (Brugnatelli 1987; Lafkioui 2013a). Some examples that account for this are the following from Moroccan Arabic (from my personal corpus):

- (9) *ma šrəb š l-ma.*
 NE drink.PFV.3M.SG NEG water.DEF
 ‘He has not drunk water.’
- (10) *ma ka yšrəb š l-ma.*
 NEG PRVB drink.IPFV.3M.SG NEG water.DEF
 ‘He does not drink water.’
- (11) *ma yadi yšrəb š l-ma.*
 NEG AUX drink.IPFV.3M.SG NEG water.DEF
 ‘He will not drink water.’
- (12) *ma yadi š išrəb l-ma.*
 NEG AUX NEG drink.IPFV.3M.SG water.DEF
 ‘He WILL not drink water.’

In these examples of standard negation, the concatenative negator enfolds the verbal head (9) to (11) or its verbal auxiliary (12). Double negation marking is essential to the grammaticality of these constructions, although some minor cases without the postverbal negator are observed in constructions similar to (12). Furthermore, configurations with the auxiliary *yadi*, which places the verbal process in the future, like in (11) and (12), make it possible to displace the second element just after the auxiliary, so as to centre the negation on that particular constituent and hence emphasize the temporal dimension of the action described by the head

verb. As a result, the negator \check{s} underscores in (12) that the asserted process will not take place in the future (narrow-scoped negation on auxiliary). The dislocation of the second element can also have even heavier semantic implications regarding non-standard negation; for example, it might transform a request into an injunction and even lead to shifts in denotative content.

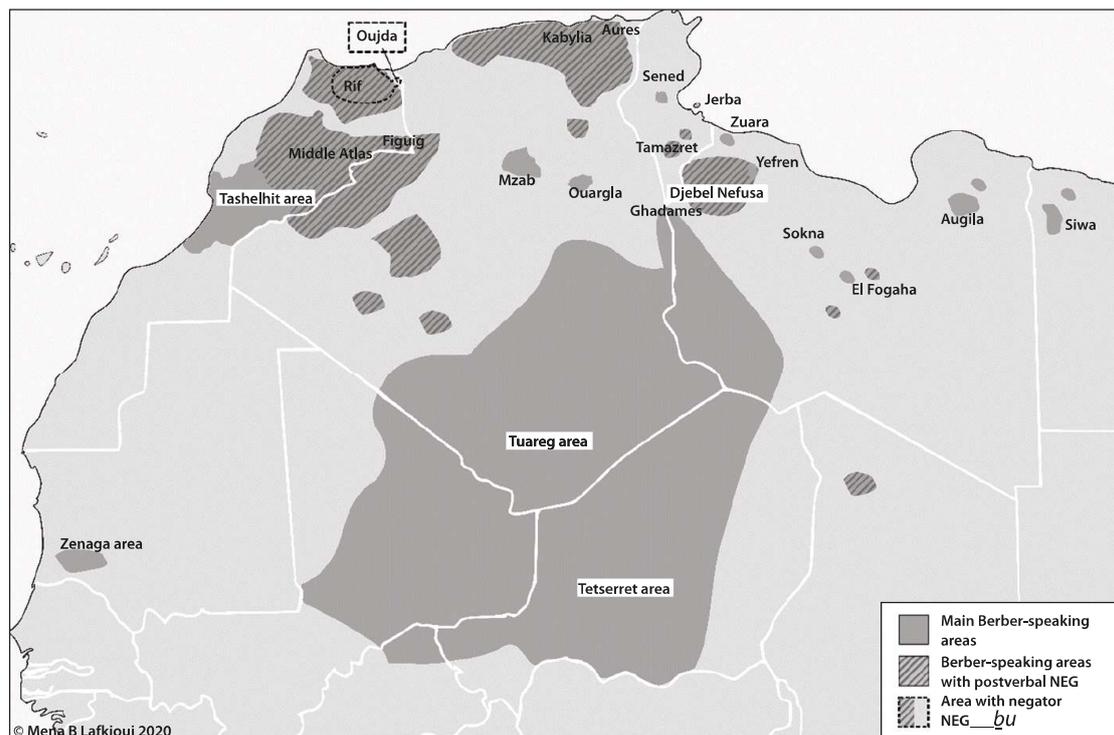


Figure 1. Geographical distribution of the postverbal *bu*-negator

3. System-internal innovation of postverbal negation in Rif Berber

This section examines the structural and functional properties of the innovated postverbal negator *bu* on a synchronic and diachronic level, drawn on recent findings based on my fieldwork in the Rif area. In Section 3.1, an overview of both the long-standing and newly generated morphosyntactic features and patterns of the *bu*-negator are given. The related diachronic developments and typological characteristics are discussed in 3.2.

3.1 The synchrony of the postverbal negator *bu*

Rif Berber is the only Berber language in which the postverbal negator *bu* occurs in a systematic and prolific way (Lafkioui 1996, 2007:234–236, 2013a, 2013b). Indeed, this element – mostly spirantized but sometimes also as *bu* – is part of

all sorts of frequently used concatenative negators, such as [*u* + V_{NEG} + *bu*], [*ur* + V_{NEG} + *bu*], [*wa* + V_{NEG} + *bu*], and [*war* + V_{NEG} + *bu*], as well as of non-concatenative negators, like for instance the existential amalgams *u-ǧi-bu* and *wa-ǧi-bu*; the latter negators are used for existential and non-verbal negation only and are therefore excluded from this study. All examples in this section stem from Rif Berber of the Nador area (North and Northeast Morocco), except when indicated otherwise. A typical case of standard negation in Rif Berber is the triple negation construction presented in (13a); its innovated postverbal negator *bu* has substituted the ancient negator **šra/kra* and its more generalized cognates like for instance *ša* in (13b), the latter negator being also commonly attested in the Rif area. Examples of standard *bu*-negation with an ensuing object complement distinct in gender and number from the case in (13a) are presented in (13c) to (13e).

- (13) a. *war yəsi* *bu ayrum*
 NEG buy.PFV_{NEG}.3M.SG NEG bread.M.SG.FRS
 ‘He did not buy bread.’
- b. *war yəsi* *ša ayrum*
 NEG buy.PFV_{NEG}.3M.SG NEG bread.M.SG.FRS
 ‘He did not buy bread.’
- c. *war yəsi* *bu tammurt*
 NEG buy.PFV_{NEG}.3M.SG NEG land.F.SG.FR
 ‘He did not buy land.’
- d. *war yəsi* *bu ifunasən*
 NEG buy.PFV_{NE}.3M.SG NE COW.M.PL.FRS
 ‘He did not buy cows.’
- e. *war yəsi* *bu timəǧarin*
 NEG buy.PFV_{NEG}.3M.SG NEG egg.F.PL.FRS
 ‘He did not buy eggs.’

Although the postverbal *ša* (and cognates) may be used in all contexts of standard negation, provided that it immediately follows the verbal head, it stands in complementary distribution with *bu*, which is subject to certain morphosyntactic restrictions. As a general rule, *bu* is necessarily followed by a direct object complement (DO), usually a noun phrase (NP) that takes the free state (as in (13a); *ayrum* is the annexed state correlate). The negator *ša*, on the other hand, may combine with indirect object (IO) complements as well, such as the prepositional phrase (PP) in (14). In addition, the postverbal negator of the *ša* type may even take a sentence final position like in (15a), which would be ungrammatical with *bu* (15b).

- (14) *war nəffiy* *ša akid=s*
 NEG go.out.PFV_{NEG}.1PL NEG with=3SG
 ‘We did not go out with him.’
- (15) a. *war nəffiy* *ša*
 NEG go.out.PFV_{NEG}.1PL NEG
 ‘We did not go out.’
- b. **war nəffiy* *bu*
 NEG go.out.PFV_{NEG}.1PL NEG
 ‘We did not go out.’

So, postverbal *bu* is specialized in negating a specific morphosyntactic construction type, whose generalisation is presented in (16), whereas its distributional and more flexible counterpart *ša* governs the negation of various constructions, whose general pattern is displayed in (17).

- (16) [NEG + V_{NEG} + *bu* + DO (NP, FRS)]
- (17) [NEG + V_{NEG} + *ša* + all sorts of complements or Ø]

Interestingly, recent developments point to a certain blurring of the complementary morphosyntactic roles of *bu* and *ša* in the region of Nador mainly, as *bu* does also occur there in negative patterns usually reserved for *ša*, such as the pattern with a PP (V + PP), to which testifies Example (18) and which is a construction in free alternation with (14) in the area, especially among the younger generations.

- (18) *war nəffiy* *bu akid=s*
 NEG go.out.PFV_{NEG}.1PL NEG with=3SG
 ‘We did not go out with him.’

Furthermore, my findings based on recent fieldwork in the area in question account for a remarkable phenomenon, that is, the occurrence of *bu* in a preverbal position, right before the verbal head, as is shown in (20) to (22). The utterance in (20) exemplifies the recently developed preverbal *bu*-pattern, which is in free alternation with the older and postverbal *bu*-pattern exemplified in (19); the latter being regularly attested over most of the Rif area (except in its western part, generally among the Senhaja and Ghomara varieties).

- (19) *war yəswi* *bu aman*
 NEG drink.PFV_{NEG}.3M.SG NEG water.M.PL.FRS
 ‘He did not drink water.’
- (20) *war bu yəswi* *aman*
 NEG NEG drink.PFV_{NEG}.3M.SG water.M.PL.FRS
 ‘He did not drink water.’

- (21) *war bu yəswi*
 NE NE drink.PFV_{NEG}.3M.SG
 ‘He did not drink.’
- (22) a. *war da bu yəswi*
 NEG here NEG drink.PFV_{NE}.3M.SG
 ‘He did not drink here.’
- b. **war bu da yəswi*
 NEG NEG here drink.PFV_{NEG}.3M.SG
 ‘He did not drink here.’
- c. **bu da yəswi*
 NEG here drink.PFV_{NEG}.3M.SG
 ‘He did not drink here.’

The preverbal *bu* is attested in all pattern types wherein its postverbal equivalent usually appears, even in the recently innovated patterns like [V_{NEG} + *bu* + IO-PP] and for which accounts (23). This example is a newly innovated substitute of (18), which in itself is a relatively recent innovation of the much older and generalised pattern with *ša* (and cognates), i.e. [NEG + V_{NEG} + *ša* + IO-NP], as is illustrated in (14). Note that the preverbal placement of the *bu*-negator does not alter its semantic value nor does it affect that of the negation pattern in which it occurs. Indeed, Examples (14), (18), and (23) convey the same negated content.

- (23) *war bu nəffiy akid=s*
 NEG NEG go.out.PFV_{NEG}.1PL with=3SG
 ‘We did not go out with him.’

The preverbal position of *bu* implies a shift in its combinatorial restrictions as well; *bu* no longer requires a subsequent DO complement but directly precedes the verbal head. No constituent is allowed between the preverbal *bu* and the head, as is exemplified in (22a) compared to the ungrammatical (22b). This privileged connection between the VP and the *bu*-negator may be related to its verbal origin (see Section 3.2). Moreover, the preverbal *bu*-negator is necessarily combined with the ancient sentence-initial negator *war* (and cognates); a permutation of the two negators is not permitted nor is dropping the negator *war*, like in (22c). This implies that the preverbal *war* still scopes over the negation. Indeed, the syntactic predominance of *war* is also confirmed by the fact that all fronted constituents are necessarily placed after it, such as in the regular negation cases (e.g., (25b) and (25c)). An amalgamation of *war* and *bu* into one grammaticalized preverbal negator does not occur in Rif Berber either, since pronominal and ventive (VENT) clitics, as well as certain locatives (LOC), may be inserted between them (e.g., (26) to

(28)). Consequently, a new negation pattern with a double preverbal negator has recently emerged in Rif Berber of the Nador area, which is presented in (24).

(24) [$*w\bar{a}r$ -NEG + (LOC – IO clitic – DO clitic – VENT – LOC) + $\underline{b}u$ -NEG + V_{NEG} + all sorts of complements or \emptyset] = [NEG + NEG + V_{NEG}]

Examples (25b) and (25c) – the negative counterparts of (25a) – display how the preverbal negator triggers fronting of pronominal and ventive clitics and how the postverbal $\underline{b}u$ changes into $\check{s}a$ in (25c), as only the latter negator may appear in sentence-final position.

- (25) a. $y\bar{a}s\bar{a}y-d$ $aman$ i $mmi=s$
 buy.PFV.3M.SG-VENT water.M.PL.FRS to son=3SG
 ‘He bought water for his son.’
- b. war $d-y\bar{a}s\bar{y}i$ $\underline{b}u$ $aman$ i $mmi=s$
 NEG VENT-buy.PFV_{NEG}.3M.SG NEG water.M.PL.FRS to son=3SG
 ‘He did not buy water for his son.’
- c. war $s=\check{t}\bar{a}n=d-y\bar{a}s\bar{y}i$ $\check{s}a$
 NEG 3SG=3M.PL=VENT-buy.PFV_{NEG}.3M.SG NEG
 ‘He did not buy it for him.’

The following examples instantiate the alternative negation patterns with the innovated preverbal $\underline{b}u$ -negator in the context of fronting. As one can clearly observe, no constituent stands between $\underline{b}u$ and the verbal head.

- (26) war $\check{t}\bar{a}n=d$ $\underline{b}u$ $y\bar{a}s\bar{y}i$ i $mmi=s$
 NEG 3M.PL=VENT NEG buy.PFV_{NEG}.3M.SG to son=3SG
 ‘He did not buy it for his son.’
- (27) a. war $s=d$ $\underline{b}u$ $y\bar{a}s\bar{y}i$ $aman$
 NEG 3SG=VENT NEG buy.PFV_{NEG}.3M.SG water.M.PL.FRS
 ‘He did not buy him water.’
- b. war $\check{d}as=d$ $\underline{b}u$ $y\bar{a}s\bar{y}i$ $aman$
 NEG 3SG=VENT NEG buy.PFV_{NEG}.3M.SG water.M.PL.FRS
 ‘He did not buy him water.’

The IO clitics in (27a) and (27b) are free variants, which always precede the ventive, as well as the DO clitics, as is shown in (28a) and (28b).

- (28) a. *war s=tən=d bu yəsi*
 NEG 3SG=3M.PL=VENT NEG buy.PFV_{NE}.3M.SG
 ‘He did not buy it for him.’
- b. *war das=tən=d bu yəsi*
 NEG 3SG=3M.PL=VENT NEG buy.PFV_{NEG}.3M.SG
 ‘He did not buy it for him.’

A small number of short locatives, such as *da* ‘here’, *din* ‘there’, and *dinni* ‘there in question’ may be inserted between the two preverbal negators, preferably right before the innovated *bu*, to which testifies (29a), whereas in the more common negation constructions with the postverbal *ša*, the locative generally precedes the verbal head (29b). Once more, the particular connection between *bu* and the verbal head is substantiated here. Locatives may also precede the fronted clitic complex, although it is less common and mostly attested with the DO-VENT complex (30).

- (29) a. *war das=tən=d dinni bu yəsi*
 NEG 3SG=3M.PL=VENT there NEG buy.PFV_{NEG}.3M.SG
 ‘He did not buy it for him there in question.’
- b. *war das=tən=d dinni yəsi ša*
 NEG 3SG=3M.PL=VENT there buy.PFV_{NEG}.3M.SG NEG
 ‘He did not buy it for him there in question.’
- (30) *war da tən=d bu yəsi*
 NEG LOC 3M.PL=VENT NEG buy.PFV_{NEG}.3M.SG
 ‘He did not buy it here.’

In addition, my recent fieldwork findings attest to the regular existence of negation constructions wherein the postverbal *bu*-negator is reduplicated in the immediate preverbal position, like for instance in (31) (parallel to (20)) and in (32) (parallel to (27a)). Once more, the postverbal *bu*-negator requires here a subsequent complement, which may be a DO or IO complement; this makes this negation pattern – as depicted in (33) – distinct from the regular (and older) pattern in (16) and more in accordance with the innovated pattern in (24). Indeed, these negatives with a reduplicated *bu*-negator are merely used by speakers (from the younger generations) who also use on a regular basis the innovated negative patterns with *bu*, that is, the pattern with the newly preverbal *bu* as in (24) and the pattern wherein *bu* may be followed by an IO complement ([NEG +V_{NEG} + *bu* + IO-PP]), as exemplified in (18). In other words, both negatives with a reduplicated *bu*-negator as in (33) and those with the innovated preverbal *bu*-negator as in (24) are recently created and are mainly used among the younger generations in free alternation. The reduplication of the *bu*-negator does thus not change the seman-

tic and pragmatic content conveyed, unless one of the two *bu*-negators (usually the postverbal one) is prosodically punctuated by a pitch accent, which may indicate emphasis, among other discursive functions.

(31) *war bu yəswi bu aman*
 NEG NEG drink.PFV_{NEG}.3M.SG NEG water.M.PL.FRS
 ‘He did not drink water.’

(32) *war s=d bu yəsyi bu aman*
 NEG 3SG=VENT NEG buy.PFV_{NEG}.3M.SG NEG water.M.PL.FRS
 ‘He did not buy him water.’

(33) [**wər*-NEG + (LOC – IO clitic – DO clitic – VENT – LOC) + *bu*-NEG + V_{NEG} + *bu*-NEG + all sorts of complements]
 = [NEG + NEG + V_{NEG} + NEG + all sorts of complements]

As is shown in (33), Rif Berber (of the Nador region) distinguishes quadruple negation constructions, which is exceptional in Berber, as well as on a more general typological level (van der Auwera & Krasnoukhova 2020; Vossen 2016). Interestingly, there are also quadruple *bu*-negatives with a slightly different pattern (34) and which are generally encountered among the older generations, who do not use the innovated constructions of the type shown in (24) with the innovated preverbal *bu* or those of the type with an IO complement subsequent to the postverbal *bu*-negator ([NEG + V_{NEG} + *bu* + IO-PP]; Example (18)). This alternative quadruple negation pattern looks as follows:

(34) [**wər*-NEG + (LOC – IO clitic – DO clitic – VENT – LOC) + *bu*-NEG + V_{NEG} + *bu*-NEG + DO] = [NEG + NEG + V_{NEG} + NEG + DO]

Examples (31) and (32) are regarded as perfectly grammatical for speakers employing the quadruple negation pattern in (34); the following Example (35), on the other hand, is not. It fits, however, the grammatical requirements of those speakers who use pattern (33).

(35) *war bu nəffiy bu akid=s*
 NEG NEG go.out.PFV_{NEG}.1PL NEG with=3SG
 ‘We did not go out with him.’

It should be noted that the quadruple negatives of the (34) type are rather infrequent, compared to the profuse and productive use of the newly generated quadruple negation pattern of (33) among the younger generations. The quadruple negation of (34) is a much older negation pattern and is mostly employed to convey emphatic negation, which goes with a pitch accent on the postverbal *bu*, as will be explained in next Section 3.2.

3.2 The diachrony and typology of the postverbal negator *bu*

In the light of the new findings discussed in previous Section 3.1, this section will account for the system-internal origin of the *bu*-negator in Rif Berber. It proposes to regard this negator as the result of a verbal grammaticalization of the existential **iba* (and cognates; ‘there is no’, ‘to lack’, ‘to be dead’, ‘to be empty’, ‘to disappear’) according to the diachronic trajectory in (36) and its extension in (44); Tuareg Berber provides abundant evidence of all stages in (36). From a typological perspective, the diachronic development of a negator from an element meaning ‘to lack’, such as in the Tuareg Berber cycle in (36), is quite common (Veselinova 2013: 136–137). On the other hand, Stage 2 of (36), wherein a phasal negator (i.e., the negative adverb ‘no longer’) develops into a standard negator (i.e., the negative particle *bo* in Stage 3) is distinct from both a JC and a Negative Existential perspective. Hence, the diachronic pathway depicted in (36) represents a special kind of Negative Existential Cycle. In addition, negative existentials like **iba*, which express the notion of ‘there is no’, ‘to lack’, ‘to be dead’, ‘to be empty’, and ‘to disappear’ seem to form a cross-linguistic minority, synchronically speaking (Veselinova 2013: 118–119).

- (36) Berber-internal verbal grammaticalization of the *bu*-negator:
 [Impersonal existential verb > negative adverb > negative particle = dedicated negator]
- Stage 1: Impersonal verbal form **iba* (and cognates; ‘there is no’, ‘to lack’), Example (37), (38)
 - Stage 2: Negative adverb *iba-s* (and variants; ‘no longer’), Example (40a), (40b)
 - Stage 3: Negative particle *bo* (and variants; ‘not’, ‘no’), Example (41)

Examples in point from Tuareg Berber are given below for each stage, respectively.

STAGE 1: EXISTENTIAL VERBAL FORM

(37) *aman äbâ=tän*

water there.is.no.PFV.3M.SG=3M.PL

‘There is no water.’ (Prasse 2010: 52; Ahaggar Tuareg, Algeria)

(38) *ulli-nin äbâ=tänät*

goats=1SG there.is.no.PFV.3M.SG=3F.PL

‘There is no goats of mine.’ > ‘My goats are lost’

(Sudlow 2009: 10; Burkina Faso Tuareg)

The existential *iba* (or cognate) in Tuareg Berber is a particular half-grammaticalized verbal form that only combines with the 3MSG but without its usual prefixed person marker *y* (except with the “intensive imperfective”; Prasse 2010: 52). It goes together with a series of DO complement pronouns, which refer to the discourse object that does “not exist”. It may also combine with a series of IO pronouns, which indicate the referents affected by the “inexistence” of the discourse object (i.e., the beneficiary). This verbal construction type is not exceptional in Berber. As a matter of fact, a similar grammaticalization mechanism that generates impersonal expressions pointing to existential values is also observed in other Berber languages, even in Rif Berber, which is of particular interest for this study. For instance, in Rif Berber, attributive negation may be rendered by means of the fully grammaticalized existential conglomerate *wa-ǧi-ša* ‘it is not (that)...’ (and variants), which consists of the following configuration [preverbal NEG + fixed form of the negative perfective 3SG of *ili* ‘to be’ without the usual person marker + postverbal NEG]; the concise equivalent of this configuration is [NEG + EX + NEG]. Example (39a) provides evidence for this. Interestingly, this attributive negator has even a free variant in which the negator *bu* is incorporated and which is exemplified in (39b).

- (39) a. *waǧiša mliḥ ammu.*
NEG fine like that
‘It is not fine like that.’
b. *waǧibu mliḥ ammu.*
NEG fine like that
‘It is not fine like that.’

STAGE 2: NEGATIVE ADVERB

Data from the Ayer region (Niger), from north-eastern Burkina Faso, and from Mali prove the existence of a negative adverb based on *iba*, that is, the grammaticalized form *iba-s* (‘no longer’), which derives from the complex **iba=as* (*iba* + IO clitic), like in Example (40a).

- (40) (a) *ibas šanšey kǎfe*
NEG buy.IPFV.1SG coffee
‘I no longer buy coffee.’ (Sudlow 2001: 69; Burkina Faso Tuareg)

In this Berber-speaking area, there are also negative interjections with *iba* or its variants (e.g., *bo*, *bǎw*, Prasse et al. 2003: 2), which can be extended (e.g., *bebo*, Prasse et al. 2003: 3) or reduplicated (e.g., *ǎbo ǎbo*, Sudlow 2009: 10) for expressive purposes.

Tuareg Berber from Mali provides evidence for the combination of the negative adverb *iba-s* ('no longer') with the ancient preverbal negator **wər-NEG* (> *u-bà-s* = NEG-NEG > *ubàs* = NEG), as displayed in Example (40b).

- (b) *ubàs taksúdæd fæl 'arázzej*
 NEG fear.RES.2SG on livestock.M.S.AS
 'You are no longer afraid for the livestock.' (Heath 2005: 690; Mali Tuareg)

Accordingly, Stage 2 of (36) is split into two substages: a first one with only the negative adverb **iba-as* (and cognates) and a second one in which the negator **wər-NEG* is added. Both negative items are fully grammaticalized into *u-bà-s* in (40b), as the negator *u* does not trigger a change of the ensuing positive verb stem into a negative form, as expected here.

STAGE 3: NEGATIVE PARTICLE *BO*

In Tuareg Berber of Niger, the entirely grammaticalized particle *bo* functions as a dedicated preverbal negator, as is illustrated in (41).

- (41) *bo tašwey*
 NEG drink.AOR.2SG
 'You should not drink.' (Prasse et al. 2003: 2, Niger Tuareg)

It is worth mentioning that this kind of dedicated negators derived from *iba* tend to appear in contexts of modality, such as optative and prohibitive constructions, and therefore generally mark non-standard negation.

Even though the postverbal negator *bu* in Rif Berber and the preverbal Tuareg negator *bo* look analogous, they cannot be a product of contact as the two linguistic areas are geographically distant from each other (see Figure 1) and there is no historical evidence that could account for contact or for migration of these Berber peoples. A polygenesis scenario is also unlikely in this case, especially because Rif Berber does not provide evidence of a grammaticalization process parallel to that of Tuareg Berber (as defined in (36)). Accordingly, it is much more reasonable to regard the negator *bu* as a remnant of an ancient Berber form that originally covered the entire Berber-speaking North-African area but today is merely still attested in its peripheries, such as in the Sahara (Tuareg Berber) in the south, in the Rif area in the north, and in Sokna in Libya in the east (Sarnelli 1924–25: 32).⁶ The system-based origin of *bu* is also corroborated by the fact that there is no specific linguistic or extra-linguistic motivation that could account for its borrowing from MAO – the only Arabic variety where *bu* also occurs as a postverbal nega-

6. The possible link between the *bu*-cognates occurring in these areas is briefly mentioned in a book review by Naït-Zerrad (2002: 682).

tor – as will be explained in Section 4. And even if forms analogous to this negator are attested in the other language families of the Afro-Asiatic phylum (Lafkioui 2013b), which may suggest a common genealogical basis, the MAO case could not be a remnant, given its very restricted diffusion in North Africa; it only occurs in the area of Oujda and in contexts of contact with Rif-Berber speakers.

Other evidence that supports this system-internal existential development in Rif Berber stems from the recently collected records and corresponds to what follows: (1) the reduplication of the preverbal *bu* in postverbal position following the older innovation pattern in (34), which initially would have functioned as an intensifier; (2) the reduplication of postverbal *bu* in preverbal position following the recently innovated pattern in (33); and (3) the emergence of the preverbal *bu* following the pattern in (24), which matches with the Tuareg Berber records, where *bo* occurs preverbally only. And as this preverbal *bu* – in all its instances – does not require a succeeding object complement but a verbal head instead, the hypothesis of its verbal origin is more than likely, especially because the negation patterns with a preverbal *bu* fit the standard negation patterns generated by a grammaticalization of existential negatives and negators, which are also attested in Berber. Indeed, a language like Sokna Berber (Libya) for instance – which distinguishes a preverbal negator analogous to *bu* for emphatic negation – makes use of the innovated composite preverbal negator (*i*)*ngi* (i.e., NEG₄) for standard negation (Sarnelli 1924–25: 32). This negator is the result of a grammaticalization of the following periphrastic existential construction:

- (42) (*i*)*ngi* < *(*wər*) *ngi* ‘it-is-not-that...’ < **wər igi* ‘it is not...’ (= pan-Berber negator **wər* + negative form of the verb *igu* ‘do, be’, i.e., NEG₁ + V_{NEG₃}).

A similar grammaticalization phenomenon based on the same periphrastic construction **wər igi* ‘it is not...’ is found in Tuareg Berber, usually in the form of *wərgi* or *wərgɛy*, which is mostly used to negate noun phrase predicates and nominalized constructions (Prasse 1972: 245). It does also occur in other Berber languages, even in those where the *bu*-negator (or cognate) is not retrieved, such as in Tashelhiyt (South Morocco), which employs the same grammaticalized existential **wər igi*, like for instance in *ur igi nkkɪn (ad)* ‘it is not me (that)’. [REDACTED]

[REDACTED] It is attested in Rif Berber as well, where the existential *ili* ‘be’ is not only combined with the ancient and common preverbal negator **wər* but also with a postverbal negator, which may correspond to the ancient *ša* and its cognates (e.g., *wağiša*, as in (39a)) or even to *bu* (e.g., *wağibū*, as in (39b)). These construction types are part of the “Negative Existential Cycle”, as understood by Croft (1991: 13), and hence indicate “a diachronic cycle in which distinct negative existential markers arise, and are subsequently used to indicate verbal negation, displacing the original verbal negator”.

Consequently, there are Berber languages that account for the extension of negative existential markers upon standard negation (type C of Croft's Cycle). Therefore, the Berber findings disconfirm what is stated in Veselinova (2016: 147, 150, 159), which confines the typology of Berber negation to type A, which has "no distinction between verbal and existential negation" (2016: 159), to type A-B, where "a distinction exists, but the negative existential is restricted to the present tense" (ibid.), and to type B, in which "verbal and existential predications are negated by well delimited strategies" (ibid.). In other words, Berber covers all negation types involved in Croft's Cycle. As a matter of fact, existential negators such as (*i*)*ngi* and *bo* have been fully grammaticalized and play the role of new standard negators in Berber after having gone through the stages presented in (43).

(43) Second standard negation cycle generated out of existentials

Stage 1: [NEG-standard = NEG-existential]

Stage 2: [NEG-standard ≠ NEG.EX-existential]

Stage 3: [NEG.EX-standard = NEG.EX-existential]

Stage 4: [NEG-standard = NEG-existential]

The stages of the special Negative Existential Cycle with *bo* in (36) match with the standard negation cycle in (43) in various ways, depending on the Tuareg Berber language at hand. The data mainly point to the following matches, though: stage 1 of (36) with the impersonal existential verb corresponds to stage 2 of (43), stage 2 of (36) with the negative adverb as a phasal negator to stage 3 of (43), and stage 3 of (36) with the negative particle *bo* (and cognates) to a stage in-between 3 and 4, since negatives with this particle in Tuareg Berber usually express non-standard negation (modality, emphasis). This latter in-between stage does also relate to the data reported for Sokna Berber (Libya), where a cognate of *bu* occurs in emphatic negation contexts. In Rif Berber, on the other hand, stages 3 and 4 of (43), along with their in-between "emphatic" stage, are attested as regards the *bu*-negator.

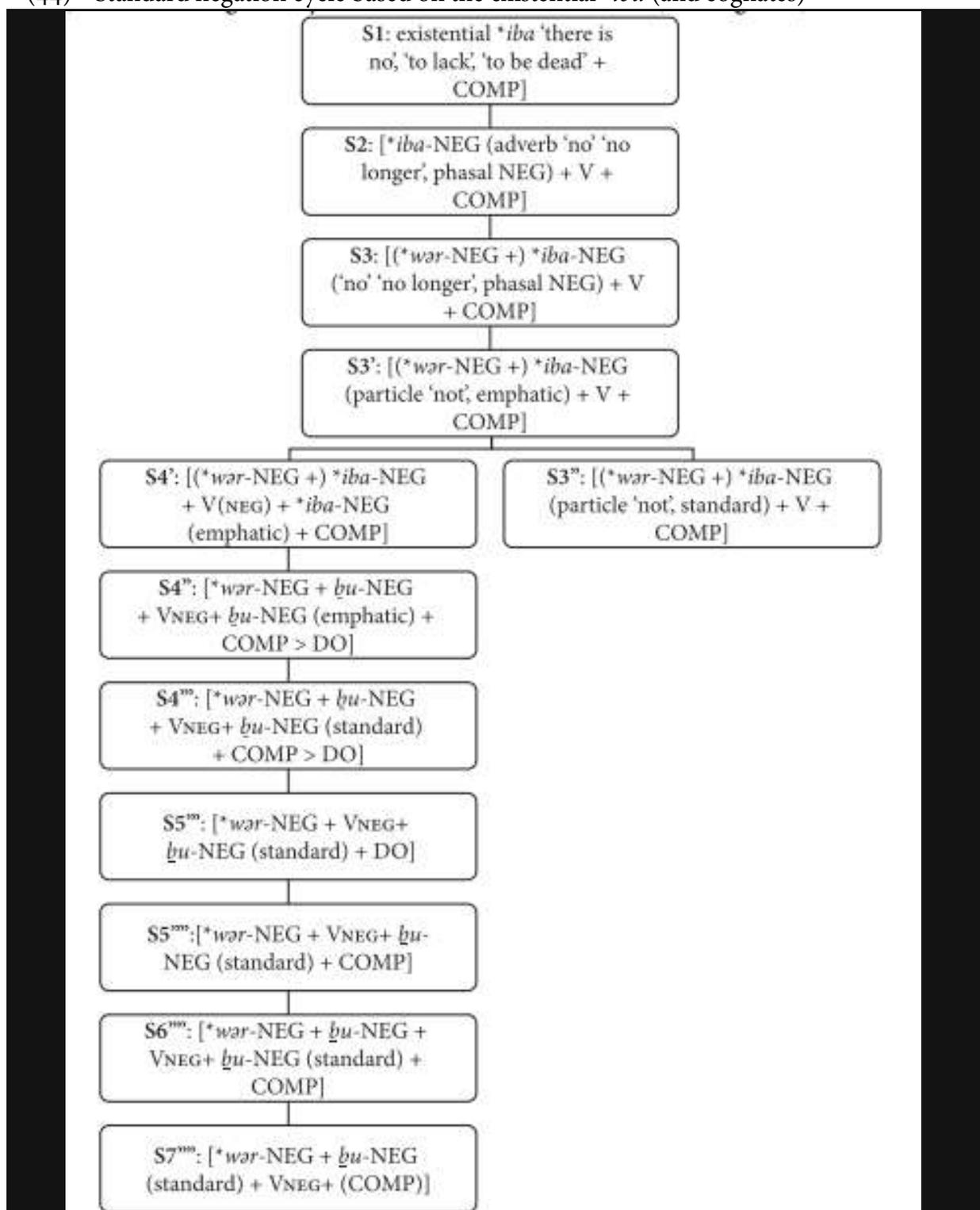
As to what motivated the creation of the new preverbal *bu*-negator in Rif Berber, as a result of a reduplication of the post-verbal *bu*, there are two system-internal principles that may explain it; these are the NEG-first principle and the weakening principle.

Regarding the NEG-first principle, Dahl (2010: 23) defines it as follows: "Thus, judging from the figures in Dryer (1988), negators are placed either directly before or directly after the verb in 80–90 percent of all cases, and in both VO and OV languages, syntactic negators overwhelmingly precede verbs, the ratio between preverbal and postverbal placement being something like 3:1 in a hypothetical ideal sample." According to this principle, which has been validated for Berber (Lafkioui & Brugnatelli 2020), negators are pulled to the sentence-initial position and, in the ideal case, negatives are composed by merely a preverbal

negator. The recent preverbal placement of the *bu*-negator in Rif Berber perfectly supports this.

Concerning the weakening principle, it is understood here as a primary functional – semantic and pragmatic – weakening (Meillet 1912:140, van der Auwera 2009), which may be associated with a formal (phonetic and morphological) weakening. These weakening mechanisms are probably behind the clausal negation patterns of both the Extended JC for Berber and the relatively more recent negative cycle, i.e., the second standard negation cycle, which has NEG6 in its final stage, as far as the **iba*-negator is concerned. In this second standard negation cycle, which is interlaced with the Extended JC for Berber, preverbal NEG4 is different from the ancient pan-Berber negator **wər* and is typically innovated by means of a grammaticalization of all sorts of Berber material, existentials as well. NEG4, instantiated through **iba*-NEG, may occur alone, as in Tuareg and Sokna Berber, or may cooccur with the preverbal pan-Berber **wər*-NEG, as in Rif and Tuareg Berber. In Rif Berber, this second standard negation cycle also contains a reduplicated cognate of the older preverbal *bu*-negator (NEG4) in postverbal position (NEG5) along with its relatively recent reduplication in preverbal position (NEG6). NEG5 is at least two centuries old (if not older), since it is regularly attested in my large speech corpus of Rif Berber, which I started to build more than twenty-five years ago and which includes data from elderly speakers, some of them having more than a century of language practices and having heard their grandparents using it. In addition, the postverbal *bu* (NEG5) also appears in Renisio's description of Rif Berber (among others), which goes back to the first half of the last century; more so, it provides evidence of its existence with a subsequent object complement (Renisio 1932: e.g., 127).

Considering these findings, the recent placement of the *bu*-negator in Rif Berber in preverbal position (NEG6) may be regarded as a product of weakening of the postverbal variant (NEG5). The latter would have lost its initial strengthening function, after having been generalized over all sorts of combinatorial patterns of standard negation (as e.g., in 18 from Rif Berber of Nador), which implies that its earlier and more restrictive pattern [NEG + V_{NEG} + *bu* + DO (NP, FRS)] is losing ground. So, the current preverbal *bu*-negator patterns in Rif Berber would have been the outcome of the following transformations in (44). It should be mentioned that not all Rif Berber varieties have necessarily undergone all these stages and that certain stages may occur concurrently.

(44) Standard negation cycle based on the existential **iba* (and cognates)


Stages 4 to 7 are presently well-attested in Rif Berber. There is also ample evidence for stages 1 to 3 in other Berber languages, primarily in Tuareg Berber, where they all do occur, but also in Sokna Berber, for instance, where stage 3' is used for emphatic negation and the negative imperative. Note that, even in the Tuareg

Berber languages, stage 3' appears more often (emphatic negation, optative, prohibitive) than the standard negation pattern of 3", which is rather marginal. As from stage 3, an entwinement of the existential-based negation cycle with the Berber Extended JC is recorded. Stage 4' would be the outcome of a reduplication of the original preverbal negator **iba*-NEG in postverbal position and would serve as an intensifier, which is gradually weakened in the subsequent stages. It is reasonable to suggest reduplication as the device engendering the postverbal *bu*-negator, since this grammatical device is quite regular for producing negation patterns (Ramat 2006), for which also account the following examples of genealogically diverse languages:

- (45) *eu não quero não*
 1SG NEG want.PRES.1SG NEG
 'I don't want to.' (Schwegler 1991: 209, Romance, Brazilian Portuguese)
- (46) *?al sabēb=i la?*
 NEG fault=1SG NEG
 '(It's) not my fault.' (Simeone-Senelle 1997, Semitic, South Arabic)

The Brazilian Portuguese case in (45) contains homomorphic preverbal and postverbal negators, whereas the reduplication case of South Arabic is subject to metathesis (46). Homomorphic clause-final negation doubling does also occur in Flemish Dutch (47), a Germanic variety spoken in Belgium. Flemish also provides evidence for triple negation structures (48), a feature which is uncommonly attested world-wide (van der Auwera 2009; Vossen 2016).

- (47) *hij gaat daar niet dikwijls niet.*
 3SG go.PRES.3SG there NEG often NEG
 'He does not go there often.' (Author's corpus, Flemish of East Flanders)
- (48) *pas op dat ge niet en valt nie.*
 fit on that 2SG NEG NEG fall.PRES.2SG NEG
 'Take care that you don't fall.' (Pauwels 1958: 454, Brabantic Flemish)

It is also in stage 4' that the nonconcatenative negator would have appeared progressively, as a consequence of the presence of the postverbal **iba*-NEG (see Lafkioui & Brugnatelli 2020 about the origin of the nonconcatenative negator). In other words, starting from stage 4', this innovated existential-based negation pattern is interlaced with the regular triple standard negation pattern [**wār*-NEG + V_{NEG} + **šra/kra*-NEG], which would have taken place for system-internal reasons, mainly pertaining to the generalization of this latter common pattern, resulting from the Berber extended JC, so as to enhance the formal and functional coherence of the restructured negation system.

Subsequently, in stages 4” and 4”” would have emerged a new pattern which requires the DO complement after the postverbal *bu*-negator, due to functional needs pertaining to descriptiveness (sign and denotation connection), as well as to fixing and narrowing the scope of negation, i.e., limiting *bu*-negation to fixed constituent negation. Stage 4” often requires a fitting pitch accent on the postverbal *bu*-negator, which indicates emphasis or other expressive functions pertaining to negation, as is illustrated in (49). Its subsequent stage 4””, on the other hand, pertains to standard negation.

- (49) *war s bu yəwši BU awar*
 NEG 3SG NEG give.PFV_{NEG}.3M.SG NEG word.M.SG.FR
 ‘He did NOT give him his word.’

In stage 5””, as a consequence of weakening, the preverbal *bu*-negator would have disappeared. It is this pattern that is nowadays recorded in the majority of the Rif Berber varieties and that goes back to at least two centuries (see Section 3.1). Stage 5”” is a more recent development and is the outcome of a further standardisation of the *bu*-negation pattern of stage 5”” by means of a generalisation of the morphosyntactic features of the complement ensuing the postverbal negator, since all complement types are accepted here. These formal modifications are also connected with functional modifications regarding the further weakening of the postverbal *bu*-negator, which is reflected in stage 6”” and which involves a reduplication of the postverbal *bu*-negator in preverbal position. The postverbal *bu*-negator would have been so weakened in time that it is dropped in the final stage 7”” under the influence of the NEG-first principle, which pulls the negators towards a preverbal position.

The diachronic phenomena and pathways discussed in this section provide evidence for the complex and incessantly innovating cyclical system of negation in Berber, which in this case includes the following interlaced cycles: the extended JC for Berber, based on the ancient pan-Berber preverbal **war* (NEG₁), a special Existential Negative Cycle based on **iba*, which gave birth to, at least, an alternative standard JC with NEG₄ as the preverbal negator (e.g., Tuareg’s *bo*), which subsequently developed into the postverbal NEG₅ and the preverbal NEG₆, both being instantiated through *bu* in Rif Berber.

In view of this discussion, the following inferences can be drawn regarding the origin of the *bu*-negator in Rif Berber:

1. The post-verbal negator *bu* and its relating patterns are in all probability of Berber origin and are the outcome of a system-internal grammaticalization out of an existential going back to remote times of Berber's language history.
2. The preverbal negative *bu*-pattern in Rif Berber is a system-based innovation that distinguishes two types; two recently developed types relating to stages 6''' and 7'''', as well as an older type represented by stages 4'' and 4'''.
3. MAO has most likely replicated the old postverbal *bu*-pattern of stage 5''' in (44), as will be substantiated in next Section 4.

4. System-external innovation of postverbal negation in MAO

Compared to the negation system of North African Arabic, including other Moroccan Arabic varieties (see Section 2), MAO provides evidence for the innovated double negation pattern *ma + V + bu*. As will be shown in this section, this innovated pattern is hybrid in that its pre-verbal negator *ma* stems from Arabic, while its postverbal negator *bu* is the outcome of pattern replication mediated by matter borrowing from Rif Berber, as the model language. Sometimes, a subsequent light adaptation processing of the Rif Berber material according to MAO's language structural requirements as the replica language has taken place, that is, the typically spirantized Berber variant *bu* has undergone a despirantization as *bu* among certain speakers of MAO, who use it in free variation with the spirantized *bu*.

Furthermore, Rif Berber and MAO do not only share the particular formal features of the postverbal *bu*-negator but also its default combinatorial structuring, as is exemplified in (50). This latter example is the MAO equivalent of Example (19) from Rif Berber, retaken here as (52); it is also a free variant of the example with the regular negation pattern *ma + V + š*, as is illustrated in (9) and reproduced here in (51). Accordingly, MAO's postverbal negation with *bu* is a perfect instantiation of pattern replication. As a consequence of this replication, an adaptation concerning the DO-NP ensuing the *bu*-negator took place in MAO (replica language), since the free state, which necessarily marks this complement in Rif Berber, does not exist in MAO. Instead, in this latter language, the DO is obligatory associated with definiteness, which is generally rendered by the definite article.⁷ It should be noted, however, that definiteness in MAO – and in Arabic in

7. The DO may be indefinite in certain “non-standard” negation contexts, such as e.g., in the anaphoric negative *ma qrayt bu ktab* (NEG read.PFV.1SG NEG book) ‘I have read no (such) book’, which stands in complementary distribution with the standard negative *ma qrayt bu l-ktab* (NEG read.PFV.1SG NEG book-DEF) ‘I haven't read the book’. Although the latter stan-

general – does not necessarily involve the definite article and may be instantiated through other morphosyntactic means (e.g., genitive constructions) or rendered by object complements which are intrinsically defined, such as proper nouns, for instance. Therefore, one may wonder how the unfounded rectification in Caubet (2018:101–105) could be justified when stating “it should rather be [*ma* + verbal predicative syntagm + *bu* + **article** + noun]” (2018:105, “article” put in bold by Caubet), since identical findings are clearly given and explained in Lafkioui (2013a, 2013b).

- (50) *ma šṛəb bu l-ma.*
 NEG drink.PFV.3M.SG NEG water-DEF
 ‘He has not drunk water.’
- (51) *ma šṛəb š l-ma.*
 NEG drink.PFV.3M.SG NEG water-DEF
 ‘He has not drunk water.’
- (52) *war yəswi bu aman*
 NEG drink.PFV_{NE}.3M.SG NEG water.M.PL.FRS
 ‘He has not drunk water.’

The adoption of the innovated *bu*-negator in MAO, by analogy with Rif Berber, triggered thus a restructuring of its existing negation system by introducing a new general pattern for standard negation, which is given in (53) and which is analogous to the Rif Berber’s pattern as exhibited in (16), except the property of definiteness of the DO. The same pattern is also used for the negation of non-verbal predicates. Just like in Rif Berber, this pattern is generally employed for descriptive negation, that is, the negation of the propositional content of an utterance (as opposed to metalinguistic negation).

- (53) [NEG + V + *bu* + DO (NP, DEF)]

So, the same basic restrictive rules from Rif Berber apply to MAO and have instigated a great alteration of the standard negation system of MAO, since it now

standard negative is a widespread pattern in MAO and in all Moroccan Arabic varieties in contact with Rif Berber (especially in the Rif area; North, Northeast, and Northwest Morocco), idiolectal variation may be recorded. For instance, the standard negative with a definite DO *ma qrayt bu l-ktab* ‘I haven’t read the book’ may be regarded as ungrammatical in certain Moroccan Arabic idiolects, such as Jamal Ouhalla’s idiolect of Tetouan (Rif, Northwest Morocco). According to him, only the anaphoric negative *ma qrayt bu ktab* ‘I have read no (such) book’ is grammatical in his variety, whereas its standard equivalent must have *ši* as the postverbal negator, like in *ma qrayt ši l-ktab* (NEG read.PFV.1SG NEG book-DEF) ‘I haven’t read the book’. I am grateful to Jamal for his valuable input.

has a parallel and specialized sub-system which requires that both negators of the double negation directly enfold the verbal head. Consequently, the postverbal *bu*-negator does not function as a device that delineates the negation scope by following it directly, as does its counterpart *š*. These restrictions are connected with *bu*'s functional roles in MAO, which serve descriptive purposes (i.e., pertaining to the connection between a sign and its denotation) that relate to highly referentialized semantic notions, which are asserted to be non-existent. Note that, just as in Rif Berber, the postverbal *bu* may appear in non-standard (emphatic) negation in MAO, provided that the whole negative construction is sustained by an appropriate intonation and referential context. Figure 2 below displays this reinvented negation system of MAO induced by contact with Rif Berber.

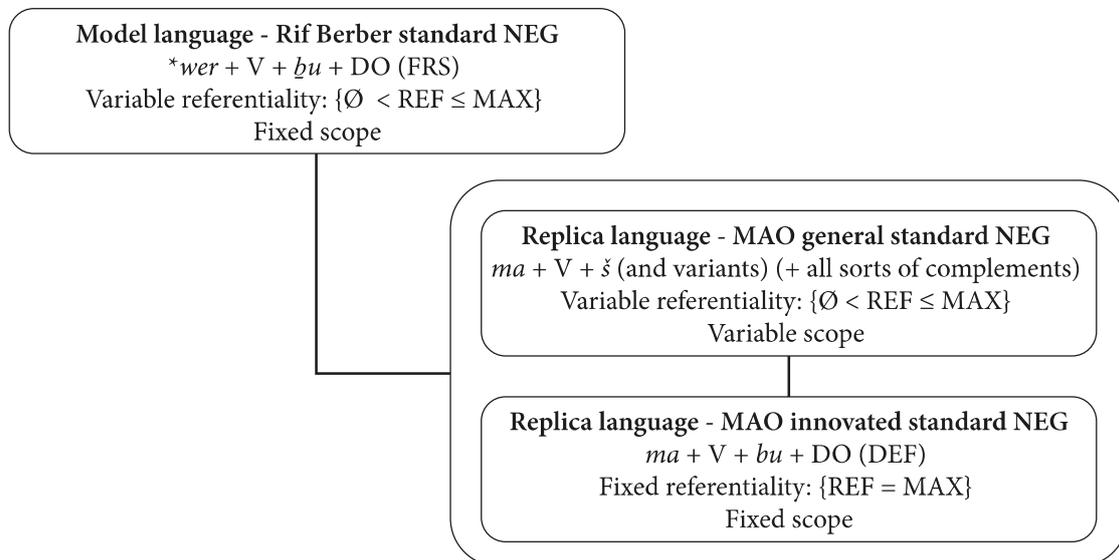


Figure 2. Reinvented negation system of MAO by contact with Rif Berber

The adoption of Rif Berber's postverbal *bu*-negator in MAO has thus triggered a transformation of its standard negation system by adding a specialized negation pattern relating to defined objects with a high degree of referentiality. Certain patterns of the former negation system of MAO were reanalysed as preferential for standard negation, while others were reanalysed as merely optional. As a result, the negation system of MAO has been developed into a split system with a complementary distribution between the innovated pattern [*ma* + V + *bu*], specialized in highly referential negation with a fixed scope (constituent negation), and the older pattern [*ma* + V + *š*], which concerns dereferentialized notions as well; these latter notions are semantically so generalized that they do not refer to any specific extralinguistic referent. In other words, *bu*-negation is used in MAO when the semantic referents of the negated constituents (fixed scope) are clearly identified, that is, they relate to a maximum of referentiality ($\{REF = MAX\}$),

which is reflected in the property of definiteness of the required DO (DEF) on the morphosyntactic level. Otherwise, the more flexible pattern with the post-verbal *š* is employed.

Cases such as the hybrid double negator *ma + V + bu* in MAO, occurring in specific complementary morphosyntactic configurations referring to assertoric values, imply that it is standard negation that is predominantly subject to change in the asymmetrical negation system of North African Arabic. Furthermore, the emergence of this innovated negator indicates that the evolution dynamics of negation in this area is significantly motivated by functional needs regarding descriptiveness (sign and denotation connection) and referentiality (variable as opposed to fixed). This contact-induced innovation also points to an expansion of the grammatical system of MAO. And in so doing, it aligns with the findings presented in Matras & Sakel (2007), as well as in Gast & van der Auwera (2012), which show that replica grammaticalization, when sustained by matter borrowing, generally leads to more grammar in the replica language.

Additional reasons that validate Rif Berber as the model language of the adoption of *bu*-negation in MAO are the following:

1. Rif Berber possesses the postverbal *bu*-negator for at least two centuries, as is accounted for by my fieldwork data (see Section 3); published records go back to the first half of the 20th century (e.g., Renisio 1932: e.g., 127). On the other hand, in MAO, *bu* is attested since relatively recently, as my informants have not been able to confirm its existence prior to their own language practices (not even among their parents). The only data from Arabic outside the Rif area concern Moroccan Arabic of Fez (Caubet 1983: 172–174, 1993: 294–295) and are not only fairly recent, but also stem from a corpus collected among a family with Rif Berber roots, as is explicitly mentioned in Caubet (2018: 101). As a matter of fact, apart from the MAO case, the *bu*-negator is attested all over Morocco (e.g., in Tanger, Agadir, and Casablanca), as well as in the diaspora, and even on the Internet, but only among speakers with a Rif Berber background or in regular contact with Rif Berber. Indeed, the *bu*-negator has been developed into an identity marker of Rif-Berber, mostly involuntarily. Speakers who use this negator are generally regarded as being of Rif Berber descent. These facts make the MAO case stand out, since its Arabic-speakers who use the *bu*-negator and who are considered here do not speak Rif Berber or any other Berber language. It is indeed contact that is the instigator of this innovation phenomenon.
2. The spread of the postverbal *bu*-negator covers most of the Rif Berber area (Figure 1), while in Arabic, it only concerns MAO, which is under heavy influence of Rif Berber. As a matter of fact, the city of Oujda and its surroundings,

originally Berber speaking (mainly of the Zenet language type),⁸ is of economic and political importance because of its strategic location on the border between Northeast Morocco and Northwest Algeria. Its role as an ancient and intensely active trading passage towards all directions is mostly responsible for its linguistic and cultural diversity. Yet, this diversity is still characterized by a considerable presence of Berber speaking people. In the last four decades, they have become even more prevalent due to, *inter alia*, students coming from Berber speaking areas outside Oujda who want to study at the University and often even settle there afterwards. Indeed, many of these students are from Rif Berber speaking areas (e.g., Berkane, Nador, Alhoceima). With the recent creation of the department of Berber studies at the University of Oujda, with a program that focuses on Rif Berber language and culture, the number of students speaking Rif Berber in Oujda has even increased significantly.

Given this geolinguistic spread of the *bu*-negator, it is most likely that the borrowing direction occurred from Berber into Arabic (Figure 1). It is also worth mentioning that my accounts indicate that social factors such as prestige or community solidarity are not involved in the adoption, acquisition, and diffusion of the *bu*-negator in MAO. Instead, they point to system-internal properties as the primary motivating factors (see explanation here above in this section and in Figure 2).

3. Finally, negation with *bu* is a very productive phenomenon in Rif Berber; it is even evolving from a postverbal negator into a preverbal negator in certain varieties. In MAO, on the other hand, it is much less productive and even receding lately, which means that the pattern *ma* + V + *š* is gaining ground again. As revealed by my recent fieldwork in the area, the declining of the postverbal *bu*-negator in MAO is to some extent connected with the fact that this linguistic feature has gained importance as a Rif Berber identity marker, from which certain MAO-speakers prefer to distance themselves. Current local and international Berber claims and policies regarding language and cultural rights, which lately gave more visibility to the Berber-speaking communities (via e.g., the creation of Berber curricula at the University, TV shows, radio programmes), make the postverbal *bu*-negator stick even more out as an identity marker, especially when used in Moroccan Arabic speech.

8. Zenet stands here for a group of Northern and Eastern Berber languages of North Africa which share a number of linguistic features.

5. Conclusion

The present study has demonstrated that both the postverbal negator *bu* and its corresponding negation patterns are of Berber origin and were generated through system-internal existential developments, mainly driven by the principles of weakening and NEG-first. Furthermore, the study has shown that Rif Berber distinguishes quadruple negatives, which pertain to a reduplication of the *bu*-negator, as in [NEG + *bu*-NEG + V_{NEG} + *bu*-NEG (emphatic) + DO], which is an older pattern often used for emphatic purposes, and in [NEG + *bu*-NEG + V_{NEG} + *bu*-NEG (standard) + complements], which corresponds to a pattern that is recently developed for standard negation, from which the freshly innovated pattern [NEG + *bu*-NEG + V_{NEG} + complements] is most probably created. Consequently, Berber proved here to possess a cyclical interlaced negation system, which is continually innovated by means of system-internal mechanisms involving different JCs and a special Negative Existential Cycle. Therefore, as is argued in van der Auwera et al. (Forthcoming), research involving the typology and dynamics of negation could benefit greatly from considering the JC together with other negative cycles (when needed), as well as from adjusting and redefining certain established concepts, such as weakening, for instance. In accordance with these findings, the study has also accounted for pattern replication as being the diachronic process behind the creation and grammaticalization of the hybrid *ma* + V + *bu* pattern in MAO, as the replica language, through a borrowing of the *bu*-negator from Berber, as the model language, and hence has validated Lafkioui's findings and claims (2013a, 2013b) about its system-external origin.

Abbreviations

1	first person	FRS	free state
2	second person	IMP	imperative
3	third person	IO	indirect object
A	aspect(ual)	IPFV	imperfective
ACC	accusative	IR	irrealis
AOR	aorist	LOC	locative
AS	annexed state	M	masculine
AUX	auxiliary	MAX	maximum
COMP	complement	MIN	minimum
COP	copula	NEG	negation, negator
DEF	definite	NE .EX	negative existential
DO	direct object	NIPFV	negative
EX	existential	NP	noun phrase
F	feminine	NPFV	negative perfective

O	object	PROX	proximal
P	predicate	PRVB	preverb
PART	particle	PTCP	participle
PFV	perfective	REF	referential
PL	plural	RES	resultative
PRDR	predicator	S	subject
PREP	preposition(al)	SG	singular
PRES	present	VENT	ventive

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