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LAZIMA IN SWAHILI AND BEYOND: ACCOUNTING FOR THE DOUBLE TRANSFER OF A STRONG NECESSITY MARKER IN EAST AFRICA

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In this study I explore the transfer and further adaptation of Arabic *lazima*, first into Swahili and its many varieties and then from Swahili into several local language varieties spoken in East Africa. Establishing the function of *lazima* as a modal marker, used for conveying strong necessity, I examine the various structural and semantic types of integration that *lazima* has been exposed to. In this pursuit, the investigation contributes both to the growing interest in studies on modality and the influence of Swahili in this area. Drawing on a wide range of Swahili varieties and Swahilized varieties, the analysis challenges the traditional understanding of *lazima* as a nominal form confined to a superordinate copula clause and as only operating on predicate verbs inflected in dependent and/or non-indicative forms. I argue that there are structural, interactional and ultimately socio-cognitive and socio-historical reasons behind the introduction of this linguistic element in the East African region, where *lazima* in some local languages even seems to serve as the sole marker of strong necessity, or even of necessity more generally, in a particular semantic domain.

1. Introduction

This study offers a source-oriented account of the introduction and use of the modal necessity marker *lazima* 'must' in the East African region. The semasiological profile of this marker, as it occurs in this geographically confined area, is worked out through a two-step approach, where I explore its transfer first from Arabic into Swahili and then from Swahili into a significant set of other languages of East Africa.

In this endeavor, this work builds on the recent upswing in studies on modality in Bantu, particularly in Eastern Bantu (see e.g. Bernander & al. 2022; Kawalya & al. 2021; Mberamihigo & al. 2016; Devos & de Schryver 2016; Crane forthcoming; Gluckman & Bowler 2020; Nyinondi & Lusekelo 2020). It is also embedded in the research field referred to as "Swahilization", i.e., the increasing degree of linguistic transfer of Swahili witnessed in other East African languages (see Bernander forthcoming; Nassenstein & Shinagawa 2019; Brenzinger & Marten 2016).

This investigation of *lazima* provides new insights into both fields of research. Although some of the studies mentioned above have touched up on the role of Swahili in the contact-induced evolution of modal systems in Bantu, the concrete impact of Swahili and Swahilization in the domain of modality has received little attention (but see Bernander & al. 2022). This ties in with the universal dearth of studies on contact-induced processes involving modality (cf. Hansen & Ansaldo 2016). Similarly, it is often acknowledged that Swahili loans detected in other East African languages ultimately stem from Arabic (or other, typically "oriental", non-

Bantu language sources; see the further discussion in §2)[1]. However, the particular expressions and constructions of which they are a part are rarely analyzed in detail regarding the two different instances of contact-induced change taking place, with Swahili as both recipient and donor.

The two-staged transfer of *lazima* in an East African context is also reflected in the organization of this paper. After the introduction to the socio-linguistic background of these contact situations in Section 2 and the introduction to *lazima* as a modal marker in Section 3, I account for the copying of *lazima* into Swahili from Arabic in Section 4; in Section 5, I continue by investigating the further spread of *lazima* from Swahili into other East African languages. Both latter sections are structured similarly and describe the structural and functional traits of *lazima* in these contact situations and linguistic varieties. In Section 6, I discuss the findings and argue that the extensive spread of *lazima* is due to several conspiring factors making this modal marker into a top candidate for contact-induced transfer. In section 7, I offer a summary and some conclusions.

2. The linguistic ecology of Swahili

This section introduces the socio-cultural backdrop to the processes of contact-induced change involving *lazima* in the East African region.

2.1. On Swahili

Swahili originally developed along the East African shores of the Indian Ocean, on a narrow strip along the coast from Somalia in the north to northern Mozambique in the south, including the islands of Zanzibar and Comoros (Mugane 2015: 1; Mazrui 2022). Although Bantu in origin, Swahili has been described as a "contact-language par excellence" (Schadeberg 2009: 79), molded through millennia of constant interaction with languages around the Indian Ocean and influences from Arabic, English, various Indian languages, Portuguese, Persian, Turkish, and German, but also various inland African varieties. Arabic, and the Omani variety in particular, has by far been the most influential language (see, *inter alia*, Krumm 1932, 1940; Zawawi 1979; Nurse & Hinnebusch 1993: 321), with a strong influence on Swahili in political, religious, educational, and other cultural terms (see, *inter alia*, Nurse & Hinnebusch 1993: 321; Lodhi 2000: 91-97; Mazrui 2022). Arabic influences on Swahili have probably existed since the language first emerged, through trade and the early adoption of Islam by its speakers (Lodhi 2000: 53-57; Mazrui 2022; Brielle & al. 2023), but most Arabic loanwords were introduced into Swahili during the Omani suzerainty over Zanzibar and other parts of the East African coast (see Schadeberg 2009; Nurse & Hinnebusch 1993: 286, 321; Hinnebusch 1996).

[1] Indeed, the most straightforward cases of Swahili loans are typically those where the element in question has further provenience, going back to Arabic or other instances of non-Bantu descent.

The stretched-out character of the Swahili coast has also led to language-internal divergence and the development of different regiolects (and later convergence between these regiolects; see Güldemann 2018: 478). During the era of the expansion of trade routes to the African interior, Swahili – as the tongue of the middlemen – also spread inland.

2.2. On Swahilization

Through the language policies of both the colonial and post-independence governments in East Africa, the status of Swahili was further entrenched (see, e.g., an account of the situation in Tanzania in Blommaert (1990, 2014); see also Robinson (2022)). Swahili was strongly promoted, often to the detriment of local languages, and it became further established as a language of wider communication across the region, with Standard Swahili, i.e., the Swahili variety of Zanzibar town that became standardized in the 20th century during the British colonial administration. The use of Swahili in colonial practices also resulted in the formation of pidgins and other contact varieties. This further spread not only led to new regional varieties of Swahili arising, but also affected local languages in a significant manner. Nowadays, Swahili often operates as lingua franca in East Africa, has national and official status, and is ubiquitously employed in many public domains, including education, administration, religion, and the media. East African Swahili is also often used by bi-/multilingual speakers even when the interlocutors both speak the same local language (see, e.g., Rosendal & Mapunda 2017). These facts have unanimously "widened the power and prestige gap between Swahili and other local languages" (Mazrui 2022: 377).

The social impact of Swahili and its structural effects is often referred to as "Swahilization". Brenzinger & Marten (2016) describe this process as a subtle, gradual, and ongoing convergence of local languages in East Africa to Swahili, a type of "language drift" – in contrast to (a more definite and discrete) language shift. To be sure, the other side of the coin of this process is the constant substrate influence and restructuring of the Swahili repertoire by the multilingual speakers using Swahili throughout Eastern Africa. Although the role of Swahilization has been amply described in several works, both in those with a more socio-linguistic perspective and in those with a more structural linguistic angle (see, e.g., the long list of references in Bernander forthcoming; see also Mazrui 2022), very little has been said about the potential instances of Swahilization of the modal systems of other languages (but see Bernander & al. 2022; Bernander forthcoming), even though cross-linguistic studies indicate that expressions of modality are easily transferred from one language to another (Matras 2007).

3. *Lazima* as a modal marker of strong necessity

Modality belongs to the wider set of Tense-Aspect-Mood (TAM) categories (Nuyts 2006, 2016) referring to the (non-)factual status of a proposition (Narrog 2012). This grammatical domain comprises expressions of possibility (capability, ability, and potentiality) and necessity (need and necessities, obligations, and certainties). These core concepts (or "forces") of possibility

and necessity are further divided into various subcategories (or "flavors") of dynamic, deontic, and epistemic modality which often show overlap in their coding (Bybee & al. 1994; van der Auwera & Plungian 1998; Nuyts 2006; Nauze 2008; Vander Klok & al. 2022). The concepts of necessity and possibility stand in a scalar relationship to each other, where necessity conveys a relatively stronger force and possibility a relatively weaker force. Furthermore, it has been argued that the category of necessity itself can be further divided between a relatively stronger and a relatively weaker sense of necessity (see Rubinstein 2014; Vander Klok & Hohaus 2020; Silk 2022) – compare the difference between English 'ought to' (~ 'should' ~ 'be supposed to') versus 'must' in example (1). In formal semantic analyses, this difference has been described as one between negotiable and non-negotiable necessities (Rubinstein 2014; Vander Klok & Hohaus 2020), and as one between partial and full support in functional work (Boye 2012).

(1) English (von Fintel & Iatridou 2008: 115; see also Vander Klok & Hohaus 2020: 122)
Employees must wash their hands.
Non-employees really ought to wash their hands, too.

Using the conceptualization of modal strength, I classify *lazima* in Swahili – and other East African languages – as a necessity marker that conveys strong force, as illustrated in (2a-b). In (2b), *lazima* is infelicitous as the semantics of the coordinated clause annuls a strong necessity reading.

(2) Standard Swahili (G42d[2]; Ponsiano Kanijo p.c. 8/11/2023, based on von Fintel & Iatridou 2008)

a. *Aoshe vyombo lakini hakuna wajibu wa kufanya hivyo.*

a-osh-e	vy-ombo	lakini	hakuna	w-ajibu	w-a
SM1-wash-SBJV	8-dishes	but	NEG.EXT	11/14-obligation	11/14-CONN
ku-fany-a	hivyo				
INF-do-FV	DEM8				

'S/he ought to wash the dishes but there is no obligation to do so.'

b. ***Lazima** aoshe vyombo lakini hakuna wajibu wa kufanya hivyo.*
**'S/he must wash the dishes but there is no obligation to do so.'

That *lazima* conveys strong force in Swahili is also reflected in its use in directive speech acts, where it is predominant in obligation statements uttered in social contexts where the speaker has a higher status vis-à-vis the addressee (Podobinska 2002).

[2] In compliance with the conventionalized strategy in Bantu studies, I will use the alpha-numeric "Guthrie codes" (see Guthrie 1967-1971; Maho 2009) to refer to different Bantu varieties (languages, regiolects, etc.) in this study. For Standard Swahili, I use the dedicated code for the Unguja variety, "G42d", as in (2). For the sake of consistency, varieties without any associated code are merely indicated as "G40-". The non-Bantu languages discussed are presented with their iso-codes.

Examples (3) to (5) aim to illustrate the strong necessity reading further, with examples from different Swahili varieties and from non-Swahili varieties influenced by Swahili. The examples also show how *lazima* as a necessity marker covers most if not all modal flavors of necessity in Swahili, viz. dynamic (3), deontic (4), and epistemic necessity (5).[3]

(3) Vumba (G42H; Lambert 1957: 63)
Lazima nichomolewe.
lazima ni-chomol-e-w-e
NEC SM1sg-pull_out-APPL-PASS-SBJV
'I must have it pulled out for me (I cannot pull it out myself).'

(4) Standard Swahili (G42d; Beaudoin-Lietz 1999: 199)
Lazima umsaidie mamaako.
lazima u-m-saidi-e mama=ako
NEC SM2sg-OM1-help-SBJV 1.mother=POSS2sg
'You must help your mother (because I (or some other agency) will make you do so).'

(5) Ishenyi (JE45; field notes; cf. Winford & Maggie 2007)
Razima aβaana mbaɾeɾe ikɛki iiɾɛ.
razima aβa-ana m-βa-ɾ-iɾe i-kɛki i-iɾɛ
NEC 2-children FOC-SM2-eat-PFV 9-cake 9-DEM
'The children must have eaten the cake (it must be the case that the children ate the cake).'

Thus, in examples (3) and (4) *lazima* is used to express that some obligation befalls the first participant of the proposition, whether due to general external circumstances, as in (3), or specifically to the subjective norms of the speaker or the society, as in (4). In example (5), however, *lazima* is used to convey the speaker's certainty regarding the truth of the proposition that follows. It is important to note here already that *lazima* in Swahili and some of the other languages under consideration may co-occur with a copular element *ni*, as in (6), taken from the Helsinki Corpus of Swahili (HCS 2.0)[4]; this fact is further discussed in §4.4.2.

(6) Standard Swahili (G42d; HCS: *Majadiliano ya Bunge* 2/9/2006)
Ukianza kutumia dawa hizi ni lazima uendelee kutumia.
u-ki-anz-a ku-tumi-a dawa hizi
SM2SG-SIT-start-FV INF-use-FV 10.medicin DEM10

[3] I will ignore the theoretical debate about the fine-grained delimitations of various modal subcategories (see, e.g., Nuyts 2016), e.g. how one should disentangle a dynamic participant-internal from a participant-external expression such as (3) and whether deontic expressions such as that in (4) are ultimately to be subsumed under participant-external modality or counted as a subcategory or flavor of their own, as they are of little importance for the analysis of this paper. Note also that some of the languages that have borrowed *lazima* show more restrictions in the range of flavors it may convey (see §5.2.3).

[4] See https://www.kielipankki.fi/corpora/hcs2/.

ni	lazima	u-endele-e	ku-tumi-a
COP	NEC	SM2-continue-SBJV	INF-use-FV

'If you start using these medicines you must continue to use (them).'

This study is focused on the use of *lazima* in affirmative contexts, and hence I will not pay much attention to the interrelation between modality and negation. However, for the sake of completeness, (7) shows that *lazima* may co-occur with internally negated propositions, in which case it retains its function of expressing strong necessity.

(7) Standard Swahili (G42d; Mohammed 2001: 77)
Lazima asiondoke sasa.

lazima	a-si-ondok-e	sasa
NEC	SM1-NEG-leave-SBJV	now

'He must not leave now.'

As evident in (8), *lazima* itself may additionally be negated through the use of a copula construction similar to the affirmative one discussed in relation to example (6) above (see also §4.2.2). However, in this case, the copula used is the negative equivalent of the affirmative ni, namely *si* as in (8).[5]

(8) Standard Swahili (G42d; Sacleux 1939: 469)
Si lazima uende mwenyewe.

si	lazima	u-end-e	mwenyewe
NEG.COP	NEC	SM2sg-go-SBJV	1.self

'It is not necessary (that) you go yourself.' (~ 'You do not have to go yourself.') (**'You must not go yourself.')

In (8), negation only has scope over *lazima*. As indicated in the translations in parentheses, this renders a shift in the modal semantics. That is, a weaker force is conveyed that is more reminiscent of the neutral or agnostic evaluation associated with (affirmative) possibility (cf. de Haan 1997: 11-13, 86-87, 2006; van der Auwera & Plungian 1998; van der Auwera 2001; Squartini 2016). This type of external or wide-scope negation of *lazima* seems impossible in those languages where *lazima* has not been copied together with the copula (construction); see §5.2.2.

[5] McWhorter (1992) convincingly argues that *ni* and *si* are not etymologically related despite their formal and functional similarities.

4. Swahili as a recipient of *lazima*

In this section, I further address the structural, functional, and distributional traits of *lazima*[6] in Swahili and its various varieties, while also zooming in on the history of this marker and its introduction to the East African coast.

4.1. Attestations of *lazima* in various Swahili descriptions – an exposé

Lazima is mentioned in the earliest linguistic descriptions of Swahili, like Krapf (1882: 185), Steere (1894: 325), and Madan & Steere (1890: *passim)*, where it is only presented as a noun. Apart from associated meanings such as 'bail' and 'responsibility', it is described as being used to express both 'necessity' and also 'surety', i.e., both deontic and epistemic readings. Neither Krapf (1850), the oldest grammatical source on Swahili, nor Delaunay (1885) mention *lazima*.

Knappert (1999), which does not constitute an old source itself, but which refers to the traditional, literary variety of Swahili, makes no mention of *lazima*. He further claims that the subjunctive verb form alone may be sufficient to mark 'must', i.e., strong necessity. Similarly, Miehe's (1979) work on the grammar of literal Swahili bears no attestations of *lazima.*

It was not possible to extend this research to a comprehensive investigation of attestations of *lazima* in older Swahili literature (see the discussion in §7). However, it might be noted that a cursory review of some of the oldest known Swahili texts – including the transliterations of (an excerpt of) the *Hamziya* claimed to represent 17th Century Swahili (Knappert 1968) and the *Chuo cha Herekali* (also known as the *Utendi wa Tambuka*), dated to the 18th century (Knappert 1967) – provided no attestations of *lazima*.[7] One text mentions *lazima* in Allen's (1971) collection of classical verse Swahili verse, namely *Utendi wa Masahibu*. This text, however, is of unknown date (cf. Njozi 2003).

As will be made clear in the following sections of this paper (see also Tables 1 and 2 in the Appendix), most of the later grammars of Swahili mentions *lazima*. This includes most of the work on Standard Swahili, from Sacleux (1939) and Ashton (1947), via Loogman (1965) and Polomé (1967), to recent grammars such as Muhammed (2001) and Mpiranya (2015). Schicho (1995), hitherto the only study dedicated to modality in Swahili, also makes ample reference to *lazima*. Moreover, a cursory search of the HSC 2.0 provided us with a total of 11818 instances of *lazima*.[8]

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[6] The same root with similar functions shows up in other formal realizations in Swahili in the form of verbal words, most prominently in the verb *lazimu*, but also in several other verbal derivations (*-lazimia*, *-lazimisha*, *-lazimika*, etc.). For the reason of lack of space and since these variants do not seem to be as commonly borrowed in other East African languages as *lazima*, I will ignore these forms in this study.

[7] The Herekali, however, showcases several instances of another strong necessity construction partly consisting of Arabic matter, namely negated *budi* (< بُدّ *budd* 'way out, escape'; see, e.g., Sacleux 1939: 116). This construction is mentioned by Knappert (1999: 55).

[8] Note that beyond this statement, I will only use this corpus to extract illustrative examples. I refrain from using it to cite any figures or make any other calculations. This is partly due to the fact that a corpus-based study is

There are also often mentions of *lazima* in linguistic studies on non-standard varieties of Swahili (see Table 1 in the Appendix). To start with, *lazima* is attested in many of the traditional coastal dialects of Swahili, such as Mtang'ata, illustrated in (9), or Vumba, illustrated in ((3)) above.[9]

(9) Mtang'ata (G42c; Whiteley 1956: 49)
Lazima utanambia.
lazima u-ta-n-ambi-a
NEC SM2SG-FUT-OM1SG-tell-FV
'You must tell me.'

Next, *lazima* is also shown to be found in the Swahili varieties of the Democratic Republic of Congo, as seen in example (10).

(10) Kivu Swahili (G40-; Nassenstein & Bose 2016: 157)
Ni lazima nikuone.
ni lazima ni-ku-on-e
COP NEC SM1SG-OM2SG-see-SBJV
'It is necessary for me to see you.' ~ 'I have to see you.'

In their description of various necessity expressions in Kivu Swahili, Nassenstein & Bose (2016) show that *lazima* is employed interchangeably with the French borrowing *il faut* to mark strong necessity force (the exact range of flavors covered by these markers is not discernable). This situation is comparable to that of Kinsangani/Ngwana Swahili (G40G), another Congo Swahili variety, where the aforementioned *il faut* from French seems to have taken over the role played by *lazima* (Nassenstein 2015: 104-105). However, the work of Whitehead & Whitehead (1928) shows that *lazima* certainly also occurred in this area before.

Furthermore, *lazima* shows up in the descriptions of the Tanzanian urban youth variety of Swahili, *Lugha ya mtaani,* as illustrated in (11), as well as in the work on Kenya Pidgin Swahili, as seen in (12).

(11) Lugha ya mtaani (G40-; Reuster-Jahn & Kießling 2006: 101)
Bwana, unapotaka kuchukua demu angalia, lazima uwe na buti.
bwana, u-na-potak-a ku-chuku-a demu angalia
mister SM2-PRS-want-FV INF-take-FV 1.dame look

beyond the scope of this study (see also §7). Mostly, however, it is because such numbers would not be reliable. For example, a cursory check made it clear that many instances of *lazima* must have been wrongly POS-tagged, as there are manifold instances where *lazima* has been categorized as an adverb, although in many of the examples in which they occur they are undeniably nouns, whether one uses functional (semantic) or structural criteria (see §4.2 for further discussion on this matter).

[9] Interestingly, however, data from Kae/Makunduchi (G43c; Racine-Issa 2002; Makoto Furumoto p.c. 29/9/2023) and Tumbatu (G43b; Makoto Furumoto p.c. 29/9/2023) would suggest that *lazima* is not used in these dialects.

lazima	u-w-e	na	buti
NEC	SM2sg-be-SBJV	with	9.boot

'Mister, if you want to have sex with a girl, you must wear a condom.'

(12) Kenya Pidgin Swahili (G40C; Heine 1973: 114)

Lazima sisi nafanya haraka au sisi nachelewa.

lazima	sisi	na-fany-a	haraka	au	sisi	na-chelew-a
NEC	we	PRS-do-FV	haste	or	we	PRS-be_late-FV

'We must hurry, or we will be late.'

Lastly, as was mentioned in §2.2, most East Africans have acquired and use Swahili as a subsidiary repertoire along with other languages which, in turn, have modified the linguistic structure of Swahili. An interesting case of such re-structuring, which incidentally involves *lazima*, is seen in example (13), which comes from Drolc's (1999) description of Swahili used as an interlanguage by Maa speakers (East Nilotic).

(13) Maa Swahili (G40-; Drolc 1999: 146)

Wanatahiriwa wakiume lazima.

wa-na-tahiri-w-a	wa-kiume	lazima
SM2-PRS-circumcise-PASS-FV	2-men	NEC

'Men have to be circumcised.'

According to Drolc, the inverted word order seen in this Swahili example is due to the infusion of the general VS word order of Maa. As further seen in the example, this would also seem to have influenced the positioning of *lazima*, which appears at the very end of the clause rather than in its canonical initial (or early) position. Note, also, in relation to the later discussions in this article, that the predicate verb in the clausal construction is inflected in the (indicative) present tense form.

4.2. The transfer of *lazima* to Swahili

As mentioned above, Arabic in general, but Omani Arabic in particular, has been the most common donor to Swahili. In his rigorous work on loanwords in Swahili, Schadeberg (2009) places *lazima* very vaguely as a loanword of "pre-modern Swahili", and as having been introduced at some point during the years 800–1940. A diachronic corpus could provide a more exact date for its introduction. In absence of such a resource, there are still arguments favoring the conclusion that *lazima* was introduced into Swahili during the Omani era and thus constitutes one of those relatively recent (200-300 years old) Omani loans (see Nurse & Hinnebusch 1993: 328).

Fundamentally, from a socio-historical and socio-cognitive point of view, *lazima* as a marker of requirements, obligations and conviction, is arguably strongly functionally associated with law, administration, and religion, all important domains of Omani Arabic influence.

There might also be structural clues that point towards this date of origin, in particular the fact that the Arabic stress pattern has been kept (see §4.3). It is also worth pointing out that the initial liquid of *lazima* has been retained. This is notable since a feature used for detecting earlier loans in Swahili is that they, in contrast to the relatively newer ones, have been affected by the historically productive (partial) sound shift of liquid weakening to /y/ or deletion (e.g., *luban* > *ubani* 'incense'; *jamil* > *ngamia* 'camel')[10]; see Nurse & Hinnebusch (1993: 315, 328; Hinnebusch 1996; Krumm 1940: 66; see also Nurse & Hinnebusch 1993: 331; 100-104).

The word can be linked to the Arabic stem لَازِم *lāzim (laazim)* 'must, need' (see Sacleux 1939: 469; Johnson 1939: 242; Bosha 1993: 137; Kharusi 1995: 284; Khamisi 2012: *passim*), ultimately from the erstwhile verbal root ل ز م (l-z-m), related to adhering, accompanying, or persisting (Wehr 2012: 1014-1015). Derived in a nominal(ized) (participial) form it is also used as a modal necessity marker in Arabic, including Omani Arabic, as illustrated in (14). Arabic *laazim* seems to cover the same range of flavors as in Swahili (see the discussion in Boye 2012: 100-101 which also includes an illustration of an epistemic use of *laazim*). An identical form also functions as an adjective.

(14) Omani Arabic (Morano 2019: 182)

Lāzim aḫalliṣ haḏā l-kitāb.

lāzim	aḫalliṣ	haḏā	l-kitāb
NEC	finish.1sg	DEM	DEF-book

'I must finish this book.'

Reflexes of *lazima* have also been included in descriptions of "Zanzibar Arabic", i.e. the Omani variety of Arabic spoken in Zanzibar, as *lâzim* 'necessary' ('nötig') in Raddatz (1900: 181) and as the "particle" *láazum* 'must, need' in Nakano (1994: 122, as well as in several example sentences elsewhere in the work)[11], as further illustrated in (15) below.[12] Kharusi (1995: 3) mentions for Omani Arabic that "vowels are often subjected to substitution with one another," one of her cited examples being the very shift from *laazim* > *laazum*. This phenomenon probably also explains the shift in the final vowel from /i/ to /u/ in Nakano's work.

(15) Zanzibar Arabic (Nakano 1994: 47)

Nta láazum tsállim fidya.

nta	láazum	tsállim	fidya
you	NEC	pay	fine

'You must pay (the) fine.'

[10] In the northern regiolects this shift occurred in all phonological environments except before *i (Nurse & Hinnebusch 1993: 102), i.e., also before stressed *a, as in *-lala 'sleep' > *-yaa* (Amu; G42a).

[11] Nakano mentions that his data was collected in the 1970s.

[12] No reflex of *lazima* is, however, found in Reinhard's (1894) seminal work on Zanzibari (and Omani) Arabic. Here, necessity is only mentioned as being expressed by future tense marking.

4.3. The phonological (non)integration of *lazima*

In accordance with the regular phonotactic system of Swahili, *lazima* was copied with a word-final vowel. Scholars seem to disagree whether this /a/ is a reflex of the feminine gender suffix in Arabic, a reduction of *-at(un)* (see Krumm 1932: 42), or a reflex of the accusative case suffix (+ an elided indefinite singular-marking nasal) *-a(n)* (see Kharusi 1995: 218, 284). A realization without the final epenthetic vowel, i.e., *lazim*, may also occur in Swahili, albeit only used in the sense '(it) is necessary' (according to Sacleux 1939: 469). The realization *lazima* constitutes one of the Swahili words that defy the otherwise strict penultimate stress pattern of this language (Tucker 1946: 861; Polomé 1967: 50-51; Rzesuwski 1991; Schadeberg 2009: 90). That is to say, although *lazima* may be articulated with penultimate stress (*lazíma*), it is more typically expressed with prominence on the antepenultimate syllable (*lázima*), following Arabic stress rules; see Ryding (2005: 36- 38) on Modern Standard Arabic stress rules and Morano (2019: 70-72) on Omani Arabic in particular. Authors commenting on this fact tend to ascribe it to socio-linguistic and stylistic reasons – i.e., a desire to use the higher status, Arabic pronunciation. To be sure, this can also be an indication of the relatively recent history of borrowing posited for *lazima*, given the general sentiment that formal adaptation may constitute a prolonged process in contact-induced change.

None of these "Arabisms" or non-adaptations is phonemic in character, and they are not indicated in the orthography of (Standard) Swahili. Consequently, they also leave little trace in the written sources (i.e., the grammars and the synchronic corpus) employed for this study. As further described in §5, however, they have affected how other recipient languages have integrated *lazima*.

4.4. The categorical status and constructional specifics of *lazima* in Swahili

In this section, I flesh out the categorical and constructional particulars of the modal *lazima*.

4.4.1. Lazima as a noun

First and foremost, *lazima* has been adopted – and may thus function – as a regular lexical noun.

As a noun, *lazima* is generally treated as belonging to the gender or noun class pair 9/10; see, e.g., TUKI (2001: 172), or the word list accompanying Schadeberg (2009). This particular class pairing is a popular choice for the integration of loanwords in Swahili and other Bantu languages since it has a zero noun class prefix allomorph (cf. Mous 2019) and probably also since there are no formal shifts directly assigned to the noun when derived in number from class 9 to 10.

The indication "(pl. *ma-*)" given by Krapf (1882: 185), would suggest the possibility of *lazima* initially belonging to noun class pair 5/6, or at least that there were some ambiguities around its noun class affinity, with the possibility of deriving *lazima* into the plural noun class

6; see Nurse & Hinnebusch (1993: 354-355) and Mous (2019) on this common type of gender reassignment and fluctuation in the noun class integration of foreign material. However, I have not found any examples indicative of such a situation in any of the descriptions of Swahili (or any of the other languages under scrutiny for that matter), nor in the HCS 2.0.

The status of *lazima* as a class 9/10[13] nominal can be witnessed in examples such as (16), where *lazima* functions as an object argument that triggers agreement with the possessive pronoun, or as in (17), where *lazima* can be seen both as being modified with an agreeing adjective, and as also triggering agreement with the connective (genitive-like) marker *-a*.

(16) Standard Swahili (G42d; Loogman 1965: 253)
Nachukua lazima yake.
ni-a-chuku-a lazima y-ake
SM1SG-PRS-take-FV 9.obligation 9-POSS3SG
'I take his obligation (on myself).'

(17) Lubumbashi Swahili (G40F; Ferrari & al. 2014: 47)
Alipata kuwa na lazima ndoko ya neno lile.
a-li-pat-a ku-w-a na lazima n-doko
SM1-PST-get-FV INF-be-FV COM 9.obligation 9-small
y-a neno li-le
9-CONN 5.word 5-DEM
'He was less responsible for that affair (than his master)'.

In example (18), furthermore, *lazima* is used in a construction where it gains an adjectival-like function.

(18) Standard Swahili (G42d; HCS: *Majadiliano ya Bunge* 22/6/2005)
Huduma muhimu na y-a lazima.
huduma muhimu na y-a lazima
9-service 9.important and 9-CONN 9.obligation
'Important and necessary service.'

4.1.2. *Lazima* as part of a superordinate copula clause construction

Many Swahili descriptions agree that *lazima* gains its function as a modal marker with propositional scope through its inclusion in a type of bi-clausal construction where it appears in a superordinate copula construction (Seidel 1900: 187; Ashton 1947: 268-269; Loogman 1965: 253, 389; Polomé 1967: 197-198, Schicho 1995; Thompson & Schleicher 2001: 271).

[13] There are no examples of a class 10 (plural) use of *lazima* provided in the referenced literature. There are also very few hits indicative of such usage in HCS, but examples do exist. Also, a quick Google search provides several examples, like *lazima z-a breakfast* 'the necessities of breakfast', where *lazima* triggers class 10 agreement on the connective *-a*.

This small superordinate clause consists of *lazima* preceded by the invariable and thus inherently expletive or "impersonal" copula *ni* (Mpiranya 2015: 87; Shicho 1995: 129). This element is ultimately a reflex of the "predicative index" *ní* reconstructible for Eastern Bantu (but probably not Proto-Bantu); cf. Meeussen (1967: 115), Wald (1973).

Polomé (1967: 139) refers to Swahili *ni* as an identifying copula used for "quasi-verbal complexes", as illustrated with *ni mlima* 'it is a mountain'. McWhorter (1992, 1994) shows in his diachronic studies that *ni* was initially used for such presentative and highlighting functions in Swahili and only later got further reinterpreted as a copula, while copula omission or a zero copula always has been and still is a viable option in many types of non-verbal predications in Swahili (see also Gibson & al. 2019). Consequently, when *lazima* occurs by itself, without *ni*, this structure tends to be analyzed as a type of zero copula construction; in some sources, like in (19), this free variation is explicitly indicated through the use of parentheses around *ni* to signal its non-obligatoriness.

(19) Standard Swahili (G42d; Ashton 1947: 269)
(Ni) lazima aende.
(ni) lazima a-end-e
COP NEC SM1-go-SBJV
'He must go.'

Both Schicho (1995: 129, 135-136) and Mpiranya (2015: 87-89) situate the construction with *lazima* within a paradigm of similar constructions, viz. superordinate, impersonal clauses consisting of the copula *ni,* or a zero-copula, and a word, typically a nominal, which together express some kind of evaluation of a proposition expressed in the following embedded clause.[14] Examples of such nominals include *sharti* 'obligation', *bora* 'better, superb'*, vizuri* 'good'[15]*, afadhali* 'better'*, heri* 'good'*, muhimu* 'important', and *kweli* 'true'.

However, there are examples like (20), where *lazima* is positioned between the subject and the predicate verb, instantiating the first participant and the main event of the proposition it has scope over. Notwithstanding the possibilities of inter-sentential topicalization and left dislocation of the subject noun phrase, examples like these would arguably speak against the analysis of modal *lazima* as standing in a separate clause (with an invisible copula) but rather point towards *lazima* functioning as a self-standing, clause-internal particle or (sentence) adverb. As further illustrated below, other East African languages that have borrowed *lazima* show a similar possibility.

[14] Both authors also connect this constructional type to further types of impersonal modal / evaluative constructions with modal verbs inflected with expletive subject prefixes (and occasionally object prefixes) indexing the first participant of the proposition; see Bernander et al. (2022) for examples and for a further discussion of this significant type of modal construction in Swahili and elsewhere in East African Bantu.

[15] *vizuri* is often treated as an adverb, but its morphology and origins are purely nominal.

(20) Standard Swahili (G42d; HCS: *Makala za Semina ya Kimataifa ya Waandishi wa Kiswahili III Fasihi* 1983)
Mwandishi lazima aishi maisha yote.

mw-andishi	lazima	a-ishi	ma-isha	y-ote
1-author	NEC	SM1-live.SBJV	6-life	6-all

'The author must live forever.'

4.1.3. The formal features of the propositional clause that modal lazima operates on

Regarding the clause that contains the main proposition that the clausal construction [*(ni)* + *lazima*] operates on, many of the Swahili sources claim that the choice of the verb form of the predicate is restricted primarily to the subjunctive, as, for instance, in example (19) above and (22) below; however, the infinitive is also allowed, as illustrated in (21).

(21) Standard Swahili (G42d; Ashton 1947: 269)
Lazima kuja mwingine kushika mahali pake.

lazima	ku-j-a	mw-ingine	ku-shik-a	mahali	p-ake
NEC	INF-come-FV	1-other	INF-take-FV	16.place	16-POSS3sg

'It is essential that another should come to take her place'.

Notably, both of these verb forms may be used to mark predicate verbs in "non-main" dependent clause constructions, which tallies with the analysis of *lazima* as occurring in a supplementary superordinate clause. As is well known, however, the subjunctive verb form in Bantu is not only confined to non-main clauses but is typically also used in non-declarative yet independent clausal contexts (cf. Nurse & Devos 2019), and more specifically in imperative-hortative clause constructions, which in turn may conceptually overlap with (particularly deontic and other types of participant-external) modality. This kind of functional duality offered by the subjunctive is sometimes explicitly captured in the translation of examples in descriptions of Swahili, such as in (22), where both the translation and the "literal translation" given in parentheses are direct quotations from the source.

(22) Standard Swahili (G42d; Thompson & Schleicher 2001: 271)
Lazima tuende.

lazima	tu-end-e
NEC	SM1pl-go-SBJV

'We must go.' (Literally: 'It is necessary that we go.')

Of interest for the discussion on the functional motivations for borrowing *lazima* in §6, it should also be mentioned that when the subjunctive is used by itself in the formation of imperative-hortative constructions or declarative modal sentences, it is generally associated with expressing weak necessity in Bantu (cf. Nurse & Devos 2019), including in Swahili – at least the contemporary varieties (see Knappert's claim in §4.1).

Some studies depart from the narrow restriction of *lazima* to occurring only with subjunctive and infinitive conjugations by also mentioning *lazima* with future tense verb forms. An example of this use comes from the Chifundi variety in (23).

(23) Chifundi (G42F; Lambert 1958b: 93)
Lazima ʈ'akata mchia!
lazima ʈ'a-kat-a m-chia
NEC SM1.FUT-cut-FV 3-tail
'She must cut the tail!'

According to Beaudoin-Lietz (1999: 197-200), the choice between the subjunctive and the future tense in constructions with *lazima* is associated with "the certainty with which the speaker asserts the (future) actualization of the event" (ibid.: 200). That is, the choice of the future tense allegedly conveys a stronger sense of certainty. This tendency can be further linked to the fact discussed by Podobinska (2002) that – although formally declarative – the future tense form can be used in Swahili directives to convey strong obligation through the inference that arises through expressing an assertion that the addressee will perform the activity coded in the verb (compare this with Beaudoin Lietz's "actualize the event"). In that sense, the future tense is in harmony with the strong necessity reading of *lazima*.

All this being said, there are instances in the Helsinki corpus that show that *lazima* may collocate with an even broader range of verb forms than those already mentioned. This, incidentally, further speaks against the idea that clauses on which *lazima* operates have to be structurally marked as dependent or non-indicative. In example (24) with an epistemic *lazima*, the verb expressing the main event of the proposition is inflected in the indicative and independent perfect(ive) form.

(24) Standard Swahili (G42d; HCS: *Kinjeketile*, Hussein 1969)
Lazima umepata taabu sana, njaa kama hii kupata kuku!
lazima u-me-pat-a taabu sana n-jaa kama hii
NEC SM2sg-PFV-get-FV 10.trouble very 9-hunger like DEM9
ku-pat-a kuku
INF-get-FV 9.chicken
'You must have had a lot of trouble, (in a) famine like this to get a chicken!'

The fact that the clause containing the proposition that *lazima* operates on is itself a structurally independent clause that can stand by itself further means that *lazima* here is optional, again a trait typically associated with autonomous modal particles or sentence adverbs (cf. Ramat & Ricca 1998; Boye 2016).

5. Swahili as a donor of *lazima*

5.1. Attested languages with *lazima*

Table 2 in the Appendix lists the languages with attested borrowings of *lazima.* As seen in this table, language varieties with *lazima* cover a vast area of the East African region. Although the majority of varieties are of Bantu origin, at least three varieties of Nilotic origin have been confirmed to have borrowed *lazima,* viz. Terik, Nandi, and Pökoot (all Kalenjin – Southern Nilotic) and two of Cushitic origin, viz. Dahalo and (Oromian) Boraana (both East Cushitic). I did not encounter any attestations of *lazima* in members of other language (sub-)groups spoken in East Africa. However, this might be due to the still extant tendency to edit out contact-induced variation (and ongoing change) from language descriptions (cf. Mous 2019, 2020; Bernander forthcoming).

On this note, a methodological choice of mine is also in need of mentioning, namely that I include any attestations of a transferred *lazima*, and I thus remain agnostic as to whether any such phenomenon is best treated as an instance of codeswitching or borrowing, or whether, and if so how, such a distinction is theoretically viable.

I also want to mention another caveat. Given the socio-linguistic background portrayed in §2, aligned with the principle of parsimony, it is most often safe to assume that one is dealing with a direct transfer from Swahili when one finds an attestation of *lazima* in another East African language. In theory, however, it cannot be ruled out that some of the languages in Table 2, in particular those languages spoken close to the Indian Ocean coast, did not acquire *lazima* via Swahili but directly from contact with Arabic speakers. Thus, in the Comorian variety Maore, the attested reflexes of *lazima* as given in Rombi (1983) are more likely to be due to direct contact with Arabic. Consequently, I do not include Maore in the sample since the point of the exercise is to pinpoint Swahili influence.[16] However, I have included Makwe (G402) in the table 2, albeit somewhat hesitantly, as it most likely is an erstwhile Makonde dialect under heavy Swahili influence and thus it is reasonable to believe Swahili to be the donor here (see Devos 2008: 7 and further references therein).[17]

Although most of the data have been collected from secondary sources (including my own field notes), data from 12 of the Tanzanian Bantu languages listed in Table 2 were obtained through translation elicitation. This was done using a questionnaire based on Vander Klok (2014, 2022) and Winford & Migge (2007), under the supervision of Ponsiano Kanijo.

[16] This is not to disregard the fact that the Swahili and Comorian groups are closely related and that there has been sustained contact between Swahili and Comorian, indeed to the extent that Comorian has occasionally been treated as a form of Swahili (cf. Hinnebusch & Nurse 1993: 18).

[17] Notice also that I see little problem in including Logoori (JE41) in my sample, despite the concern raised by Gluckman & Bowler (2020) that Logoori too might have acquired *lazima* directly from Arabic. I believe that this suspicion is unfounded since it is inferred from the antepenult prominence pattern that *lazima* has in Logoori. As we saw in §4.3, however, this is the most common prominence pattern of *lazima* in Swahili too.

5.2. Instances of adaptation and inegration of lazima

Once *lazima* has been borrowed from Swahili and integrated into another East African language variety it may be subject to various formal adaptations, in adherence with the structural, i.e. both phonological and morpho-syntactic, characteristics of the recipient variety. It may also undergo different semantic modifications.

5.2.1. Phonological adaptations

In this section, I describe the various phonemic modifications of *lazima* witnessed in the recipient languages. As is common in processes of phonological integration of transferred code, particularly in environments of sustained multilingualism and competence in the donor language (see, e.g., Poplack & al. 1988), there are, however, many instances of irregularities or cases where *lazima* has not been fully adapted. In some languages, *lazima* has not been adapted at all (e.g., *lazima* in Bena (G63) and Jita (JE25), where the /z/ "should" have been devoiced according to their respective phoneme inventories; cf. Morrison (2011: 38), Kagaya (2005: ii)).

The following formal adaptations have been noted in the data sample:

Starting from the beginning of the word, I should mention that borrowed Swahili matter containing an /l/ is often indicated as being realized as /r/ <r> (or a similar rhotic) in the target language, and this is also attested with *lazima* for Gikuyu[18], Rufumbira, and the Mara varieties (JE401 and JE45) in the sample data. However, as liquids typically occur in free variation in these speech varieties, the choice of <r> instead of <l> reflects an orthographic convention rather than a "real" phonemic contrast. Thus, it does not count as a phonemic adaptation either (although /r/ and /l/ are often treated as contrastive phonemes in Swahili and there are minimal pairs to back up such a claim; see Schadeberg 2009).

Next, languages without /z/ in their phoneme inventory tend to devoice the fricative from /z/ to /s/, as in Kagulu, but also in the Nilotic Terik and Nandi *lasima*, or as an affricate / t͡s/ in Luguru, or, as in the case with Gikuyu *rathima*, with the interdental /θ/ <th> (thus also slightly adapting the place of articulation). Alluding to the previous claim of the instability associated with the integration of *lazima*, it is interesting to note that different levels of adaptation of this marker have been detected between closely related varieties, e.g., within the Chaga cluster, where it is realized as *lasima* in Kahe (E64) and Vunjo (E622C) but *lazima* in Rombo (E623). Even within a single language and a single language source, we may find instances of *lazima* at various levels of adaptation. Thus, in Novotná's (2005) description of Ndamba (G52), the appended word list (ibid.: 334) gives *lasima*, i.e., with an unvoiced /s/, whereas the example in the grammar (ibid.: 224) contains *lazim*a with a /z/. For Ikoma-Ishenyi-Nata (JE45) and Ngoreme (JE401), Laine (2023: 25) notes: "When Swahili words containing the voiced sibilant

[18] Notice that *lazima* is not mentioned in Kihara's (2016, 2023) recent treatments of modal expressions in Gikuyu.

/z/ are used in […] WS, it can either appear as is or be adapted to /s/", a characterization which indeed seems to hold also for the use of *lazima* in these varieties.

Finally, for those varieties where tone and/or duration are phonemic features – and where these features are also properly described – it would generally seem that the antepenult prominence is kept, with the stress pattern being reinterpreted as a high tone and/or a lengthened vowel. As illustrated in (25), Matuumbi is one of the languages where both features apply.

(25) Matuumbi (P13; Odden 1996: 298-300)
Yweembé laáṣima apaté pimbó amụsiíiniị.

yweembe	laaṣima	a-pat-e	pimbo	amụsiiniị
he	NEC	SM1-get-SBJV	10.stick	fifty

'He must get fifty lashes (lit. sticks).'

Also, note the devoicing of /z/ of *laáṣima*[19] in this example.

5.2.2. Morpho-syntactic integration

Various forms of morpho-syntactic integration of *lazima* have been detected in the comparative data set. Unfortunately, I have too little data available to say much about the morphosyntactic integration of attestations of *lazima* in the Nilotic and Cushitic varieties.

Firstly, some sources translate *lazima* as a nominal, e.g., by using English terms such as 'necessary' ~ 'necessity', and categorize it as a noun or adjective, accordingly.[20]

Without more elaborate data it has occasionally been difficult to decide whether and, in that case, how a nominal *lazima* is used as a modal marker with scope over a full proposition. Digo seems to use *lazima* as a nominal in copula constructions with *N*'=, i.e. the cognate of Swahili *ni*, as evident from the grammatical examples given in the grammar by Nicolle (2013)[21], such as (26).

(26) Digo (E73; Nicolle 2013: 323)
N'lazima akamuambire mchewe.

n'=lazima	a-ka-mu-ambir-e	mche-we
COP=NEC	SM1-ITV-OM1-tell-SBJV	1.wife-POSS3SG

'It is inevitable (that) he will go and tell his wife.'

Otherwise, it is striking that although cognates of *ni* occur in many if not most of the other East African Bantu languages and could easily have been transferred along with *lazima,* either as

[19] The grapheme <ị> merely indicates a first-degree high front vowel, i.e. [i], identical to the Swahili <i>.

[20] A type of hybrid loan calque involving *lazima* as a noun can be seen in the (endocentric) compound *wĩra wa rathima* 'compulsory labour', found in Gikuyu. In this case, we are most likely not only dealing with a borrowed *lazima* as the modifier stem, but the head 'work' (*wĩra*) and the construction as a whole is most likely a calque from the Swahili equivalent *kazi ya lazima* (cf. Baldi 2011).

[21] Nicolle (2013: 132), however, does refer to *lazima* as an "adverbial".

lexical matter or as a calqued pattern (recall that cognates of *ni* are widespread enough to make it a candidate for a putative Proto Eastern Bantu), these are rarely included in constructions with *lazima* in the set of recipients.

There are also examples similar to the Swahili examples above, which problematize an analysis of a bi-clausal construction with a nominal *lazima* and a zero-copula, in favor of one where *lazima* acts as an autonomous particle or adverb. Thus, for example, Gluckman & al. (2017) show that *lazima* in Tiriki, may just as well occur between the subject and the verb, as illustrated in (27). The Matuumbi example in (25) is also an illustration of this very fact.

(27) Tiriki (JE413; Gluckman & al. 2017)
Shipaka lazima shive irwanyi.
shi-paka lazima shi-v-e irwanyi
7-cat NEC 7-be-SBJV 23.outside
'The cat must be outside.'

Interestingly, in the Rufumbira variety of Kinyarwanda, it would seem that *lazima* has been integrated into a more verb-like construction, albeit not with a reflex of *ni* or any other copula, but with what appears to be another type of salient light verb, namely the quotative *-ti* 'say, do' (+ the noun class 9 subject prefix *i-* used as an expletive); this adheres to a common type of loan integration in Bantu (see Mous 2019). Example (28) is a case in point.

(28) Rufumbira (JD61; Nassenstein 2019: 141)
Itirazima itaka riri kuzanwa.
i-ti-razima i-taka ri-ri ku-zan-w-a
SM9-QUOT-NEC 5-soil SM5-COP INF-remove-PASS-FV
'It is necessary that the soil is removed.'

With regard to the choice of concomitant verb conjugation, most recipient languages combine *lazima* with predicate verbs inflected in the subjunctive as in Swahili. However, similarly to what has already been described for Swahili, the subjunctive and infinitive are far from being the only verb forms that may co-occur with *lazima* in the survey. Bernander (2017: 303-304), explicitly mentions a division in labor in Manda concerning the choice of verb form vis-a-vis the modal flavor of the proposition on which *lazima,* often integrated as *lásima,* operates. Here, *lásima* with a subjunctive verb form is dedicated to deontic expressions alone, as in (29a), whereas *lásima* in conjunction with various other independent and indicative verb forms is employed for expressing epistemic necessity, as in (29b).

(29) Manda (Bernander 2017: 303-304)
a. *Lásima fwáláy' hélméti.*
lasima fwal-ayi helmeti
NEC wear-SBJV 9.helmet
'You must wear a helmet'.

b. *Lásima abítí' kukanísa.*
lasima a-bɪt-íli ku-kanisa
NEC SM1-go-PFV LOC17-9.church
'She must have gone to church'.

This type of formal and functional delimitation does not always seem to hold in other languages that have borrowed *lazima*, however, as seen in the epistemic construction (30) in Logoori, where the verb is inflected in the subjunctive. A somewhat similar example comes from Ngoreme in (31) (here with a phonemically non-adapted *lazima*). In this case, however, we are dealing with a complex verb-verb combination, where a copula verb is inflected in the subjunctive but the second verb expressing the main event of the proposition is inflected in the (indicative/independent) perfective.

(30) Logoori (JE41; Gluckman & Bowler 2020: 222)
Lazima Sira azie Nairobi.
lazima Sira a-zi-e Nairobi
NEC S. SM1-go-SBJV N.
'Sira must go to Nairobi.'

(31) Ngoreme (JE401; field notes)
Teŋgumurɔra lazima aβɛ aɣiire.
te-ŋ-gu-mu-ɾɔɾ-a lazima a-β-ɛ a-ɣi-iɾe
NEG-SM1sg-IPFV-OM1-see-FV NEC SM1-be-SBJV SM1-go-SBJV
'I don't see him; he must be gone already.'

5.2.3. Semantic integration/distribution

Although it is difficult to draw any general conclusions about the sample data, due to the lack of any elaborate descriptions in many of the sources, it would seem that different varieties show different restrictions on the semantic extension of *lazima,* with different varieties using *lazima* to cover different flavors of necessity. Most importantly, *lazima* is often portrayed as filling a gap in the language when it comes to expressing strong or absolute necessity.

Thus, Gluckman & Bowler (2020) note that whereas *lazima* is used to express the same flavors of necessity in Logoori as in the donor Swahili*,* it is the only marker, apart from *mpaka* (another Swahili borrowing; see Mous 2020), that Logoori has access to for expressing strong epistemic necessity. Similarly, as indicated in §5.2.2, the reflex *lásima* may be used for both deontic and epistemic necessity in Manda, and in the domain of deontic necessity it is the only marker that can be used exclusively for expressing strong necessity (i.e., a strong sense of obligation). For expressing epistemic necessity, *lásima* is the only dedicated modal strategy at hand.

In Nyakyusa, *laazıma* is used for marking epistemic necessity, as illustrated in (32).

(32) Nyakyusa (M31; Bastian Persohn p.c. 5/9/2023)

Laazıma si-li-po si-mo.

laazıma	si-li-po	si-mo
NEC	10-COP-16	10-one/some

'There must be something.'

Nyakyusa's reflex of *lazima* only covers the flavor of epistemic necessity; it would seem that the language uses other markers, such as *mpaka* (similar to Logoori) and also *fikuti*, to express strong non-epistemic necessity (see Felberg 1999: 190). Yet, *laazıma* is the only dedicated epistemic necessity marker in the language.

6. Discussion

Why then has *lazima* concurrently been transferred both into Swahili and its numerous varieties and then further, into at least 30-40 other East African languages? As will be argued in this section, there are probably several factors that have conspired to create this situation.

To begin with, we may note that the transfer of *lazima* adheres to a typologically generalizable tendency. Matras' (2007) cross-linguistic study shows that modality, in general, is the domain with the most widespread attestations of matter borrowing, and within modality, markers of necessity are most commonly borrowed. Within the domain of necessity, in turn, markers of "intensive" necessity (i.e., strong necessity) are the ones most susceptible to borrowing. Indeed, it is not only Swahili – and by extension other East African languages – where *lāzim* specifically has been borrowed. Several other languages in contact with Arabic have also borrowed this particular element (see Matras 2007; Hansen & de Haan 2009: 548; Hansen & Ansaldo 2016).

On structural grounds, we may furthermore note that an invariable and autonomous element such as *lazima* is easily borrowed, since it has little need for morphosyntactic integration (Matras 2007). In particular, this tends to characterize types of utterance modifiers like *lazima*, sometimes also referred to as "sentence introducers" (Mous & Qorro 2009), that "occur in an initial position where code-switching easily occurs, and […] serve the communicative purpose of an early and easily recognizable indication of the attitude of the speakers toward the information to come". I will return to the latter claim of this quotation, on communicative purposes, below. First, it should be noted that in this role of a sentence introducer, or at least a modifier with a full clause in its scope, *lazima* is in good company with several other independent function words in Swahili that are also of Arabic origin (see Lodhi 2000: 99-115; Wald 2001; Schadeberg 2009; Mous 2019), and which have subsequently spread to other East African languages. As a case in point, Bernander (2017: 32) mentions the transfer of *baadaye* 'afterwards', *halafu* 'then', and *maana* 'that is' into Manda, all of Arabic origin. Other such markers include *lakini* 'but', *kabla* 'before', and *kama* 'if'.

At the same time, the ambiguous categorical status of *lazima,* which it is also possible to analyze as a nominal, may have facilitated the spread of this marker further, since open class lexemes, in general, and nouns in particular, are the class of words most susceptible to borrowing (see, e.g., Haspelmath 2009; Winford 2003: 51).

Finally, there are also functional explanations for the grand transfer of *lazima*. Thus, we find a recurrent argument – explicitly mentioned at least for Pökoot, Nyakyusa, Logoori, and Manda – that *lazima* has a gap-filling role (see §5.2.3). That is to say, there has been a language-internal need to acquire *lazima* in its role as marking strong necessity – whether as marking a non-cancellable obligation in the deontic domain or the conviction of inevitability in the epistemic domain – otherwise having been absent or "ineffable" (Gluckman & al. 2017) in these languages.

Interestingly, the combination of *lazima* with the subjunctive – itself a marker associated with weak necessity – to express strong necessity, as witnessed in Swahili and other East African Bantu languages, is in a way a development in the opposite direction from what has been described as the cross-linguistically more salient developmental route for compositional necessity markers, namely the weakening of necessity markers from (inherently) strong to weak necessity markers, like the pattern of adding counterfactual morphology or some other type of weakening morphology, such as the suffix *-ne* in Javanese, onto strong necessity modals to make them weaker in force (von Fintel & Iatridou 2008; Vanderklok & Hohaus 2020).

On the other hand, it tallies with a wider tendency confirmed in other domains of Bantu languages, namely the proneness to use borrowed material for expressions of emphasis or for reinforcing an utterance (see Bernander forthcoming). In connection to this fact, while also taking up the last part of the above quotation from Mous & Qorro on sentence introducers, it may be argued in line with Matras (1998, 2007, 2009: 137, 2022; see also Bernander forthcoming) that there are communicative reasons for speakers to resort to the pragmatically dominant language, Arabic in the case of Swahili, and Swahili in the other cases, namely to maintain assertive authority in conversational interactions, particularly when there is "potential for tension at the interaction level" (Matras 2007: 34), which is undeniably the case for *lazima*. The non-adaptation of *lazima* with the Arabicized pronunciation retained might serve as an indication of this fact, as well as of the inequality in status, in terms of social power and distance, associated with the use of *lazima* in directive speech acts.

These socio-cognitive explanations lead us back to the socio-linguistic ecology where we started in §2. There it was described a societal system where Arabic, in relation to Swahili, and Swahili, in relation to other East African languages, constitute the more prestigious and high-status repertoire among multi-lingual speakers. Consequently, it this also becomes the preferred choice of code to uphold the type of pragmatic authority referred to by Matras.

7. Conclusions

This study has explored the topics of modality and contact change through the lens of *lazima* being used as a modal marker of strong necessity in the many varieties of Swahili, as well as in other languages of East Africa.

As argued, *lazima* was transferred into coastal Swahili from Omani Arabic and later spread to other Swahili varieties covering a vast area of East Africa. Through Swahilization, i.e., the ongoing language drift where local languages in East Africa are converging to Swahili, *lazima* has also been introduced into more than 30 other local language varieties, mostly of Bantu origin but also of Nilotic and Cushitic descent.

Through its spread into different language varieties with Swahili as both a recipient and donor, *lazima* and its various reflexes have been shown to exhibit different types of adaptations both within the structural and the semantic domain.

Some of these findings indicate that previous depictions of the distributional traits of *lazima* are too premature and narrow. As shown, *lazima* may occur in contexts where it is problematic to analyze it as occurring in a copula construction. Furthermore, it has been shown that *lazima* may collocate with a broader range of verb forms than those traditionally mentioned (viz. the subjunctive, the infinitive, and occasionally the future). This expanded distributional range, witnessed both in Swahili and in other East African varieties, suggests the polyfunctional development of both a nominal *lazima* and arguably also a categorically reanalyzed variant more reminiscent of a particle or sentence adverb.

We further argue that it is not a coincidence that *lazima* in particular has been borrowed but that there exist several interleaved structural, interactional, and socio-cognitive explanations. Indeed, in some of the local languages, *lazima* is the only marker of strong necessity, or even of necessity more generally, in a particular semantic domain.

This being said, many issues have admittedly had to be left out of this study and would be worthy of fuller exploration. One fruitful avenue of further research would be to investigate *lazima* in a detailed corpus of Swahili that contains diachronic data and data from different varieties of Swahili. This could lend further support to the hypotheses brought forward in this article, both regarding when and how *lazima* was introduced and how it came to expand functionally and structurally.

Abbreviations

The abbreviations used generally follow the standard of the Leipzig Glossing Rules, with the following exceptions and modifications:

1, 2, 3, etc. noun classes
CONN connective
FV final vowel
ITV itive
NEC necessity
NEG EXT Negative existential
OM object marker
SM subject marker
** Ungrammatical

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Appendix

Abbreviations: DRC = Democratic Republic of Congo, Ke. = Kenya, Moz. = Mozambique, Tz = Tanzania, Ug. = Uganda

TABLE 1: List of Swahili variety sources consulted with attestations of *lazima*

Swahili variety	**Guthrie code**	**Country**	**Source**
Lugha ya Mtaani	G40-	Tz	Reuster-Jahn & Kießling (2006)
"Zaïre Swahili"	G40-	DRC	Haddad (1983: 202)
Kivu Swahili	G40-	DRC	Nassenstein & Bose (2016)
Maa Swahili	G40-	Tz	Drolc (1999)
Kenya Pidgin Swahili	G40C	Ke.	Heine (1973)
Lubumbashi/Shaba	G40F	DRC	Ferrari & al. (2014)
Ngwana	G40G	DRC	Whitehead & Whitehead (1928)
Mvita, Jomvu	G42b	Ke.	Krapf (1850, 1882); Lambert (1958a)
Mtang'ata	G42c	Ke.	Whiteley (1956)
Unguja / Standard Swahili	G42d	Tz/elsewhere	Steere (1870); Madan & Steere (1890); Seidel (1900); Johnson (1939); Sacleux (1939); Ashton (1947); Loogman (1965); Polomé (1967); Schicho (1995); Thompson & Schleicher (2001); Beaudoin-Lietz (1999); Mohamed (2001); Mpiranya (2015)
Fundi	G42F	Ke.	Lambert (1958b)
Vumba	G42H	Ke.	Lambert (1957)
Pemba	G43a	Tz	Whiteley (1958)

TABLE 2: List of East African sources consulted with attestations of *lazima*

Language variety	**Guthrie code / [ISO code]**	**Country**	**Formal realization**	**Notes on formal adaptation**	**Source**
E. Bantu					
Gikuyu	E51	Ke.	*rathima*	l > r z > th	Baldi (2011: 14)
Vunjo	E622C	Tz	*lasima*	z > s	Leeman & Lauwo (1993: 93)
Rombo	E623	Tz	*lazima*		Montlahuc (2000:178)
Kahe	E64	Tz	*lasima*	z > s	Kahigi (2008: 22)
Giryama	E72a	Ke.	*lazima*		Ngowa & Ngonyani (2020)
Digo	E73	Tz/Ke.	*lazima*		Nicolle (2013: 105, 125, 323, 334); Mwalonya & al. (2004)
Sukuma	F21	Tz	*lazima*		Questionnaire (2024)
Rangi	F33	Tz	*lazima*		Stegen (2011: 530); Questionnaire (2024)
Kagulu	G12	Tz	*lasima*	z > s	Petzell (2008: 105, 216); Questionnaire (2024)
Pare	G22	Tz	*ladhima*	z > dh (?)	Questionnaire (2024)
Bondei	G24	Tz	*lazima*		Kiango (2008: 37)
Zigula	G31	Tz	*lazima*		Mochiwa (2008: 29)
Luguru	G35	Tz	*latsima*	z > ts	Questionnaire (2024)
Makwe	G402	Moz.	*lázíima*	Tone spread	Devos (2008: 220)
Ndamba	G52	Tz	*lasima ~lazima*	s > z in list but not in ex.	Novotná (2005: 244, 314)
Hehe	G62	Tz	*lasima*	z > s	Questionnaire (2024)

Bena	G63	Tz	*lazima*		Morrison (2011: 188)
Rufumbira	JD61	Ug./DRC	*lazima* ~ *razima*	indexed with -ti (> 'say'	Nassenstein (2019)
Ha	JD66	Tz.	*lazima*		Questionnaire (2024)
Nyambo	JE21	Tz	*lazima*		Nyinondi and Lusekelo (2020)
Haya	JE22	Tz	*lazima*		Questionnaire (2024)
Jita	JE25	Tz	*lazima*		Questionnaire (2024)
Kwaya	JE251	Tz	*lazima*		Questionnaire (2024)
Bukusu	JE31c	Ke.	*lazima*		Gluckman & Bowler (2017)
Ngoreme	JE401	Tz	*lazima ~lasima*		field notes
Logoori	JE41	Ke.	*lazima*		Gluckman & Bowler (2020)
Tiriki	JE413	Ke.	*lazima*		Gluckman & al. (2017)
Ikoma-Nata-Ishenyi	JE45	Tz	*razima* ~ *rasima*		*field notes*; Mekacha (1993: 157)
Nyiha	M23	Tz.	*laziima*	i > i:	Questionnaire (2024)
Ndali	M301	Tz/Ma.	*laziima*	i > i:	Questionnaire (2024)
Nyakyusa	M31	Tz	*laazıma*	i > ɪ (?)	Persohn (p.c.); Felberg (1996)
Manda	N11	Tz	*lásima*	z > s	Bernander (2017: 303-304, *field notes*)
Chinyanja	N31x	Tz			Ngonyani (2020: 66)
Matuumbi	P13	Tz	*laásima*	z > s	Odden (1996: 298-299)
Makhuwa	P31	Moz.	*lazima*		Rzewuski (2001: 296)
S. Nilotic (Kalenjin)					

Terik	n/a [tek]	Ke.	*lasima*	z > s	Seroney (2009: 313)
Nandi	n/a [niq]	Ke.	*lasima*	z > s	Creider & Creider (2001)
Pökoot	n/a [pto]	Ke.	*lazima*		Baroja (1989: 104)
E. Cushitic					
Dahalo	n/a [dal]	Ke.	*ládima*	z > d	Tosco (1991: 141)
Boraana (Oromo)	n/a	Ke.	*laazima*		Stroomer (1995: 203)