Grammaticalization and subjectification in the semantic domain of possibility in Kirundi (Bantu, JD62)

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Abstract

This article is a first systematic study of the expression of possibility in Kirundi, more specifically of its verbal markers. Possibility is traditionally seen as one of the core components of the semantic domain of modality. The onomasiological approach of this modal sub-domain has resulted in the identification of four verbal potential markers, i.e., the auxiliaries **-bâsh-** and **-shóbor-**, the semi-auxiliary **-shóbok-**, and the TAM affix **-oo-**. These four markers of possibility manifest different degrees of grammaticalization along the full verb > auxiliary > affix cline. Grammaticalization in the structural domain seems to be correlated with semantic change, both within and beyond the semantic domain of possibility. The related verbs **-shóbor-** and **-shóbok-**, which have no or little remaining lexical uses, cover the entire semantic domain of possibility in contrast to **-bâsh-** which has still clearly distinct lexical uses ('to be active, to be healthy') and only conveys participant-inherent possibility. The inflectional affix **-oo-**, covering the entire domain of possibility and having developed other modal and non-modal meanings, manifests the most advanced semantic generalization. Moreover, **-oo-** underwent the strongest subjectification within the semantic domain of possibility and even developed different intersubjective uses. Hence, the most grammaticalized marker of possibility in Kirundi not only underwent the strongest semantic generalization, but its meaning is also the most (inter)subjectified.

Keywords: Kirundi, Bantu, modality, possibility, grammaticalization, subjectification, distributional corpus analysis

1. Introduction

Kirundi (JD62) is the national language of Burundi, having an estimated number of more than 8,000,000 speakers.[1] It is a Great Lakes Bantu language, closely related to Kinyarwanda (JD61), the national language of Rwanda, and Kiha (JD66), spoken in Tanzania.[2] These three languages actually constitute a large dialect continuum (Bukuru 2003). Although Kirundi grammar has been relatively well studied, no systematic study has ever been dedicated to the expression of modality. In contrast to tense and aspect, modality is understudied in Bantu linguistics. Dedicated studies, such as Devos (2008), Fourie (1989, 1991) and Louwrens (1990), are rare. This paper wants to add to this emerging field in Bantu studies by exploring, in Kirundi, one of the core sub-domains of modality, namely possibility.

Possibility is traditionally considered to be one of the core components of the semantic domain of modality, along with notions such as probability, obligation, and necessity. In linguistics, modality is generally conceived as a semantic subdivision within the wider TAM domain, narrowly associated with categories such as tense and aspect (Nuyts 2006: 1), which are more common notions in Bantu studies. If one goes by the plethora of definitions found in the literature, modality is a problematic category. It is found to be a semantic domain that is difficult to define, both in terms of its external borders and in terms of its internal structure (for an overview of the ongoing debate, see for instance Nuyts 2006). Nuyts (2005) defines modality in terms of 'qualifications of states of affairs'. For Palmer (2001: 1) modality is 'concerned with the status of the proposition that describes the event'. It refers to the speaker's attitude towards the action or state expressed by the main verb. Narrog (2010: 392) rather considers modality 'in terms of a lack of factivity, or, from a different perspective, as the relativization of the validity of a proposition with respect to a certain background'. While it may be hard to delineate the semantic domain of modality, the inclusion of possibility and necessity as core modal concepts is rather uncontroversial. That is why certain scholars, such as van der Auwera & Plungian (1998), restrict the definition of modality to the expression of these core concepts. Since our article is essentially concerned with the expression of possibility in Kirundi, we can content ourselves with the definition of van der Auwera & Plungian (1998).

In Section 2, we discuss the semantic sub-categorization of modality according to which the Kirundi possibility types will be described. To this end, we compare the semantic map of modality as developed by van der Auwera & Plungian (1998) with the more recent proposal of Nuyts (2006). In Section 3, we describe and illustrate the different types of potential meanings expressed by Kirundi's main verbal markers of possibility, i.e., the modal auxiliaries **-bâsh-** and **-shóbor-**, the semi-auxiliary **-shóbok-**, and the potential affix **-oo-**. We leave aside modal adverbs, such as **kumburé** 'perhaps, maybe' and **nkeeká** 'perhaps, maybe', which

1. According to the last census (2008), Burundi has 8.053.574 inhabitants (see http://www.paris21.org/sites/default/files/BURUNDI-population-2008.PDF).

2. The letter-number combinations accompanying Bantu language names refer to the conventional codes these languages were assigned in Guthrie's updated referential classification of the Bantu languages (Guthrie 1971, Maho 2009).

require a separate study. Neither do we consider negative modals, because negation combines with modality in rather peculiar ways without regular correspondence between form and meaning (Palmer 1995, van der Auwera 2001). We also disregard the common Bantu 'neutro-passive' derivational suffix **-ik-** which may indicate that the subject is either 'potentially or factually affected by the action expressed by the verb' (Schadeberg 2003: 75).[3] With specific reference to the possibility markers considered, we wish to uncover whether they manifest a correlation between grammaticalization in the structural domain and subjectification in the semantic domain. As expounded upon at length by Narrog (2010: 387-92), modal verbs have been treated as prominent instances of the interaction between these two processes in the work of Langacker and Traugott, the most authorative advocates of subjectification (Langacker 1990, 2003, Traugott 1995, 2003), even if both conceive this semantic change in different ways (see Cornillie 2006: 177). In Langacker's Cognitive Grammar approach, subjectification is 'the full disappearance of any objective basis for the conceptualizer's mental scanning' (Langacker 2000: 299). In Traugott's more historical oriented grammaticalization approach, subjectification refers to the semantic evolution from 'objective' meanings based in the externally described situation, i.e., the outside world, to meanings which 'tend to become based in the speaker's subjective belief state/attitude toward the proposition' (Traugott 1989: 35). In Section 4, we test whether this correlation between grammaticalization and subjectification stands up to scrutiny in the semantic domain of possibility in Kirundi, by examining more closely the actual uses and distribution of the Kirundi possibility markers in a corpus. Discussion and conclusions follow in Section 5.

2. The semantic domain of possibility

Possibility in the broad sense, including notions like potentiality and probability, is commonly seen as one of the central sub-domains of modality, together with necessity. Van der Auwera & Plungian (1998) even confine their definition of modality to the expression of the two core concepts possibility and necessity. They distinguish between four modality types: (1) 'participant-internal'; (2) 'participant-external'; (3) 'deontic'; and (4) 'epistemic'. The first three types are subsumed under the common denominator 'non-epistemic'. Van der Auwera & Plungian (1998) actually consider deontic modality as a particular sub-type of participant-external modality. This sub-categorization is at odds with more traditional approaches, as espoused by Nuyts (2006), who distinguishes between three modality types: (1) 'dynamic', further subdivided in (a) 'participant-inherent', (b) 'participant-imposed', and (c) 'situational'; (2) 'deontic'; and (3) 'epistemic'. Although their labels are similar, the categories distinguished by Nuyts (2006) and van der Auwera & Plungian (1998) do not always match in terms of semantic content.

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3. The actual reading of verbs with this extension – potential or factual – depends on both the wider discursive context and the aspect of the specific verbal conjugation. The following Kirundi sentence is a typical example of the suffix' potential reading:

i-fu	**i-ra-fát-ik-a**	**aríko**	**u-mu-ôtsi**	**nti-u-fát-ik-a**
AUG_9-flour	SC_9-DISJ-seize-NPA-FV	but	AUG_3-NP_3-smoke	NEG-SC_3-seize-NPA-FV

'Flour is seizable (can be seized), but smoke is not.'

Dynamic modality can be characterized as capacities, abilities or potentials on the side of possibility, and needs or necessities on the side of necessity ascribed to the subject-participant of the clause, or more precisely to the controlling participant in the state of affairs, usually the agent, in order to not exclude passives (Nuyts 2006: 3). These properties can be fully inherent to the first-argument participant, as in (1). We then speak of 'participant-inherent dynamic modality' following Nuyts (2006). This corresponds to 'participant-internal modality' according to van der Auwera & Plungian (1998), but not exactly since they also incorporate certain cases of what Nuyts (2006) would categorize as 'participant-imposed'.[4]

(1) a. Jean-Pierre **can** lift a hundred pounds right up over his head.
b. Joseph **needs** his daily dose of caffeine.

These abilities/potentials or needs/necessities may also be determined by external factors, which are either explicit or implicit and may be partly beyond the control of the first-argument participant, as in (2). If such circumstances imposed on the participant make the state of affairs in which he is involved possible or necessary, Nuyts (2006) speaks of 'participant-imposed dynamic modality'. Van der Auwera & Plungian (1998) define their category of 'participant-external modality' similarly, but they also include instances of what Nuyts (2006) would classify as 'situational'.[5]

(2) a. The driver will replace the flat tire so that we **can** drive on.
b. To make an omelette you **have to** break eggs.

In order to cover cases, as in (3), which go beyond abilities/potentials or needs/necessities of any participant in the state of affairs and rather characterize a potential or a necessity/inevitability inherent in the situation described in the clause as a whole, Nuyts (2006: 4) proposes a third dynamic sub-type, i.e. 'situational dynamic modality'. This subtype typically appears in expressions in which there simply is no participant, but also in cases with inanimate first-argument participants, and even with animate (including human) first-argument participants, in which the first-argument participant is left implicit.

(3) a. In this country, it **can** rain for weeks on end.
b. The entropy of the universe **must** increase for a reaction to occur.

4. What van der Auwera & Plungian (1998) give as an example of 'participant-internal necessity', i.e., 'Boris needs to sleep ten hours every night for him to function properly' is seen as a case of 'participant-imposed necessity' by Nuyts (pers. comm.), because he considers a person's proper functioning a contextual factor which makes it necessary for Boris to sleep ten hours every night. It can be questioned, of course, to what extent the proper functioning of a person is to be conceived as a circumstance external to the participant.

5. What van der Auwera & Plungian (1998) give as an instance of 'participant-external possibility', i.e., 'To get to the station, you can take bus 66', is considered to be 'situational' by Nuyts (pers. comm.), because the circumstances do not make it possible to take the bus in question.

Deontic modality is traditionally defined in terms of permission and obligation, but Nuyts (2006: 4) suggests that it may be defined in more general terms as an indication of the degree of moral desirability of the state of affairs expressed in the utterance, as in (4).

(4) a. She is dressed now. You **can** enter.
b. Children **must** be silent while adults eat.

Van der Auwera & Plungian (1998: 81) conceive deontic modality as a special case of participant-external modality, because it 'identifies the enabling or compelling circumstances external to the participant as some person(s), often the speaker, and/or as some social or ethical norm(s)'. However, this view of the matter does not take into account that deontic modality is an attitudinal category in that it indicates 'the degree to which the 'assessor' (typically, but not necessarily, the speaker […]) can commit him/herself to the SoA [*State of Affairs*] in terms of certain principles' (Nuyts *et al.* 2010: 17). Dynamic modality, including participant-external possibility/necessity, misses this subjective dimension. This attitudinal notion is also present in the last type of modality, i.e., epistemic modality. In this case, the modal does not indicate to what extent the assessor can commit him/herself to a moral principle, as with deontic modality. It rather 'concerns an indication of the estimation […] of the chances that the state of affairs expressed in the clause applies in the world' (Nuyts 2006: 6). In other words, it expresses the degree of probability of the state of affairs. Uncertainty is epistemic possibility, as in (5a), while epistemic necessity pertains to an event which is relatively certain by virtue of some judgment, as in (5b).

(5) a. The plane is delayed. Our parents **may** be in trouble.
b. My biscuits are finished. Gerard **must** be back.

Nuyts (2005, 2006) considers the 'attitudinal' character of both deontic and epistemic modality as the principal reason not to lump together deontic and dynamic modality, as van der Auwera and Plungian (1998) do, and not to oppose deontic and dynamic modality jointly to epistemic modality, as is common in the Anglo-American tradition of 'root modality' vs. epistemic modality. At the same time, it has been shown for several languages with a long written tradition, such as English (Traugott 1989), Spanish (Cornillie 2006) and Dutch (Nuyts 2001), that epistemic modals derive historically from non-epistemic modals, especially deontic modals.[6] This semantic shift from deontic to epistemic modality is commonly interpreted in terms of increasing subjectification. In the words of Traugott (1989: 49), 'the development of epistemic and evidential meanings increases coding of speaker informativeness about his or her attitude. There may be weakening of the semantics of deontics, but there is strengthening of focus on knowledge, belief, and the speaker's attitude toward the proposition'. In the same vein, Cornillie (2006: 201), following

6. It is important to point out that epistemic modals are not always derived from deontic modals in the languages of the world. They may evolve in parallel with deontic modals from dynamic modals or have a completely different origin (van der Auwera & Plungian 1998), such as the auxiliary of epistemic possibility **-sakha** in Shangaci, which expresses in origin volition (Devos 2008).

Langacker (2003) and Pelyvás (1996), argues that '[e]pistemic modals stand for maximal subjectification in that they completely attenuate the force directed to the participants involved in deontic modal readings'.

In Section 4, we present the results of a distributional corpus analysis in order to test whether the more grammaticalized markers of possibility are indeed more strongly associated with the more subjective modal meanings in Kirundi language use. However, we first describe in Section 3 how the Kirundi modal markers **-bâsh-**, **-shóbor-**, **-shóbok-** and **-oo-** cover the different sub-categories of the semantic domain of possibility.

3. Kirundi markers of possibility

Kirundi has four verbal expressions of possibility. All four modal markers can be considered grammaticalized forms, but to different degrees. Grammaticalization is understood here as a category changing process, i.e., from independent lexical morphemes referring to the objective world to grammatical morphemes or function words which no longer refer to the externally described situation, but depend on independent lexemes and convey information on their semantic and/or structural status, for instance on the tense, aspect or modality of the event expressed by the lexical verb. Grammaticalization is primarily a formal process that commonly runs along 'a cline of grammaticality' of the following type: content word > grammatical word > clitic > inflectional affix (Hopper & Traugott 2003: 7). It can be characterized as the increasing morphologization of forms through their 'desyntacticization' (Klausenburger 2000: 142). This morphologization is often accompanied by phonological changes of different sorts, most often reductions (Hopper & Traugott 2003: 154). Although primarily formal in nature, grammaticalization also frequently involves – though not always – meaning change, which can often – though not always – be characterized as a generalization of semantic content, also known as 'semantic bleaching'. Although grammaticalization is a historical process, it is unfortunately quite obvious that we are not really able to see it at work in Kirundi for want of a truly historical corpus. That is why we have to content ourselves in this paper with the study of forms that have presently undergone variable degrees of grammaticalization.

Within the semantic domain of modality, auxiliaries most commonly represent the stage of grammatical word in the cline of grammaticality discussed above. Such is the case in Kirundi. We adopt in this paper the somewhat vague definition of an auxiliary verb as proposed by Anderson (2006: 5), i.e., 'an element that in combination with a lexical verb forms a mono-clausal verb phrase with some degree of (lexical) semantic bleaching that performs some more or less definable grammatical function'. We adhere to this definition on purpose, because there are little or no formal criteria in Kirundi, like in many other languages of the world, that allow to set auxiliaries apart as a discrete class of verbs. Unlike modal auxiliaries in English, Kirundi auxiliary verbs in general do not manifest characteristic morphological or syntactic features differentiating them from other types of verbs. Their specificity is first and foremost semantic in that when used in auxiliary verb constructions, these verbs no longer express their original lexical meaning, but

convey a grammatical meaning, which might otherwise – either in Kirundi or in other languages of the world – be expressed through an inflectional affix. This is not the case for other constructions involving two verbs. Although such a semantic definition may seem at odds with the concept of grammaticalization as a primarily formal development, we will show in this paper that the auxiliary use of modal verbs in Kirundi also has a small albeit significant impact on their morphosyntactic behaviour.

In this section, we will describe the different uses of the four Kirundi markers of possibility. The language data on which this description is based were obtained in two different ways. We relied in the first place on the native knowledge of the second author to gain a preliminary understanding of the semantic domain of possibility in Kirundi. These basic insights were counterchecked and fleshed out further by querying a Kirundi corpus, which we describe in more detail in Section 4. The examples in this descriptive section were either provided by the second author or retrieved from the corpus. The origin of the corpus examples will be elucidated in footnotes. All non-referenced examples are elicited.

3.1. **-bâsh-**

The lexical meaning of the verb **-bâsh-** can be translated as ‘to be active’, ‘to have a strong health’. It is often used as in (6), i.e., in combination with the ‘indicative perstitive’ marker **-racáa-**, which translates as ‘still’.[7]

(6) **erega** **ú-a** **mu-taama** **a-racáa-bâsh-a**
so PP_1-DEMd NP_1-oldster SC_1-IND.PERST-be.active-FV
‘So! That oldster is still in good health.’

Derived from this full verb is the noun **ububăsha** meaning ‘power, strength’. In contrast to the verb, it does not so much refer to physical power, but rather to mental or moral power, as in the expression **ububăsha butabonéka bw’úmupfumú** ‘the invisible power of the soothsayer’. Hence, the example **ububăsha bw’âmâzi** ‘the power of water’, provided by Rodegem (1970: 28), is only considered appropriate by mother tongue speakers if it is used in a figurative sense, i.e., referring to the magic or supernatural power of water.

The verb **-bâsh-** is most typically used as in (6), i.e., without an object noun phrase. Nevertheless, it cannot be taken for an intransitive verb, since it may take an object without any morphological change, as shown in (7). Given that this object noun phrase can always be omitted, **-bâsh-** is not a strictly transitive verb either. It is to be considered ‘ambitransitive’ (Creissels 2006: 2, Dixon & Aikhenvald 2000: 4).

(7) **ú-ryá** **mu-gabo** **a-ra-bâsh-a** **i-n-ryá**
PP_1-DEMc NP_1-man SC_1-PRS.DISJ-cope.with-FV AUG_9-NP_9-food
‘That man is a big eater.’

7. The affix **-racáa-** actually is historically polymorphemic. It consists of the perstitive marker **-ki-**, which is preceded in the indicative by the ‘disjoint’ marker **-ra-** and followed by a residual **-a-**.

The object noun phrase following **-bâsh-** designates the thing to which one devotes or dedicates oneself avidly and/or energetically. This connotation of avidity/energy is crucial here. In this use, the verb is typically associated with food, as in (7). Rodegem (1970: 28) translates the verb as "*être friand de*" and gives the example **ibāsha igitumba** 'she loves salt'. The verb has a similar use in Kinyarwanda. Coupez *et al.* (2005: 148) translate it, among others, as "*manger ou boire beaucoup sans conséquence néfaste*", e.g. **reka abaashe íbiryó** 'let him eat a lot'. However, it can also take object arguments in Kirundi which are not food-related, as in the sentence **Abahútu babāsha isúka** which Rodegem (1970: 28) translates as "*Les Hutu sont surtout cultivateurs*" and considers it as an example of the derived meaning "*être spécialisé*". However, this meaning is nothing more than a specific instantiation of the basic meaning, since this sentence actually reads as 'The Hutu avidly dedicate themselves to the hoe', i.e., they love to hoe and do it with devotion. It is important to note that used this way, **-bâsh-** is always followed by an object noun phrase. It cannot take an infinitive as complement.

The verb can also be reflexivized by means of the reflexive prefix **-i-**. Rodegem (1970: 28) translates **-îbāsha** as "*être capable de (porter de lourdes charges) ; être solide ; (intr.) être grand buveur ; être gourmand ; avoir une grande capacité*". The reflexive verb is also attested in Kinyarwanda (Coupez *et al.* 2005: 984). In present-day Kirundi, it is most typically found in the sense of being capable of carrying heavy loads, as in (8). Although morphologically reflexive, the verb does take an object noun phrase as core argument.

(8) **u-ra-bêsh-a** **nti-u-rwâr-yé** **u-iriru-a**
SC_{2sg}-PRS.DISJ-lie-FV NEG-SC_{2sg}-be.sick-PFV SC_{2sg}-spend.the.day-FV
u-ra-i-bâsh-a **i-mi-fúko** **y'** **a-ma-kára**
SC_{2sg}-PRS.DISJ-REFL-can-FV AUG_4-NP_4-bag $CONN_4$ AUG_6-NP_6-charcoal
'You are lying, you are not sick; you spend the whole day carrying bags of charcoal.'

The object argument of the reflexive verb can also be omitted. The verb translates then as 'being in good health'. In that use, it is most often found in the negative form, but it can also be found affirmatively, as in (9).

(9) **ubu** **n-ra-rwâr-ye** **tu-zoo-bón-an-a** **mu**
now SC_{1sg}-PRS.DISJ-be.sick-PFV SC_{1pl}-FUT-see-ASSOC-FV LOC_{18}
n-dwi **i-zá** **ni** **hó**
NP_9-week SC_9-come it.is there
n-zoo-bá **ń-i-bâsh-a**
SC_{1sg}-FUT-be.REL CONJ.SC_{1sg}-REFL-be.healty-FV
'For the time being I am sick; we will see each other next week, then I will be well.'

The verb **-bâsh-** may also occur in an 'auxiliary verb construction' (Anderson 2006: 7). In such a mono-clausal structure, it functions as an auxiliary and combines with a lexical verb – the auxiliate – that always follows **-bâsh-** and occurs in the

infinitive. While the main verb contributes lexical content to the construction, **-bâsh-** expresses participant-inherent dynamic possibility, as in (10). It indicates that the state of affairs expressed by the main verb is a capacity or ability fully inherent to the first-argument participant. It typically conveys a specific meaning of physical ability, but this may be extended to mental ability.

(10) **i-bi-fŭngurwa** **bi-N-zan-ír-á** **a-ma-gará**
AUG$_8$-NP$_8$-food SC$_8$-OC$_{1sg}$-bring-APPL-FV.REL AUG$_6$-NP$_6$-energy
m-bâsh-é **ku-kór-a** **i-bi-ó** **u-shaak-á**
SC$_{1sg}$-be.able-SUBJ NP$_{15}$-do-FV AUG$_8$-PP$_8$-DEMb SC$_{2sg}$-want-FV
'Food that gives me energy so that I can do what you want.'

As soon as **-bâsh-** is followed by an infinitive verb, it loses the specific connotation of doing something with avidity/energy, which it conveys when followed by an object noun phrase. Even though the modal meaning of **-bâsh-** is close to its lexical meaning, it underwent semantic generalization. In contrast to the example in (11a), provided by Rodegem (1970: 28) and discussed above, the sentence in (11b), incorporating the infinitival causative form of the verb **-rima** 'to cultivate', could not be translated as 'Those Hutu will avidly dedicate themselves to cultivating with the hoe'. The modal auxiliary **-bâsh-** simply conveys participant-inherent possibility here.

(11) a. **a-ba-hutú** **ba-bâsh-a** **i-súka**
AUG$_2$-NP$_2$-Hutu SC$_2$-dedicate.oneself.avidly-FV AUG$_9$-hoe
'The Hutu avidly dedicate themselves to the hoe' (i.e. agriculture is their specialisation).

b. **a-bo** **ba-hutú** **ba-zoo-bâsh-a** **ku-rim-iish-a**
AUG$_2$-DEMb NP$_2$-Hutu SC$_2$-FUT-can-FV NP$_{15}$-cultivate-CAUS-FV
i-súka
AUG$_9$-hoe
'Those Hutu will be able to cultivate with a hoe.'

According to the data in Coupez *et al.* (2005: 148), the cognate of **-bâsh-** in Kinyarwanda has the same auxiliary use as marker of participant-inherent dynamic possibility. Bastin *et al.* (2002) propose the regional reconstruction ***-báac-** 'be able', which reflects the recurrence of the verb among the Great Lakes Bantu languages. It is for instance found in Mashi (JD53) (Bashi Murhi-Orhakube 2005: 251, Polak-Bynon 1978: 54).

3.2. **-shóbor-**

This auxiliary is the most prominent modal verb involved in the expression of possibility, since it covers all potential sub-categories of the semantic domain of modality. Except in some very restricted contexts, this auxiliary is followed by an infinitive. Its non-auxiliary use has become very restricted. However, similar to **-bâsh-**, it may also take as core argument an object noun phrase, as in (12), or an

anaphoric object concord, as in (12) and (13). Unlike **-bâsh-**, its complement cannot be omitted. The lexical verb **-shóbor-** is always used transitively. When followed by an object noun phrase or taking an object concord referring to an object noun phrase, **-shóbor-** is translatable as 'to be able to cope with', which approximates the dynamic modal meaning the verb expresses when used as an auxiliary. In (13), it receives the specific reading 'to fool, to trick (someone)', 'to beat in a competition'.

(12) **u-o** **mú-ana** **a-ra-shóbor-a** **u-mu-fúko**
PP$_1$-DEMb NP$_1$-child SC$_1$-PRS.DISJ-can-FV AUG$_3$-NP$_3$-bag
w'í-bi-ró **cúmi** **a-ra-ú-shóbor-a**
of.AUG$_8$-NP$_8$-kilo ten SC$_1$-PRS.DISJ-OC$_3$-can-FV
'That child can cope with a bag of ten kilos. He can deal with it.'

(13) **gend-a** **tu-ra-gu-shóbor-ye** **sha**
go-FV.IMP SC$_{1pl}$-PRS.DISJ-OC$_{2sg}$-can-PFV chap
'Go away! We've had you, chap!'

In the absence of historical data, it is difficult to say whether these restricted non-auxiliary uses of **-shóbor-** are relics of its original lexical use or whether we are dealing here with an instance of 'de-auxiliarization' accompanied by a 'gain in semantic substance', i.e., lexical meaning, a composite process which Norde (2009: 135) calls 'degrammation'.[8] Since this type of degrammaticalization is very rare in the languages of the world (Norde 2009: 135ff), we most probably deal here with the continued existence of an earlier, not yet grammaticalized usage of **-shóbor-**. This may lead to the development of new lexical meanings from a verb mainly used as an auxiliary, a semantic change type called 'retraction' in Haspelmath (2004: 33ff), which does not necessarily involve degrammaticalization in the structural domain. Possibly indicative of the original lexical meaning of **-shóbor-** is the meaning 'to be wealthy' of its lexicalized reflexive form **-i-shóbor-**, exemplified in (14).

(14) **u-ryá** **a-ra-i-shóbor-ye** **a-gur-a**
PP$_1$-DEMc SC$_1$-PRS.DISJ-REFL-can-PFV SC$_1$-buy-FV
i-ki-ó **a-shaak-á** **ki-óóse**
AUG$_7$-PP$_7$-DEMb SC$_1$-want-FV.REL PP$_7$-all
'That one is wealthy; he buys whatever he wants.'

The noun **abatîshóboye**, derived from the negative of this reflexive form, is the politically correct term to designate "economically weak persons", in other words the poor. It resembles the noun **intáshobóra** provided by Rodegem (1970: 429) with the translation "*impuissant*". It would be derived from the negative base verb, but this term is not accepted by present-day Kirundi speakers and is not found in

8. Although the meaning of **-shóbor-** when used as a full verb is close to the modal meanings it conveys as an auxiliary, we certainly do not deal here with 'de-auxiliarization without de-modalization', i.e., the structural evolution of an auxiliary to a full verb without the loss of its modal meaning, of which Nuyts (forthcoming) recently described a case in Dutch.

our corpus either. The same is true for the meaning "*être puissant*" which Rodegem (1970: 429) gives as one of the translations of the base verb and which would be a plausible candidate for the original lexical meaning. However, modern-day Kirundi speakers do not accept this meaning either, nor is it found in our corpus. One cannot say, for instance, **umwǎmi arashóbora** 'the king is mighty' in current-day Kirundi. It does occur with this meaning in the anthroponym (**Imâna**) **Mushóboravyöse** '(God) the Almighty' or **Imâna ishobóra vyöse** 'God the Almighty', of which the Kinyarwanda equivalent is **Ushóbora byóose** "*Dieu le Tout Puissant*" (Coupez *et al.* 2005: 2218). One could consider these expressions as archaisms having retained the original lexical meaning of **-shóbor-**. Syntactically and semantically, these constructions are close to the non-auxiliary use of the verb exemplified in (12). The first is a 'complemented agent noun' (Schadeberg 2003: 88), literally meaning 'the one being able to cope with all things', and the second is a subject relative construction translatable as 'the one who can cope with everything', **vyöse** being the object complement. The derived noun **ubushóbozi** translated by Rodegem (1970: 429) as "*faculté, pouvoir, puissance*" is another lexicalized item which might reflect the possible original meaning 'to be mighty, powerful'. Although it does marginally occur in modern Kirundi, native speakers tend to consider it as a word of Kinyarwanda origin where it is attested indeed, with the meaning "*capacité de faire*" (Coupez *et al.* 2005: 2218). It is obvious that the original meaning of **-shóbor-** is difficult to retrieve for lack of historical data. In contrast to **-bâsh-**, it no longer has a distinct lexical meaning in Kirundi. The meaning it adopts in its non-auxiliary use is near-modal. Comparative research could be useful for the reconstruction of the verb's etymology. Indicative in this respect is the fact that the cognate verb **-sóból-** in Luganda (JE15), another Great Lakes Bantu language, also translates as 'to be able to cope with, to manage, to master, to succeed' when used as a lexical verb (Kawalya *et al.* forthcoming). That said, the modal uses of **-shóbor-** are probably older than Kirundi, since it is also attested as a modal auxiliary in closely related Bantu languages, such as Kinyarwanda (Coupez *et al.* 2005: 2218), Kiha (Harjula 2004: 146), Kihavu (Aramazani 1985: 300) and Luganda (Kawalya *et al.* forthcoming). The reconstruction ***-còbʊd-** which Bastin et al. (2002) propose for Great Lakes Bantu with the meaning 'to be able to' points in the same direction.

Unlike the reconstruction of the original lexical meaning of **-shóbor-**, the description of its modal uses is quite straightforward. The auxiliary **-shóbor-** simply covers all sub-categories of the semantic domain of possibility, to start with dynamic possibility. Followed by the infinitive of the main verb expressing the state of affairs, it may express participant-inherent possibility, as in (15).

(15)	**a-á-ra-shóbor-ye**	**ku-tu-gáanir-ir-a**	**kuri**	**Mareza**
	SC_1-REM-DISJ-can-PFV	NP_{15}-OC_{1pl}-tell-APPL-FV	about	Mareza
	'He was capable of telling us about Mareza.'[9]			

In the same construction, it may also express participant-imposed dynamic possibility, as in (16).

9. This corpus example was retrieved from an unpublished 2009 UNESCO report on Burundese cultural heritage.

(16) **n-ra-shóbor-a** **ku-siinziir-a** **ha-ri-hó** **i-ki-tănda**
SC_{1sg}-PRS.DISJ-can-FV NP_{15}-sleep-FV SC_{16}-be-LOC_{16} AUG_7-NP_7-bed
'I can sleep (because) there is a bed.'

Examples of the situational dynamic potential use of **-shóbor-** are given in (17) and (18).

(17) **u-u-kómow-ye** **n'î-n-zóka** **a-ra-shóbor-a** **gu-pfa**
AUG_1-PP_1-bite.PASS-PFV by.AUG_9-NP_9-snake SC_1-PRS-can-FV NP_{15}-die
'Someone bitten by a snake may die (of it).'

(18) **i-n-nyoni** **i-ra-shóbor-a** **ku-arik-a** **mu** **n-zu**
AUG_9-NP_9-bird SC_9-DISJ-can-FV NP_{15}-nest-FV LOC_{18} NP_9-house
'A bird can nest in a house.'

In an auxiliary verb construction where **-shóbor-** expresses dynamic possibility, a lexical verb – if previously mentioned – can always be replaced and referred to by an anaphoric object marker on the auxiliary. As shown in (19), the object concord used in such a case is not the class 15 object marker, which would express mechanic agreement with the class 15 noun prefix of the infinitive, but the object concord of class 8, which is the default impersonal marker in Kirundi (see also its use as subject marker with **-shóbok-** in Section 3.3). If we turned, for instance, the example in (18) into a question, the answer could be as in (19).

(19) **eegó** **i-n-nyoni** **i-ra-bi-shóbor-a**
yes AUG_9-NP_9-bird SC_9-DISJ-OC_8-can-FV
'Yes, a bird can (do) it.'

In addition to dynamic possibility, **-shóbor-** may be used to express deontic possibility, as in (20).

(20) **a-ba-ntu** **ba-ó** **mu** **mi-ryango** **i-óóse**
AUG_2-NP_2-person PP_2-CONN LOC_{18} NP_4-clan PP_4-all
ba-á-ra-shóbor-a **ku-bandw-a**
SC_2-REM-DISJ-can-FV NP_{15}-participate.in.the.Kiranga.cult-FV
'People of all clans were allowed to participate in the Kiranga cult.'

In an auxiliary verb construction where **-shóbor-** expresses deontic possibility, the lexical verb can never be replaced and referred to by an anaphoric object marker on the auxiliary. This indicates that the syntactic cohesion between the auxiliary and the auxiliate is stronger in the case of deontic possibility than in the case of dynamic possibility. The syntactic status of the auxiliary has become less autonomous. In the question in (21a), permission is asked to express an opinion. The sentence in (21b) is a proper answer to this question. The entire auxiliary verb construction is retaken – both auxiliary and auxiliate – and the object noun phrase of the question is referred to by a co-referential class 7 object concord which occurs on the lexical verb and not on the auxiliary. The sentence in (21c) would not be a proper answer

to the question in (21a). If an impersonal object concord of class 8 referring to the auxiliate and its complement occurs on the auxiliary, **-shóbor-** necessarily conveys dynamic possibility, as in (19). Expressing an opinion would be interpreted as a capacity here and not as something permitted. A loss in syntactic freedom in the structural domain clearly goes together with further developed modality in the semantic domain.

(21) a. **n-ra-shóbor-a** **ku-shikiriz-a** **i-ki-íiyumviiro**
SC_{1sg}-DISJ-can-FV NP_{15}-express-FV AUG_7-NP_7-opinion
'Can I express an opinion?'

b. **eegó** **u-ra-shóbor-a** **ku-ki-shikiriz-a**
yes SC_{2sg}-DISJ-can-FV NP_{15}-OC_7-express-FV
'Yes, you can express it.'

c. **eegó** **u-ra-bi-shóbor-a**
yes SC_{2sg}-DISJ-OC_8-can-FV
'Yes, you are able to do it.' (**'Yes, you are allowed to do it')

The auxiliary **-shóbor-** is also involved in the expression of epistemic possibility. However, in this modal use, it always combines with the infinitive of the auxiliary **-bá** 'to be' which is in turn followed by the main verb in the 'conjunctive mood' (Ntahokaja 1994), as in (22). The conjunctive marker is a high tone that is generally realized on the syllable following the subject concord. It refers to an action that is associated with another – hence the idea of conjunction – in terms of conditionality, simultaneity, opposition, concession, etc. It also occurs after the so-called 'conjunctive' verbs, e.g. **kubóna** 'see', **gusânga** 'find', **gusíga** 'let, leave', **kwûmva** 'feel, hear', as well as after the modal adverb **nkeeká** 'maybe' and after certain auxiliaries, such as **kubá** 'to be' (Cristini 2000: 166-7, Meeussen 1959: 109).

(22) **u-u-jîsh-a** **i-bi-ziriko** **a-shóbor-a** **ku-bá**
PP_1-SC_1-plait-FV AUG_8-NP_8-rope SC_1-can-FV NP_{15}-be
´-a-a-ra-bi-i-têr-ir-ye
CONJ-SC_1-REM-DISJ-OC_8-REFL-plant-APPL-PFV
'Someone who plaits ropes may have planted them (for) himself.'[10]

When expressing epistemic possibility, **-shóbor-** thus occurs in an auxiliary verb construction incorporating another auxiliary in the infinitive form and a finite lexical verb. As we observed for deontic possibility, the syntactic cohesion between these three verbs in the mono-clausal construction is strong. They necessarily occur in this order and none of them can be replaced and referred to by an impersonal object concord of class 8. The class 8 object concord on the lexical verb **-têr-** 'to plant' in (22) is not impersonal, but refers to the previously mentioned **ibiziriko** 'ropes'. Just like in (21), only the object noun phrase of the auxiliate can be replaced and referred to by a co-referential object concord.

10. This example was found in the same unpublished 2009 UNESCO report on Burundese cultural heritage.

3.3. **-shóbok-**

The verb **-shóbok-** is historically related to **-shóbor-**. It can somehow be considered as its intransitive equivalent, being translatable as 'to be possible'. If **-shóbor-** is a reflex of the reconstruction ***-còbʊd-**, **-shóbok-** regularly corresponds to ***-còbʊk-** 'be possible' (Bastin *et al.* 2002). The intransitive ***-ʊk-** and transitive ***-ʊd-** extensions are usually commutable and have been reconstructed to Proto-Bantu as 'reversive' or 'separative' derivational suffixes (Meeussen 1967: 92, Schadeberg 2003: 77). Both are often found with other meanings than 'separative' in Bantu, e.g. 'intensive' or 'repetitive' (Dammann 1959). Their polysemous nature is to a great extent due to the fact that they are never fully productive (Schadeberg 2003: 77). They tend to be lexicalized, making them prone to idiosyncratic semantic change. In the pair **-shóbor-**/**-shóbok-**, for example, none of the common Bantu meanings of ***-ʊd-**/***-ʊk-** is still identifiable. Moreover, verb roots extended with ***-ʊd-**/***-ʊk-** are often lexicalized to such an extent that they no longer correspond to a base verb. Such is the case for **-shóbor-**/**-shóbok-**, both in Kirundi and common Bantu. A simple verb ***-còb-** from which both could plausibly be derived has not been reconstructed (Bastin *et al.* 2002).

In Kirundi, **-shóbok-** only has modal uses. It does not occur with lexical meanings that could be considered pre-modal. At the same time, it cannot be considered as a true auxiliary, because it never combines directly with a main verb within a mono-clausal auxiliary verb construction. The verb **-shóbok-** is involved in three different constructions to express possibility. First, it may take a noun phrase as a subject in a formula of the type '… is possible', as in (23) below. The subject concord on the verb – in this case of class 14 – is in agreement with the subject noun phrase, i.e., **uburyó** belonging to noun class 14. In a second construction, **-shóbok-** is preceded by a verb in the infinitive form, as **gu-toohooza** in (24), which can be considered to be the subject. Hence, **-shóbok-** may take a subject concord of class 15 in agreement with this infinitive. However, it is most commonly found with the default impersonal subject marker of class 8, as in (24). In a third and final construction, as in (25), there is no explicit subject. The verb **-shóbok-** also takes the default impersonal subject marker of class 8 and is followed by a complement clause introduced by **kó** in a formula of the type 'It is possible that…'.

Just like its transitive equivalent **-shóbor-**, **-shóbok-** covers the three main sub-categories of the semantic domain of possibility, i.e., dynamic, deontic and epistemic. Within the sub-domain of dynamic modality, **-shóbok-** most naturally expresses situational possibility owing to its unaccusative nature. It is an intransitive verb whose subject is not an agent actively initiating the state of affairs referred to. In the examples (23) to (25) below, **-shóbok-** designates a potential which does not so much pertain to a specific participant in the state of affairs, but rather concerns the situation described as a whole.

(23) **u-bu-ryó** **bu-ó** **ku-ba-vuur-a**
AUG$_{14}$-NP$_{14}$-means PP$_{14}$-CONN NP$_{15}$-OC$_{2}$-can-FV
bu-ra-shóbok-a
SC$_{14}$-DISJ.PRS-be.possible-FV
'The means to heal them exist (*lit.* are possible).'

(24) **gu-toohooza** **ku** **bu-zima** **bu-á** **a-ba-twá**
NP_{15}-survey LOC_{17} NP_{14}-life PP_{14}-CONN AUG_2-NP_2-Twa
bi-ra-shóbok-a **ubu**
SC_8-DISJ.PRS-be.possible-FV now
'A survey on the life of the Twa people is possible now.'

(25) **bi-ra-shóbok-a** **kó** **i-n-kóno** **i-gu-á**
SC_8-DISJ.PRS-be.possible-FV that AUG_9-NP_9-pot SC_9-fall-FV
haasí **nti-í-menek-e**
down NEG-SC_9-break-FV
'It is possible that a pot falls down without breaking.'

Even if the potential situation ensues from the inherent (in)ability of participants, such as **abantu** 'people' and **Imâna** 'God' in the Kirundi saying in (26), the pragmatic inference of using **-shóbok-** is that it is the possibility of the situation as such that matters rather than the persons or conditions which enable it. In (26), both instances of **-shóbok-** are transitivized by means of the applicative suffix and take the persons who make the situation (im)possible as applied objects.

(26) **i-bi-ta-shóbok-ir-a** **a-ba-ntu**
AUG_8-PP_8-NEG-be.possible-APPL-FV AUG_2-NP_2-person
bi-shóbok-ir-a **i-n-mâna**
SC_8-be.possible-APPL-FV AUG_9-NP_9-God
'What is impossible for men is possible for God.'

Similarly, in (27), we deal with an inherent ability of the 2sg participant, who is the subject of the complement clause. However, by using the impersonal **-shóbok-** construction, emphasis is laid on the possibility created rather than on the person having the ability. In the latter case, one would rather use **-shóbor-**, as in (28).

(27) **´-u-umv-a** **bí-shóbok-a** **kó** **u-háguruk-a**
CONJ-SC_{2sg}-feel-FV SC_8-be.possible-FV that SC_{2sg}-stand.up-FV
ingo **tu-vu-é** **aha**
come SC_{1pl}-leave-SUBJ here
'If you feel that it is possible to stand up, let us leave here.'[11]

(28) **´-u-umv-a** **ú-shóbor-a** **ku-háguruk-a**
CONJ-SC_{2sg}-feel-FV SC_{2sg}-can-FV NP_{15}-stand.up-FV
ingo **tu-vu-é** **aha**
come SC_{1pl}-leave-SUBJ here
'If you feel you are able to stand up, let us leave here.'

If the modal verb **-shóbok-** is used to express deontic or epistemic possibility, as in (29) and (30) respectively, it also pertains to the situation, which is permitted/acceptable or may have taken place rather than to the participants involved.

11. This corpus example was heard in a radio play broadcast on the National Radio of Burundi (RTNB) in 2011.

(29) **bi-á-ra-shóbok-a** **kó** **u-mu-ámi** **a-im-a**
SC_8-REM-DISJ-can-FV that AUG_1-NP_1-king SC_1-be.enthroned-FV
-a-kí-ri **u-mu-âna**
CONJ-SC_1-PERST-be AUG_1-NP_1-child
'It was possible that a king was enthroned in his childhood.'

(30) **u-u-o** **mu-kŏbwa** **a-á-ra-bón-an-ye**
AUG_1-PP_1-DEMb NP_1-girl SC_1-REM-DISJ-see-ASSOC-PFV
ná **a-ba-hŭngu** **bi-oo-shóbok-a** **kó**
with AUG_2-NP_2-boy SC_8-POT-be.possible-FV that
a-tá-ki-rí **i-sugi**
SC_1-NEG-PERST-be AUG_5-virgin
'That girl has met boys. She might no longer be a virgin.'

As one can observe in (30), the modal verb **-shóbok-** can be combined with the potential affix **-oo-**, which we discuss in the next section. This combination is optional. The potential affix can be dropped without any effect on the meaning conveyed.

3.4. The potential affix **-oo-**

The Kirundi potential affix **-oo-** occurs in the verb slot where Bantu TAM markers typically occur, i.e., in-between the subject concord and the verb root, also preceding the object concord if present. It cannot be combined with another TAM marker, unlike in neighbouring Kinyarwanda where the potential marker **-aa-** can be combined with the future marker (Shimamungu 1991: 387). The Kirundi potential marker **-oo-** is optionally combinable with the modal verbs **-shóbor-**, as in (35) below, and **-shóbok-**, as in (30) above, as long as no other segmental TAM marker is needed. The semantic range of **-oo-** covers all sub-categories of the semantic domain of possibility, but also certain sub-categories of necessity. It even incorporates non-modal meanings, in particular the conditional. All these uses will be discussed starting with its use as a potential marker.

The **-oo-** affix is found conveying the different types of dynamic possibility, i.e., participant-inherent as in (31), participant-imposed as in (32) and (33), and situational, as in (34). If it expresses participant-imposed possibility, it is often accompanied either by another main clause specifying the participant-external conditions, as in (32), or by a subordinate conditional clause having the same function, as in (33). In Kirundi, conditional clauses are generated in two ways, either with a verb in the conjunctive mood, as in (33), or with the same **-oo-** affix, as discussed below, see example (39).

(31) **u-mu-taama** **u-éése** **a-oo-cí-a** **u-mu-ganí**
AUG_1-NP_1-old.man PP_1-all SC_1-POT-tell-FV AUG_3-NP_3-story
'Every old man can tell a story.'

(32) **mu n-zu ha-ri a-ka-céreré n-oo-siinziir-a**
LOC$_{18}$ NP$_9$-house SC$_{16}$-be AUG$_{12}$-NP$_{12}$-silence SC$_{1sg}$-POT-sleep-FV
'There is silence in the house; I can sleep.'

(33) **tú-andik-ye i-bi-tabo a-ba-ntu**
SC$_{1pl}$.CONJ-write-PFV AUG$_8$-NP$_8$-book AUG$_2$-NP$_2$-person
ba-oo-som-a ka-áhise ká-acu
SC$_2$-POT-read-FV NP$_{12}$-history PP$_{12}$-our
'If we write books, people can read our history.'

(34) **i-ki-kôkó ki-ba-an-á ná a-ba-ntu**
AUG$_7$-NP$_7$-animal SC$_7$-live-ASSOC-FV with AUG$_2$-NP$_2$-person
ki-oo-ba-hó
SC$_7$-POT-be-SS$_{17}$
'An animal living with people may exist.'

The example in (35) shows two instances of **-oo-** expressing deontic possibility, once entirely on its own and once in combination with **-shóbor-**, which does not behave as a true auxiliary here. It is no longer followed by the aforementioned main verb **kuryá** 'to eat'. The latter is anaphorically referenced on **-shóbor-** by means of the default class 8 object concord which is to be considered impersonal here.

(35) **a-ba-twá bá-onyené ba-oo-rí-a i-n-taama**
AUG$_2$-NP$_2$-Twa PP$_2$-only SC$_2$-POT-eat-FV AUG$_9$-NP$_9$-sheep
a-ba-hutú ná a-ba-tuutsi nti-ba-oo-bi-shóbor-a
AUG$_2$-NP$_2$-Hutu and AUG$_2$-NP$_2$-tutsi NEG-SC$_2$-POT-OC$_8$-can-FV
'Only Twa people can eat mutton, Hutu and Tutsi people cannot (do it).'[12]

The affix **-oo-** is equally involved in the expression of epistemic possibility. Similar to what we observed with **-shóbor-**, see (22), this modal use always involves the auxiliary **-bá** 'to be' followed by the main verb in the conjunctive mood, as shown in (36).

(36) **u-u-o mu-genzo u-oo-bá-a**
AUG$_3$-PP$_3$-DEMb NP$_3$-custom SC$_3$-POT-be-FV
´-u-á-tangur-an-ye ná u-mu-ámi Ntáre
CONJ-PST-SC$_3$-begin-ASSOC-PFV with AUG$_1$-NP$_1$-king Ntare
'That custom would have arisen with king Ntare.'[13]

12. The presence of the potential marker **-oo-** explains why the auxiliary **-shóbor-** may take an impersonal class 8 object concord here, referring to the earlier-mentioned main verb and still express deontic possibility. If one omits **-oo-**, this form could only express dynamic possibility.
13. This example was also found in the above-mentioned 2009 UNESCO report on Burundese cultural heritage.

Recall that the modal uses of the marker **-oo-** go beyond the semantic domain of possibility. Indeed, it may also refer to two subtypes of necessity, i.e., participant-imposed dynamic necessity, as in (37), and deontic necessity, as in (38). In order to seize the deontic character of the sentence in (38), a few words are needed on the context of enunciation. This sentence is uttered by the father of the bridegroom during a wedding ceremony and is addressed to the father of the bride. The words **kanyána** and **kashuuri**, diminutives of **inyána** 'female calf' and **ishuuri** 'male calf', refer here metaphorically to the bride and the bridegroom. The utterance pertains to the societal norm of patrilocal or virilocal residence, which implies that the married couple is expected to reside with or near the husband's parents. Within the domain of deontic necessity, **-oo-** rather expresses a recommendation than a strong obligation. Hence, it is semantically closer to **-kwîra** 'to be suitable, preferable' than **-tégerezwa** 'must, have to'.

(37) **mu** **ku-meny-a** **i-zi-o** **n-rírimbo**
LOC_{18} NP_{15}-know-FV AUG_{10}-PP_{10}-DEMb NP_{10}-song
u-mu-ntu **a-oo-ku-úmviriz-a** **a-ha-o**
AUG_1-NP_1-person SC_1-POT-NP_{15}-listen-FV AUG_{16}-PP_{16}-DEMb
zi-ririmb-u-á **ku** **n-saamirizi**
SC_{10}-sing-PASS-FV.REL LOC_{17} NP_9-radio
'To master those songs, one needs to listen to them when being sung on the radio.'[14]

(38) **a-ka-o** **ka-nyána** **w-oo-ka-N-hêrez-a**
AUG_{12}-PP_{12}-DEMb NP_{12}-female.calf SC_{2sg}-POT-OC_{12}-OC_{1sg}-give-FV
ka-ka-kur-an-a **ná** **a-ka-shuuri** **ka-anje**
SC_{12}-SUBS-grow-ASSOC-FV with AUG_{12}-NP_{12}-male.calf PP_{12}-$POSS_{1sg}$
'That little female calf, you should give it to me so that it grows with my little male calf.'[15]

The semantic scope of **-oo-** not only covers the semantic domain of possibility and necessity, it also includes non-modal uses. Its principal non-modal use is as conditional marker. However, **-oo-** can occur in the conditional clause or *protasis*, if and only if the main clause or *apodosis* conveys the notion of possibility, most naturally participant-imposed possibility, as in (39). This meaning will most typically also be expressed by **-oo-** in the main clause, but it can also be conveyed by **-shóbor-** or a combination of both. Moreover, the use of **-oo-** in the main clause can be combined with another marker in the conditional clause, such as the 'conjunctive' in (40).

(39) **jyeewé** **n-oo-shik-á** **i-bu-Ruúndi**
me SC_{1sg}-POT-arrive-FV.REL[16] LOC_{19}-NP_{14}-Burundi

14. *Idem*.
15. This corpus example has been taken from a forthcoming reprint of the book of Mayugi and Ndayshimiye (1985).
16. The high tone on the final vowel of **nooshiká** is characteristic of relative verb forms in

n-oo-ciik-a **u-mu-ámi**
SC_{1sg}-POT-become-FV AUG_1-NP_1-king
'If I arrived in Burundi, I would be king.' (Meeussen 1959: 123)

(40) **´-u-hór-ye** **n-oo-shóbor-a** **ku-som-a**
CONJ-SC_{2sg}-shut.up-PFV SC_{1sg}-POT-can-FV NP_{15}-read-FV
'If you shut up, I can read.'

The example in (41) can also be considered as a conditional, but with a special pragmatic usage. The main clause is left implicit, while the conditional clause is meant as a prohibitive. This is a nice example of a modal used to convey 'speech act performativity' (Nuyts 2006:15). Given that we are dealing with a linguistic act addressed to a hearer, we actually deal with intersubjectivity, at least on a pragmatic level.

(41) **aríko** **u-oo-N-egeer-ir-a** **u-mu-âna**
but SC_{2sg}-POT-OC_{1sg}-approach-APPL-FV AUG_1-NP_1-child
'But if you dare to approach my child…'
READ: 'Do not dare to approach my child.'[17]

The affix **-oo-** not only occurs in conditional clauses. It is also found in other types of subordinate clauses, especially complement clauses introduced by the complementizer **kó** 'that', though not very often. They are observed, for instance, in complement clauses following 'directive' verbs, such as **-tégek-** 'to order' in (42). It is evident that this use of **-oo-** comes close to its use as a marker of deontic necessity in main clauses. Although it seems to be a relatively marginal phenomenon in Kirundi, the directive use of this modal affix merits further study, because the close link between deontic modality and directivity has been observed elsewhere (see Nuyts *et al.* 2010 for a detailed discussion of this phenomenon in Dutch).

(42) **ba-ci-a** **ba-mu-tégek-a** **kó**
SC_2-AUX–FV SC_2-OC_1-order-FV that
a-oo-ba-jabuk-i-a **u-mu-ônga**
SC_1-POT-OC_2-cross-CAUS-FV AUG_3-NP_3-stream
'Thereafter, they ordered him that he should make/help them cross the river.'[18]

Similarly, **-oo-** is also found in complement clauses following 'volitional' verbs, such as **-îpfuuz-** 'wish' in (43).

Kirundi (see Meeussen 1959: 109). This means that **-oo-** can only express conditionality when it occurs in a relative verb form.

17. This corpus example was heard in a radio play broadcast on the National Radio of Burundi (RTNB) in 2011.

18. This corpus example originates from a news item published on the website *http://burundi.news.free.fr* (24/7/2009).

(43) **tu-ipfûz-a** **kó** **a-ba-sirikare** **ba-oo-shígikir-a**
SC_{1pl}-wish-FV that AUG_2-NP_2-army SC_2-POT-support-FV
i-teerambere
AUG_5-development
'We wish that military troops could/would support development.'[19]

Complement clauses following directive and volitional verbs, as in (42) and (43), are contexts where one would typically expect the so-called 'Subjunctive' in Bantu (Devos 2008). This conjugation, which is very common in Bantu languages, is marked by a final **-e** suffix and a distinctive tone pattern, in which both the subject marker and the final **-e** carry a high tone (Meeussen 1967: 112, Nurse & Philippson 2006: 179). The subjunctive also exists in Kirundi and it may occur in complement clauses introduced by the complementizer **ngo** (Meeussen 1959: 113-5). However, it is not naturally found in complement clauses following directive or volitional verbs.

Furthermore, replacive clauses also involve the marker **-oo-**. Such a subordinate clause is introduced by the locative demonstrative **ahó** which is followed either by a verb marked with **-oo-**, as in (44), or by an infinitive.

(44) **a-ha-ó** **ba-oo-vúg-yé** **u-mu-ryaango**
AUG_{16}-PP_{16}-DEMb SC_2-POT-say-PFV.REL AUG_3-NP_3-clan
ba-ka-vúg-a **a-ba-rí** **murí** **u-o**
SC_2-SUBS-say-FV AUG_2-SC_2-be LOC_{18} PP_3-DEMb
'Instead of saying the name of the clan, they say the name of those who belong to it.'[20]

Apart from these subordinate uses of **-oo-**, it seems as if this marker is also involved, at least historically, in future marking. The Kirundi future marker **-zoo-** is used in the same verb slot as the potential marker **-oo-**, cannot be combined with the latter, and consists of the same long vowel, which is not present in other Kirundi TAM markers. From a semantic point of view, it should not surprise that a possibility marker is part of a future marker, given the closeness of both meanings. The semantic change from possibility to future is not uncommon in the languages of the world (van der Auwera & Plungian 1998: 94). This hypothesis is all the more likely, when one takes into account the data in (45). The potential and future markers display a similar congruency in Kirundi's closest relatives, i.e. Kinyarwanda and Kiha.

(45) Potential and future markers in three Great Lakes Bantu languages

	Potential	Future
Kirundi (standard)	**-oo-**	**-zoo-**
Kirundi (eastern dialects)	**-oo-**	**-roo-**
Kiha (Harjula 2004)	**-oo-**	**-roo-**
Kinyarwanda (Shimamungu 1991)	**-aa-**	**-zaa-**

19. This corpus example is taken from a speech delivered by Michel Micombero (1940-1983), the first president of Burundi, on 7 March, 1974.

20. This corpus example has also been taken from the forthcoming reprint of the book of Mayugi and Ndayshimiye (1985).

Taking into account the grammaticality cline lexical verb > auxiliary > inflectional affix, the marker **-oo-** can be considered a more strongly grammaticalized form than the auxiliaries involved in the expression of possibility. This is no doubt the reason why we no longer have a clue on its etymological origin. The overview in (45) clearly shows that identical or similar forms exist in the closest relatives of Kirundi and further comparative research might reveal cognates in other Great Lakes Bantu languages. However, as is often the case for Bantu TAM markers, retrieving the ultimate origin of this inflectional affix will probably turn out to be impossible.

3.5. Summary

Table 1 offers an overview of the semantic range of each of the Kirundi verbal markers involved in the expression of possibility. The verb **-bâsh-** is clearly the least developed modal auxiliary. It is exclusively used to express participant-inherent dynamic possibility.[21] Besides its modal auxiliary use, it is still productive as a full verb with a distinctive lexical meaning. When used in combination with an infinitive verb in a mono-clausal construction to express participant-inherent dynamic possibility, its morpho-syntactic behaviour is not different from its 'ambitransitive' use as lexical verb. In other words, its degree of grammaticalization as auxiliary is low and its semantic evolution from a content word to a function word seems to be nascent. At the other end of the spectrum, the marker **-oo-** is the most grammaticalized along the full verb > auxiliary > affix cline. It is a bound grammatical morpheme whose etymology is completely opaque. It is the most polysemic of all markers involved in the expression of possibility in Kirundi. It does not only cover the entire semantic domain of possibility, which seems to be its core meaning. Its semantic range was also extended to the domain of necessity. It furthermore developed non-modal meanings, of which the conditional is the most prominent, and it is probably a historical component of the future marker. In other words, the marker **-oo-** not only grammaticalized the most in the structural domain, it also underwent the most advanced semantic generalization, which is traditionally seen as one of the typical features of grammaticalization (Bybee *et al.* 1994, Heine *et al.* 1991). The generalization of its semantic content made it apt for a wider range of grammatical functions. The verbs **-shóbor-** and **-shóbok-**, which are historically related, take an intermediate position in terms of grammaticalization and semantic change. The verb **-shóbor-** almost exclusively functions as an auxiliary whose semantic range covers the entire domain of possibility. It no longer has a clearly distinguishable lexical meaning. In the rare instances where it still takes, as a

21. An anonymous reviewer suggested that restrictions imposed to semantic selection in the argument structure might explain why **-bâsh-** can only express participant-inherent possibility, i.e., the fact that **-bâsh-**, unlike **-shóbor-**, can only take a [+animate/agentive] subject argument. We think that this does not play a role. First, although **-bâsh-** does indeed most naturally take an animate subject, it can also take non-animate subjects, like in the sentence **iyi módoká irabâsha igitoro** 'this car is keen on petrol', meaning that it consumes a lot of fuel. Moreover, if **-bâsh-** could really only take an animate subject, nothing would prevent it from also conveying participant-imposed possibility, and in certain cases, even situational dynamic possibility.

full verb, an object noun phrase, its meaning is very close to the dynamic modal meanings it conveys as an auxiliary. The verb **-shóbok-**, the intransitive counterpart of **-shóbor-**, cannot be considered to be a true auxiliary, but it is certainly not a lexical verb either. It is exclusively used as a modal function word and its semantic range is restricted to the domain of possibility. It is found with all main types of possibility, but due to its unaccusative nature it is used in discursive contexts that emphasize the potential nature of the state of affairs as a whole.

	Lexical	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo	P-Im DyNe	DeNe	Cond
-bâsh	■	■							
-shóbor-	▒	■	■	■	■	■			
-shóbok-				■	■	■			
-oo-		■	■	■	■	■	■	■	■

P-In DyPo = participant-inherent dynamic possibility; P-Im DyPo = participant-imposed dynamic possibility; Sit DyPo = situational dynamic possibility; DePo = deontic possibility; EPo = Epistemic Possibility; P-Im DyNe = participant-imposed dynamic necessity; DeNe = deontic necessity; Cond = conditional

Table 1: Semantic range of Kirundi verbal markers involved in expressing possibility

As expounded in the introduction, we are not only interested in the question of whether the grammaticalization of Kirundi markers of possibility correlates with change in meaning, i.e., semantic generalization, which clearly happens to be the case. We also want to uncover whether there is a correlation between grammaticalization in the structural domain and subjectification in the semantic domain, i.e., the evolution from an objective meaning based in the externally described situation to a more subjective meaning based in the speaker's attitude toward the proposition (Traugott 1989: 35). At first sight, this only seems to be partly the case. The markers **-shóbor-** and **-shóbok-**, which are further grammaticalized than **-bâsh-**, did indeed also develop the subjective meanings of deontic and epistemic modality, while the modal use of **-bâsh-** is restricted to participant-inherent dynamic modality. Moreover, when expressing deontic and epistemic possibility, the syntactic status of **-shóbor-** within the auxiliary verb construction becomes less autonomous, which indicates that there is a positive link between grammaticalization and subjectification. On the other hand, expressing both deontic and epistemic meanings, **-shóbor-** and **-shóbok-** did not subjectify less within the semantic domain of possibility than **-oo-**, while the latter is more grammaticalized. However, **-oo-** semantically evolved beyond subjectivity. It intersubjectivized in developing both directive uses – in addition to non-directive deontic – and textual uses, such as marking a conditional clause, which can be considered intersubjective. Intersubjectification commonly ensues from subjectification. As argued by Traugott (2003: 124), 'the development of meanings that encode speakers/writers' attention to the cognitive stances and social identities of addressees, arises out and depends crucially on subjectification'. Moreover, even

within the semantic domain of possibility, the subjectification of **-oo-** may still be considered more advanced, if it turns out that its use is significantly more frequent in the semantic sub-domains of deontic possibility/necessity and epistemic possibility. That is why we have judged it useful to test the frequencies of each of the markers in the different modal sub-domains by means of distributional corpus analysis. The results of this corpus research are set out in the next section.

4. Distributional corpus analysis of Kirundi possibility markers

In distributional corpus analysis (DCA) 'the analysis of actual linguistic behaviour' takes centre stage (Geeraerts 2010: 168). The first explicit use of DCA in the Bantu context was in a study by de Schryver and Nabirye (2010) who showed how this methodology may be used to start the description of a (mostly) undocumented language, in their case Lusoga. In the present Kirundi study, DCA has been used in bootstrap fashion and in parallel with the native intuition of a mother-tongue speaker of Kirundi (as explained at the start of Section 3 above). The Kirundi corpus we used is still small and is to be considered a work in progress. In its current state, it consists of 120 different 'texts', good for a total of 335,382 tokens (i.e., running words) and 48,523 types (i.e., distinct words). The data covers material from the past half century, i.e., from 1961 to 2011, as shown in Table 2. Roughly half the data stems from the 2000s, with a quarter from before then, and another quarter since then.

Period	Tokens	%	Files
1961-1999	82,093	24.48	41
2000-2009	170,466	50.83	28
2010-2011	82,823	24.70	51
SUM	335,382	100.00	120

Table 2: Period distribution in the Kirundi corpus

In terms of the medium, about 87% of the texts are derived from written data, about 12% are derived from oral data, and a further 1.5% is derived from written texts which were meant to be spoken. This is summarized in Table 3. The written data was sampled from books, didactic texts, master theses, newspapers and magazines, official declarations, reports, etc. The oral data was sampled from transcriptions of fieldwork material, radio debates and interviews, radio and television plays, songs, spontaneous speeches, etc. The written-to-be-spoken category mainly contains oaths and read-out speeches.

Medium	Tokens	%	Files
Written	290,728	86.69	78
Oral	39,574	11.80	34
Written to be spoken	5,080	1.51	8
SUM	335,382	100.00	120

Table 3: Medium distribution in the Kirundi corpus

The corpus was queried with WordSmith Tools (Scott 1996-2011), a process which included a careful analysis and tagging of each of the different instances of the possibility markers.

We first present an overview of the frequency in the corpus of each of the possibility markers considered as well as of the frequency of the different meanings covered by their semantic range. To start with, the auxiliary **-bâsh-** is very marginal in our corpus. It only occurs seven times, once as a lexical verb and six times as a modal auxiliary conveying participant-inherent dynamic possibility.

The auxiliary **-shóbor-** is considerably more frequent. We counted 694 attestations in the corpus. The frequency distribution of the different types of meanings it covers is represented in Figure 1. The near-modal use of **-shóbor-** as a non-auxiliary verb, followed by an object noun phrase or taking a pronominal object marker, is insignificant. We counted only 14 cases (2%). If this non-auxiliary use is a relic of its former full verb status, this low occurrence shows that **-shóbor-** can be considered a grammaticalized modal auxiliary. As an auxiliary, it is most prominent in the sub-domain of dynamic possibility with 217 instances of participant-inherent possibility (31.3%), 182 of participant-imposed possibility (26.2%) and 168 of situational possibility (24.2%). Dynamic possibility is thus conveyed in a total of 567 instances or about 81.7%. Beyond dynamic modality, deontic possibility is most prominent with 92 instances or 13.3%. Epistemic possibility is only very marginally associated with **-shóbor-**, i.e., 21 times or 3%.

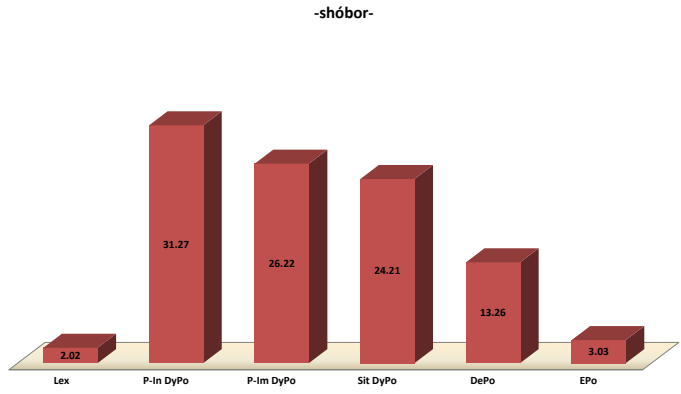

Figure 1: Semantic range of **-shóbor-**

The semi-auxiliary **-shóbok-** is not such a frequent marker of possibility in Kirundi. Only 52 occurrences have been found in our corpus. Just like its transitive equivalent **-shóbor**, **-shóbok-** is most prominent in the modal sub-category of dynamic possibility, more specifically situational possibility. As we explained above, the unaccusative nature of **-shóbok-** is such that it tends to refer to the possibility of a situation as a whole, rather than to abilities or capacities of participants acting as an agent. 43 out of the 52 instances, i.e., 82.7%, as shown in Figure 2, can be considered dynamic. Interestingly, this 82.7% of dynamic uses for **-shóbok-** corresponds to the 81.7% of dynamic uses we found for **-shóbor-**. Only in 4 cases was it observed as a marker of deontic possibility, i.e., 7.7%. Although this is lower compared to **-shóbor-** (13.3%), the difference is not statistically relevant (the p-value for the two-tailed Fisher's exact test is 0.39)**.** As a marker of epistemic possibility, **-shóbok-** is also marginal in our corpus, with only 5 attestations (9.6%).

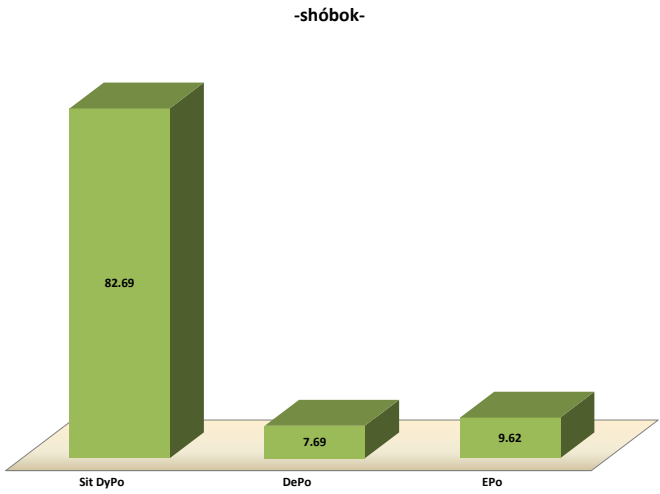

Figure 2: Semantic range of **-shóbok-**

The affix **-oo-** is clearly the most frequent modal marker in Kirundi, certainly in the modal sub-domain of possibility. A total of 1523 attestations were retrieved from the corpus. More than half of them involve possibility, i.e., 817 instances (53.6%), as shown in Figure 3. The other core component of the semantic domain of modality, i.e., necessity, accounts for 561 instances (36.8%). Beyond modality, the marker is significantly involved in the expression of conditionality. It has been observed 145 times in a conditional clause, i.e., 9.5%. Taking into account these frequency rates, it seems safe to assume that possibility is the core component of its semantic range and probably also its most original meaning. Its semantic extensions to the modal sub-domain of necessity and beyond modality to conditionality are certainly not recent either. On the other hand, conditionality is certainly not central enough to justify the label 'conditional' which Meeussen (1959: 433) gave it. The label 'potential' proposed by Ntahokaja (1994: 149) does not cover its entire semantic range either, but it better represents its semantic core.

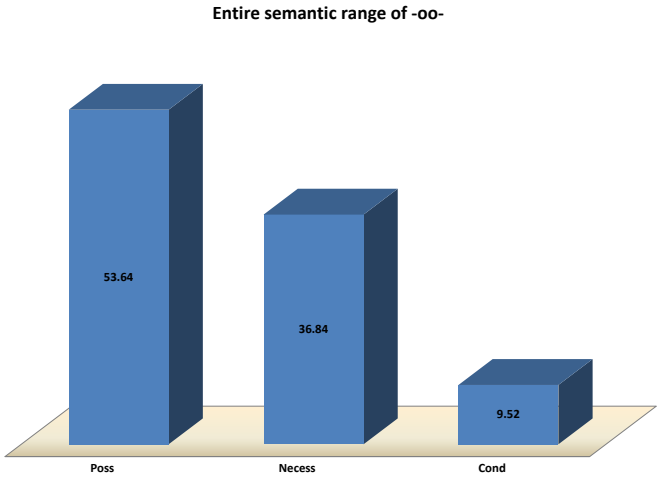

Figure 3: Entire semantic range of **-oo-**

If one focuses on the semantic core component of **-oo-**, i.e., possibility, as in Figure 4, the overall category of dynamic possibility is most prominent, i.e., 581 instances of **-oo-** out of a total of 817 or about 71.1%. This is lower than what we observed for **-shóbor-**, however, where we found 81.7% (a difference which is statistically relevant, with the p-value here 1.69×10^{-6}). Non-dynamic possibility constitutes no more than the remaining 28.9%: 48 cases of deontic possibility (5.9%) and 188 instances of epistemic possibility (23%). This is slightly lower than for **-shóbor-** as regards deontic possibility (13.3% vs. 5.9%), but considerably higher as regards epistemic possibility (3% vs. 23%). These differences are statistically relevant, with p-values of 1.16×10^{-6} and 4.5×10^{-33} respectively. As we explained in Section 2, the semantic evolution from dynamic modal meanings over deontic modal to epistemic modal meanings is commonly conceived as a process of increasing subjectification. If the semantic evolution of the highly grammaticalized marker **-oo-** had really followed this cline, one would have expected to see **-oo-** used ever more increasingly to express the more subjective meanings. However, the fact that **-oo-** is less strongly associated with deontic possibility than **-shóbor-** (5.9% vs. 13.3%), seems to be at odds with this prediction. This might indicate that the semantic evolution of **-oo-** was not directional along the dynamic > deontic > epistemic cline. On the other hand, the fact that the affix **-oo-** is unmistakably more strongly associated with the more subjective meaning of epistemic possibility than the auxiliary **-shóbor-** (23% vs. 3%) does support a correlation between grammaticalization and subjectification in Kirundi possibility markers. This is certainly so if one also considers the involvement of **-oo-** in the expression of necessity.

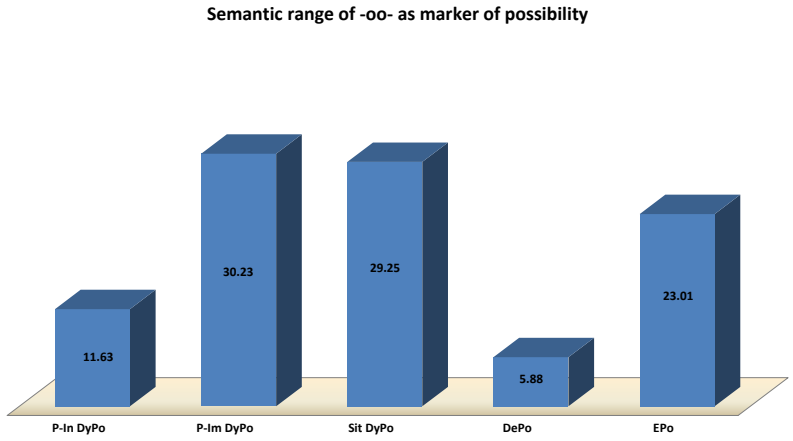

Figure 4: Semantic range of **-oo-** as marker of possibility

This is done in Figure 5, which represents all of the modal uses of **-oo-**. While 53.6% of the **-oo-** attestations in our corpus involve possibility (see Figure 3), deontic necessity is actually the single most important modal sub-category in the semantic range of **-oo-** (see Figure 5), i.e., when we consider the different types of dynamic modality separately. As many as 561 instances of **-oo-** express deontic necessity. This corresponds to 40.7% within the semantic domain of modality. Together with deontic possibility (3.5%), deontics corresponds to 44.2% of the modal meanings of **-oo-**. It seems plausible that this prevailing meaning of deontic necessity developed from deontic possibility and subsequently marginalized deontic possibility within the semantic range of **-oo-**. This may explain why deontic possibility became less prominent within the semantic cline of dynamic over deontic to epistemic possibility along which it originally developed. All non-dynamic modal uses of **-oo-** together make up 57.8%. This is considerably more than the component of subjective meanings within the range of **-shóbor-** (16.6%) and **-shóbok-** (17.3%). The differences are again relevant, with $p = 4.2 \times 10^{-75}$ and 5.2×10^{-9} respectively. Taking into account these proportions, we may safely claim that there is a correlation between grammaticalization in the structural domain and subjectification within the semantic domain of modality in Kirundi.

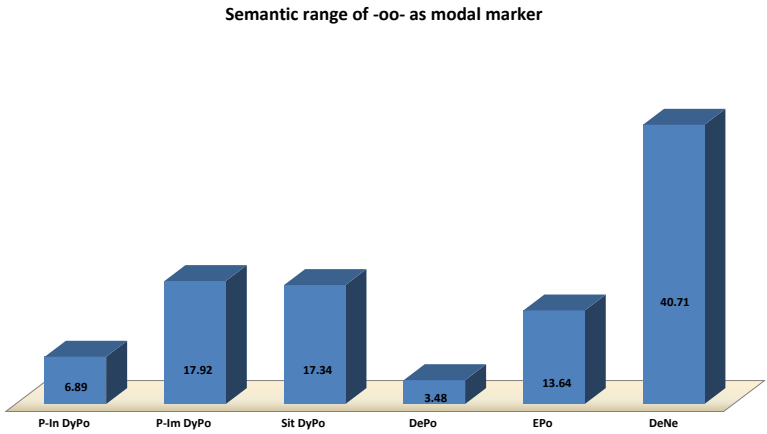

Figure 5: Semantic range of **-oo-** as modal marker

If we had only considered the semantic sub-domain of possibility, this correlation may have become obscured due to the fact that **-oo-** became more strongly associated with deontic necessity than with deontic possibility. As shown in Figure 6, **-oo-** is the most important marker of dynamic possibility, accounting for 48.8% of the cases.

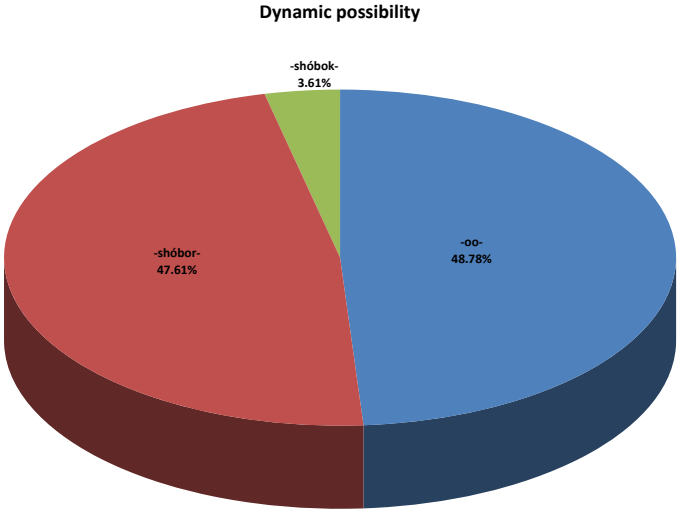

Figure 6: Markers of dynamic possibility

However, **-oo-** is less important than **-shóbor-** in the sub-domain of deontic possibility, i.e., 33.3% vs. 63.9%, **-shóbok-** accounting for the remaining 2.8%, as shown in Figure 7.

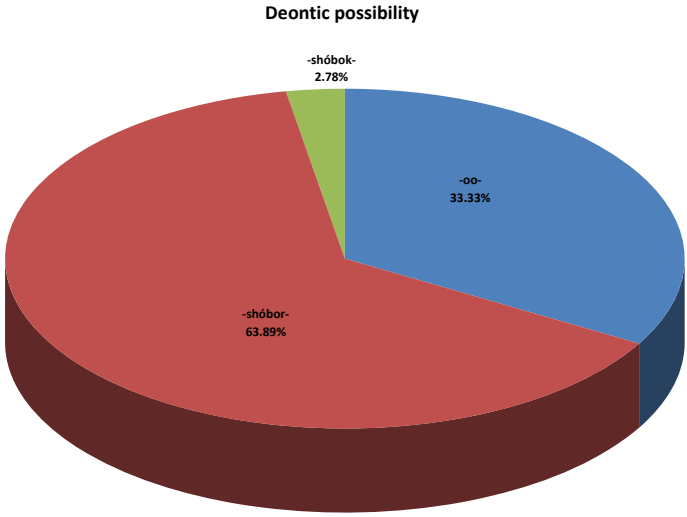

Figure 7: Markers of deontic possibility

Then again, in the more subjective sub-category of epistemic possibility, **-oo-** is unmistakably more important than **-shóbor-** and **-shóbok-**, 87.9% vs. 9.8% and 2.3% respectively, as can be seen in Figure 8.

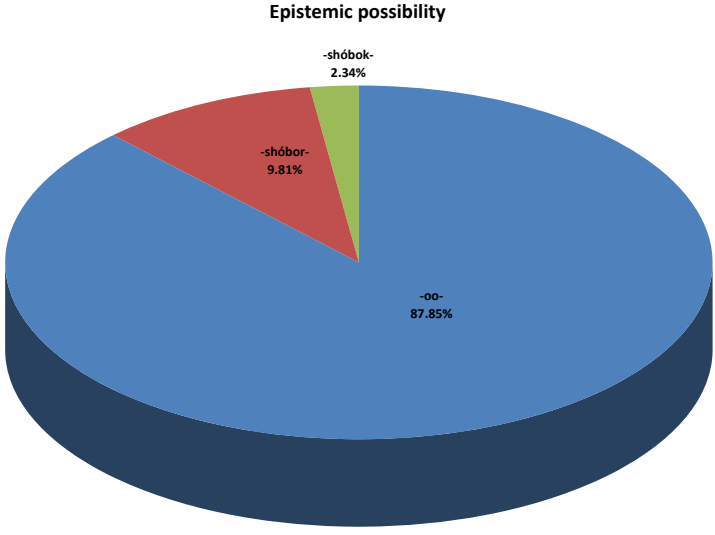

Figure 8: Markers of epistemic possibility

Taking into account this predominance of the most grammaticalized modal marker **-oo-** in the most subjective sub-category of possibility, it can be concluded that there is still a significant correlation between grammaticalization in the structural domain and subjectification within the semantic domain of possibility in Kirundi, although it has probably become obscured by the fact that **-oo-** became strongly associated with deontic necessity to the detriment of deontic possibility.

5. Conclusions

Our onomasiological approach to the modal sub-domain of possibility in Kirundi has resulted in the identification of four verbal possibility markers: **-bâsh-**, **-shóbor-**, **-shóbok-**, and **-oo-**. Our semasiological analysis of these possibility markers has revealed a clear correlation between grammaticalization along the full verb-auxiliary-affix cline on the one hand and semantic change on the other hand. The verb **-bâsh-** is only marginally used as a modal auxiliary and only to express participant-inherent dynamic possibility. It is otherwise used as full lexical verb. The markers **-shóbor-** and **-shóbok-** are almost exclusively used as modal verbs. Apart from some marginal non-auxiliary uses which are near-modal, **-shóbor-** serves as a modal auxiliary involved in the expression of all main possibility types: dynamic, deontic and epistemic. The same is true for its intransitive counterpart **-shóbok-**, which cannot be considered to be a true auxiliary, but which is not used as a full lexical verb either. Both being more grammaticalized than **-bâsh-**, the function words **-shóbor-** and **-shóbok-** have also further extended their semantic range within the modal sub-domain of possibility. Finally, being fully grammaticalized as an affix, the marker **-oo-** has also undergone the strongest semantic generalization. It not only covers the whole modal sub-domain of possibility, but it also intruded into the sub-domain of necessity, the other core component of modality, and even developed non-modal uses of which the conditional is the most prominent.

Our joint onomasiological and semasiological approach of these potential markers remained indecisive, however, on the question of whether there was also a correlation between grammaticalization in the structural domain and subjectification in the semantic domain. Given that both **-shóbor-** and **-shóbok-** as well as **-oo-** express subjective modal meanings, i.e., deontic and epistemic possibility (+ deontic necessity for **-oo-**), all can be said to have undergone subjectification, even though **-oo-** is the only one to have also undergone intersubjectification. Therefore a distributional corpus analysis of the actual uses of these markers in Kirundi was needed. The results of this analysis, expressed in overall percentages, are summarized in Figure 9.

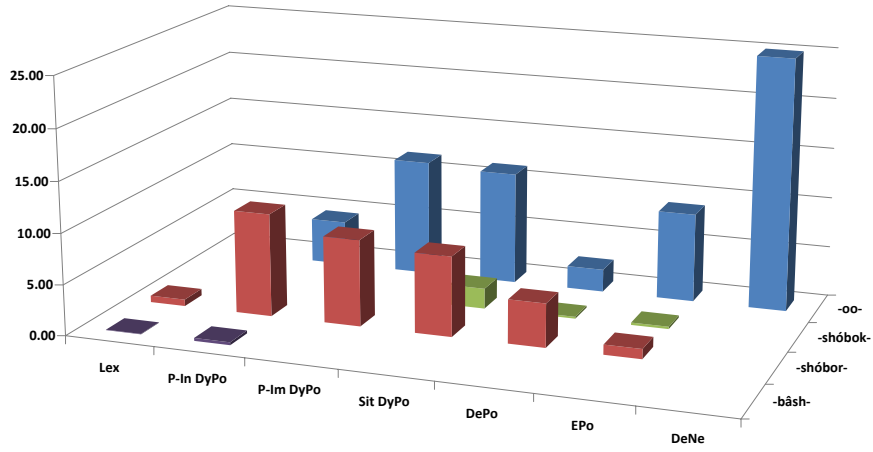

Figure 9: Semantic range and corpus distribution of the Kirundi markers of possibility

Figure 9 shows first and foremost that **-oo-** and **-shóbor-** are the most frequently used markers of possibility in Kirundi. The verb **-bâsh-** is almost not attested in our corpus, while the use of **-shóbok-** is limited to contexts where the pragmatic salience pertains to the possibility of situations as a whole. Both **-oo-** and **-shóbor-** are most prominently present in the sub-category of dynamic possibility, **-shóbor-** being used slightly more often to express participant-inherent possibility and **-oo-** being used considerably more often to express participant-imposed possibility. Beyond dynamic possibility, **-shóbor-** is a little more frequent in the sub-category of deontic possibility, while it is significantly more present in the sub-category of epistemic possibility. Given that this latter meaning is considered to be more subjective than deontic modality, the stronger association of **-oo-** with epistemic modality can be taken as evidence for its stronger subjectification. We assume that the relative under-representation of **-oo-** in the sub-category of deontic possibility is linked to the fact that its semantic range was extended from deontic possibility to deontic necessity, a semantic change that is not uncommon in the world's languages (van der Auwera & Plungian 1998: 100). This may have facilitated the breakthrough of **-shóbor-** and **-shóbok-** as markers of deontic possibility and enabled their extension, albeit hesitantly, to the sub-category of epistemic possibility, where **-oo-** is still prevailing. This intuitive hypothesis would need further testing, however, on the basis of a text corpus which is more fine-grained and balanced in terms of time distribution.

Abbreviations

APPL	applicative
ASSOC	associative
AUG_x	augment of class x
AUX	auxiliary
CAUS	causative
CONJ	conjunctive
$CONN_x$	connective of class x
DEMX	demonstrative of type/degree x
DISJ	disjoint
FUT	future
FV	final vowel
IMP	imperative
IND	indicative
LOC_x	locative prefix of class x
NEG	negative
NPA	neutro-passive
NP_x	noun prefix of class x
OC_x	object concord of class x
PASS	passive
PERST	perstitive
PFV	perfective
POSS	possessive
POT	potential
PP_x	pronominal prefix of class x
PRS	present
PST	past
REFL	reflexive
REL	relative
REM	remote past
SC_x	subject concord of class x
SS_x	substitutive suffix of class x
SUBJ	subjunctive
SUBS	subsecutive

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Résumé

Le présent article est la première étude systématique de l'expression de la possibilité en kirundi, plus précisément de ses marqueurs verbaux. La possibilité est considérée traditionnellement comme un des components principaux du domaine sémantique de la modalité. L'approche onomasiologique de ce sous-domaine de mode a résulté dans l'identification de quatre marqueurs verbaux de potentialité, c'est-à-dire les auxiliaires **-bâsh-** et **-shóbor-**, le semi-auxiliaire **-shóbok-** et l'affixe TAM **-oo-**. Ces quatre marqueurs de possibilité manifestent différents degrés de grammaticalisation suivant la série du verbe complet > auxiliaire > affixe. La grammaticalisation dans le domaine structurel semble être corrélée au changement sémantique, dans et hors du domaine sémantique de la possibilité. Les verbes relatés **-shóbor-** et **-shóbok-**, qui n'ont plus ou peu d'usages lexicaux, couvrent entièrement le domaine sémantique de la possibilité contrairement à **-bâsh-** qui retient des usages lexicaux clairement différents ('être actif, être en bonne santé') et qui exprime seulement la possibilité inhérente aux participants. L'affixe de conjugaison **-oo-**, couvrant le domaine sémantique de la possibilité dans son entièreté et ayant développé d'autres valeurs modales et non modales, manifeste la généralisation sémantique la plus avancée. En outre, **-oo-** a subi la subjectivation la plus forte dans le domaine sémantique de la possibilité et a même développé différents usages intersubjectifs. Par conséquent, le marqueur de possibilité le plus grammaticalisé en kirundi a non seulement subi la généralisation sémantique la plus forte, mais sa valeur sémantique est aussi la plus (inter)subjectivée.