Reconstructing the origins of the Luganda (JE15) modal auxiliaries *-sóból-* and *-yînz-*: A historical-comparative study across the West Nyanza Bantu cluster

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In this article, a comparison is made of the expression of possibility in West Nyanza Bantu languages in order to reconstruct the origins of Luganda's two most frequent possibility markers, viz. the near-synonymous auxiliaries *-sóból-* and *-yînz-*. Earlier Luganda diachronic corpus-driven analyses showed that *-yînz-* has been involved in expressing all possibility categories since the 1890s, which is when Luganda was first reduced to writing, while *-sóból-* acquired deontic possibility as a meaning only in the 1950s. Although this would suggest that *-yînz-* is the possibility marker with the greatest time depth in Luganda and across West Nyanza, with *-sóból-* a relative newcomer, the comparative data which is presented in this article indicates the opposite. It is shown that while *-yînz-* only exists in some West Nyanza languages (namely in the subgroup which includes Luganda, Lusoga and Lugwere), *-sóból-* is attested in all West Nyanza languages as well as in other Great Lakes Bantu languages outside West Nyanza. The fact that the cognates of *-sóból-* in all Great Lakes Bantu languages carry a dynamic modal meaning 'be able' suggests that its modal usage is older in any of the individual languages considered here than what language-internal Luganda data seems to suggest.

Introduction

In a recent study (Kawalya, Bostoen & de Schryver, forthcoming), a diachronic comparison was made of the three most important possibility markers in Luganda (JE15), that is, the near-synonymous auxiliaries *-sóból-* and *-yînz-*, and the verbal prefix *-andi-*, to be able to apprehend the diachronic evolution of the semantic domain of possibility. Empirical evidence based on a diachronic text corpus of 4 million tokens covering a time depth of 130 years revealed important synchronic and diachronic trends. It was, for instance, shown that although *-sóból-* and *-yînz-* are almost equally frequent markers of the domain of possibility, the latter is more semantically diversified, in that it covers the entire possibility spectrum, i.e. dynamic, deontic and epistemic possibility. Furthermore, unlike *-sóból-*, *-yînz-* is mostly involved in the expression of the more subjective categories of possibility, i.e. deontic and epistemic possibility. Subjective categories express meanings that tend to be based 'in the speaker's subjective belief state/attitude toward the proposition' (Traugott, 1989: 35). It was further evident from the corpus that while *-sóból-* was less prominently used as a modal marker in earlier times, the role of *-yînz-* in the expression of possibility has been significant from the start, hence suggesting that *-yînz-* could have been used as a modal marker in the earlier stages of the language when *-sóból-* and *-andi-* were still insignificant as markers of possibility.

Although these preliminary conclusions are interesting, they were found to suffer from one bottleneck, that is, the fact that a time depth of 130 years for the Luganda corpus is not deep enough to trace back to the beginnings of the interaction between the modal markers *-yînz-*, *-sóból-* and *-andi-*. It is therefore our aim in the current article to attempt to overcome this time barrier by complementing the earlier corpus-driven approach of modality in Luganda with more traditional historical-comparative research on its closest relatives from the Great Lakes Bantu subgroup, West Nyanza, as defined by Schoenbrun (1994). We examine here the cognates of Luganda's two main potential verbs and their semantic scope in other West Nyanza Bantu languages through elicited data and a review of the available literature.

The remainder of this first section deals with further preliminary building blocks: on the composition of the West Nyanza Bantu group, on modality, and on the type of data for this article and the approach used in its collection and analysis. In the second section, we then describe the use of *-yînz-* in West Nyanza Bantu languages, while we deal with *-sóból-* and its meanings in the same group of languages (where it exists) in the third section. We summarise and discuss our findings in the fourth section and provide a conclusion in the last section.

On West Nyanza Bantu

West Nyanza Bantu languages belong to the Great Lakes sub-branch of Eastern Bantu. They emerged as a distinct subgroup in the Great Lakes Bantu classification by Schoenbrun (1994) as well as in earlier classifications (such as Coupez, Evrard & Vansina, 1975; Bastin, 1979; Bastin, Coupez & de Halleux, 1979; Nurse & Philippson, 1980a; 1980b; Bastin, 1983; Bastin, Coupez & de Halleux, 1983). For his lexicostatistical analysis, Schoenbrun used

the basic lexicon of 54 Bantu languages spoken in the Great Lakes region and classified Great Lakes Bantu into five groups: Luyia, West Nyanza, Western Lakes, East Nyanza and pre-Rugungu. He also relied on lexical innovations as specific evidence to confirm the branches that he established through lexicostatistics. West Nyanza languages were further sub-classified into: A) North Nyanza, comprising Lusoga (JE16), Lugwere (JE17), Luganda (JE15) and Rushana (JE31D); and B) Rutara, comprising Runyoro-Rutooro (JE11-12), Runyankore-Rukiga (JE13-14), Kikerewe (JE24), Kizinza (JE23), Kihaya (JE22) and Kinyambo (JE21). He further groups Runyoro-Rutooro and Runyankore-Rukiga together as North Rutara, and Kihaya and Kinyambo as South Rutara. The four North Nyanza languages are spoken in Uganda, with Luganda spreading over the central region, while the other three are spoken in the eastern part of the country, north of Lake Victoria aka Nyanza. Runyoro and Rutooro are spoken in western Uganda, to the east of Lake Albert, while Runyankore and Rukiga are spoken in south-western Uganda, towards the border with Rwanda.

The South Rutara languages, Kihaya and Kinyambo, are spoken in northern Tanzania, west of Lake Victoria, while Kikerewe and Kizinza are spoken in the region of Mwanza, south of Lake Victoria. Some speakers of Kikerewe are found on the Ukerewe Island in Lake Victoria. Approximate locations of these languages are indicated in Figure 1.

Under the Luyia group, Schoenbrun includes languages such as Lumasaaba (JE31), Lunyole (JE35) and Lusaamya (JE34) in eastern Uganda, and under the Western Lakes group, he includes languages like Rukonzo (JD41) in western Uganda, Kinyarwanda (JD61) in Rwanda, Kirundi (JD62) in Burundi and similar languages in Tanzania. Rugungu
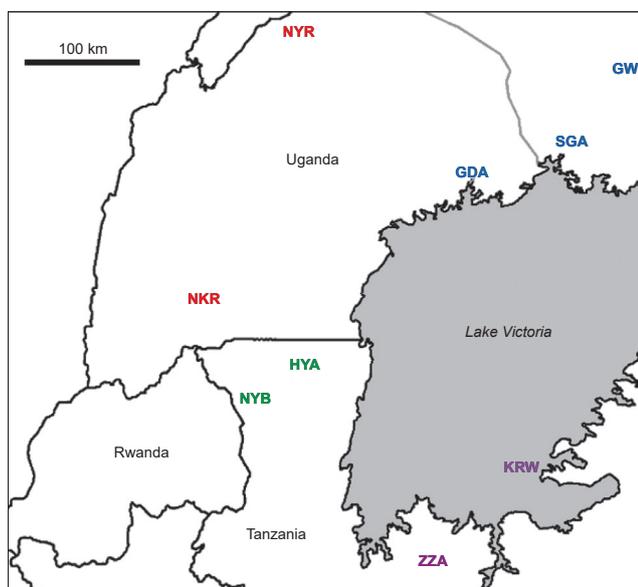

Figure 1: Geographical distribution of the West Nyanza Bantu languages. BLUE: North Nyanza (GDA Luganda, SGA Lusoga, GW Lugwere); RED: North Rutara (NYR Runyoro-Rutooro, NKR Runyankore-Rukiga); GREEN: South Rutara (HYA Kihaya, NYB Kinyambo); PURPLE: Rutara south of Lake Victoria (KRW Kikerewe, ZZA Kizinza)

(JE101) in western Uganda constitutes its own group (pre-Rugungu), while East Nyanza comprises languages such as Cijita (JE25), Kizanaki (JE44), Kegusii (JE42) and related languages in Tanzania.

In their recent phylogenetic classification of the Bantu languages, Grollemund, Branford, Bostoen, Meade, Venditti and Pagel (2015) compute a separate branch within Eastern Bantu, which corresponds to Schoenbrun's West Nyanza, with two immediate sub-branches also corresponding to North Nyanza and Rutara. However, Grollemund et al.'s (2015) North Nyanza includes, in addition to Lugwere, Lusoga and Luganda, Luyia languages, viz. Samialugwe and Lumasaaba in eastern Uganda, and Luyia (JE32), Maragoli (JE41) and Bukusu (JE31c) in western Kenya. There is no consensus in the literature on whether or not to consider Luyia as a branch of Great Lakes (Schoenbrun, 1994: 103–104). Mould (1981: 215–224, 235), for example, treats both 'Greater' Luyia and North Nyanza as descendants of Lacustrine, a claim which Schoenbrun attributes to only Mould's classification, while Bastin et al. (1983) and Nurse and Philippson (1980a) treat it as a branch of Great Lakes Bantu, but outside the North Nyanza cluster. As we had started the fieldwork for this article before the publication of Grollemund et al. (2015), we have only considered those languages classified as part of West Nyanza by Schoenbrun (1994).

On modality

Possibility is one of the two notions in terms of which modality is commonly analysed, the other being necessity (van der Auwera & Plungian, 1998: 80; Nuyts, 2006: 5). Modality has been used and categorised in various ways. In this article, we follow the use and categorisation provided by Nuyts (2006; 2016). While avoiding a precise definition, Nuyts prefers to use modality in its narrower sense, different from the broader sense, in which modality refers to 'any kind of speaker modification of a state of affairs, even including dimensions such as tense and aspect' (Nuyts, 2006: 1). According to Nuyts, modality refers to a semantic subfield within the wider domain of TAM (Tense-Aspect-Modality) categories. He identifies three categories of modality, which apply to both possibility and necessity: dynamic, deontic and epistemic modality.

Dynamic modality refers to capacities/abilities or necessities ascribed to the first argument participant in a state of affairs. This is further subdivided into (i) participant-inherent dynamic modality, to refer to abilities or needs that are fully inherent to the subject participant; (ii) participant-imposed dynamic modality, which covers abilities or needs which are determined by external factors; and (iii) situational dynamic modality, covering cases which characterise a potential or a necessity 'inherent in the situation described in the clause as a whole' (Nuyts, 2006: 3–4). Deontic modality is traditionally defined in terms of 'permission' and 'obligation'. However, Nuyts (2006: 4) defines it in general terms as 'an indication of the degree of moral desirability of the state of affairs expressed in the utterance'. Epistemic modality involves an estimation of the chances or likelihood that the state of affairs expressed in the clause applies in the world (Nuyts, 2006: 6). For Bantu languages, these categories are extensively exemplified for Kirundi in Bostoen, Mberamihigo

and de Schryver (2012) and Mberamihigo (2014) and for Luganda in Kawalya, Bostoen and de Schryver (2014).

On materials and methods

For Luganda, we have relied on the findings of Kawalya et al. (2014) and Kawalya et al. (forthcoming). For other languages, the data used were obtained through two short fieldtrips in Uganda and northern Tanzania. During the first fieldwork period, undertaken in June 2015, we collected data for Lusoga, Lugwere, Runyoro-Rutooro and Runyankore-Rukiga. In addition, the first author spent three days in parts of northern Tanzania interviewing speakers of Kihaya, Kinyambo and Kikerewe.

For Lusoga, we worked with a native speaker in his 30s. He grew up and lived in Busoga before relocating to the capital Kampala, where he had been living for about three years at the time of the data collection. For Lugwere, we interviewed a final-year student at Makerere University, Kampala. He still lives in Budaka, one of the districts where Lugwere is spoken and only comes to Kampala for studies. We were not able to obtain data for Rushana aka Orusyan. According to the only literature we could find about this language (Huntingford, 1965), it is likely to be extinct. Huntingford claims to have last talked to a speaker of the language in 1930 and that later investigators in the area were not able to find any such group of people called the Syan (Huntingford, 1965: 145). However, Stephens (2007: 41) maintains that the language is still in use, and that it is referred to as Rushana by its speakers, the Bashana. She was able to collect a word list during her research on the history of motherhood, food procurement and politics in east-central Uganda. UBOS (2016) lists Shana in their National Population and Housing Census 2014, as one of the ethnicities in Uganda, with a total population of 10 835. Little else is known about Shana and/or its speakers. For example, it was not included in the comprehensive survey of Ugandan languages by Ladefoged, Glick and Criper (1972). Thus, we do not include Rushana in our main comparison, but any relevant information from Huntingford (1965) is discussed.

For Runyoro, we worked with a private language consultant in his early 40s, and for Rutooro and Runyankore, we consulted one speaker each, both of them teachers of linguistics at Makerere University. The Rukiga speaker we interviewed is a lecturer of Runyakitara[1] at Makerere University. Although we collected data for individual languages of the Runyakitara cluster, we still treat Runyoro-Rutooro and Runyankore-Rukiga together, as hyphenated languages.

During the three days in parts of northern Tanzania in June 2015, we interviewed two speakers of Kihaya, one in his 30s and the other in his 60s. Both speakers worked in Bukoba town. There, we were also able to interview a native speaker of Kikerewe in his 60s. For Kinyambo, we interviewed a group of speakers in their 30s and another speaker in his 50s, all of whom lived and worked in Kyaka town, Misenyi District.

During the second fieldwork trip, conducted in August 2016, we interviewed the same people for Lusoga, Lugwere, Runyoro-Rutooro and Runyankore-Rukiga, but with a different set of questions. For the Tanzanian languages, however, we interviewed different speakers as it was not possible to find the same consultants. For Kihaya, we talked to two speakers, separately. One speaker, from Nyabihanga village, was in his 40s and the other, from Kyaka town, was in his 50s. Both areas are found in Misenyi District. We moved to Karagwe District, where we interviewed a group of Kinyambo speakers of different ages. Another speaker of Kinyambo to whom we talked lived in Kyaka town. We then travelled to the region of Mwanza, where we carried out interviews with speakers of Kikerewe and Kizinza. For Kikerewe, we interviewed two speakers in their 40s, separately. For Kizinza, we talked to three different speakers. One was 81 years old and the other two were both in their 70s. In total, we interviewed 17 individual speakers and two groups of speakers of mixed ages. We worked with five speakers for the six Ugandan languages (Runyankore and Rukiga were handled together with one speaker), four speakers for Kihaya, two groups and two individual speakers for Kinyambo, three speakers for Kikerewe, and three speakers for Kizinza.

For all these interviews, we were guided by Jozina Vander Klok's (n.d.) modal questionnaire for cross-linguistic use. The questionnaire was, however, greatly modified to fit into Nuyts's typology of modality as described above and to make it culturally relevant. In this questionnaire, contexts are presented first to enable respondents to understand the situation before a specific sentence to be translated is given. Each sentence targets a particular type of modality, in this case any of the various types of possibility, and seeks to solicit a form used to express it in the object language.

Because all the respondents for the Ugandan languages could speak English, the interviewer read English sentences to the respondents and explained the exact contexts in which they are used. The respondents would then translate these sentences directly into their languages. For the interviews in Tanzania, where most of the respondents did not understand English well, the interviewer worked with an assistant, who understood both Luganda (for communication with the interviewer) and Kiswahili (for communication with the respondents). The interviewer would read a sentence to the assistant in Luganda and explain the context of the sentence to him. The assistant would then explain that context to the speaker(s) in Kiswahili, after which he would read to them the particular sentence in Kiswahili. The speaker(s) would then provide the appropriate sentence in the object language, to be written down by the interviewer. In addition, all interviews were voice-recorded and later crosschecked against the written record for accuracy and consistency. Forms expressing various types of possibility in the object languages were extracted from the translated sentences, which also serve here as illustrative examples.

These elicited data were complemented with data obtained from the literature on the languages under investigation (among others: Davis, 1938; Maddox, 1938; C. Taylor, 1959; B.K. Taylor, 1969; C. Taylor, 1985; Rubongoya, 1999; Kaji, 2004; Kagaya, 2006; Kaji, 2007; Nabirye, 2009; Nzogi & Diprose, 2012; Nabirye, 2016). For Lusoga, the BantUGent Lusoga corpus was also consulted.[2]

The use of *-yînz-* in West Nyanza Bantu languages

According to Kawalya et al. (forthcoming), the Luganda modal verb *-yînz-* expresses all possibility types (i.e. participant-inherent, participant-imposed and situational dynamic possibility; deontic possibility; and epistemic possibility). In addition to these modal meanings, it also used to function as a main verb expressing lexical meanings such as 'be powerful', 'overcome', 'manage', 'control'. Nowadays, it no longer conveys these lexical meanings.

Figure 2, adapted from Kawalya et al. (forthcoming), presents an overview of the different uses of *-yînz-* in Luganda and how the verb has evolved semantically through time.

The figure shows that *-yînz-* only maintained its lexical meanings (Lexical and Lexical+)[3] up to the 1950s. Since then, *-yînz-* has only been involved in the expression of modality. Participant-inherent and participant-imposed dynamic possibility uses of *-yînz-* also reduce over time, and in present-day Luganda these uses have become very insignificant. Situational dynamic possibility and deontic possibility uses are relatively stable through time, while epistemic possibility uses clearly grow with time.

In the North Nyanza Lusoga, the cognate form *-yinz-* is used to express situational dynamic possibility, deontic possibility and epistemic possibility. In example (1), it expresses situational dynamic possibility. However, according to our respondent, *-sóból-* would be more appropriate in this particular context. When we searched the BantUGent Lusoga corpus, we did find a limited number of cases, as in (2), where *-yinz-* expresses situational dynamic possibility. In this example, *-yinz-* does not report on the ability of the spirits to stay in the house, but it expresses the potentiality of the house to accommodate the spirits. Note, however, that example (2) is extracted from fables, a text type which is characterised by old language usage. It is therefore likely that situational dynamic possibility uses

of *-yinz-* are currently rare in Lusoga. In example (3), *-yinz-* expresses deontic possibility, i.e. the speaker permits the listener to leave their bag behind or to go with it. In example (4), where *-yinz-* expresses epistemic possibility, although the speaker is not completely certain, he expresses a likelihood that Kakaire will come today. In all these examples, *-yinz-* is followed by the main verb in the infinitive. We did not find cases where *-yinz-* is used to express participant-inherent dynamic possibility or participant-imposed dynamic possibility, neither with our respondent nor in the BantUGent Lusoga corpus. Examples (8) and (9), in which these meanings are clearly expressed by *-sóból-*, were rejected as wrong when *-sóból-* was replaced by *-yinz-*.

(1) *Emótoká enó eyinzá ókútwalá ábántú amákumí abirí*.
e-Ø-motoka   e-no   **e-Ø-yinz-a**
AUG$_9$-NP$_9$-car   PP$_9$-DEMa   **SP$_9$-PRS-POT-IPFV**
o-ku-twal-a   a-ba-ntu   a-ma-kumi
AUG$_{15}$-NP$_{15}$-take-FV   AUG$_2$-NP$_2$-person   AUG$_6$-NP$_6$-ten
a-biri
PP$_6$-two[4]
'This car can take twenty people.'
(Lusoga fieldwork, 2015–16)

(2) *Tuzímbe enhûmbá ba Lubáalé mwé báyínza okúsulá, Énhúngi yóónáyóóna elá énhondó*.
tu-Ø-zimb-e   e-N-yumba   ba-lubaale
SP$_{1PL}$-PRS-build-SBJV   AUG$_9$-NP$_9$-house   NP$_2$-spirit
mu-e   **ba-Ø-yinz-a**   o-ku-sul-a
PP$_{18}$-REL   **SP$_2$-PRS-POT-IPFV**   AUG$_{15}$-NP$_{15}$-stay-FV
e-N-lungi   yoonayoona   ela   e-N-yondo
AUG$_9$-PP$_9$-good   all   and   AUG$_9$-PP$_9$-clean
'Let us build a house where the spirits can stay; an all good and clean one.'
(BantUGent Lusoga corpus: Empambo |
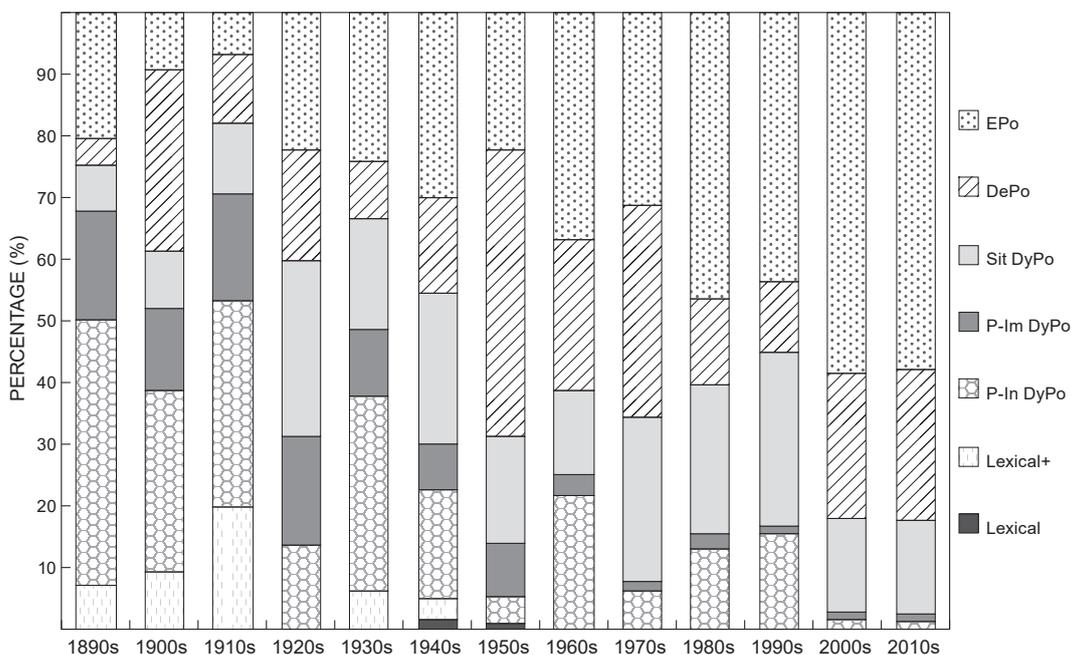W • Literature • Fables • 2007)

Figure 2: Percentage distribution of the uses of *-yînz-* in Luganda through time

(3) *Énsáwó yo óyinzá ókúgireká wanó obá okúgyá náyo.*
e-N-sawo   e-o   **o-Ø-yinz-a**
AUG₉-NP₉-bag   PP₉-POSS₂SG   **SP₂SG-PRS-POT-IPFV**
o-ku-gi-rek-a   wa-no   oba
AUG₁₅-NP₁₅-OP₉-leave-FV   PP₁₆-DEMa   or
o-ku-gy-a   na-e-o
AUG₁₅-NP₁₅-go-FV   with-PP₉-SBST
'Your bag, you may either leave it here or go with it.'
(Lusoga fieldwork, 2015–16)

(4) *Kakaire tíyáídye olwéigulo. Áyinzá ókwídhá lééro.*
Kakaire   ti-a-id-ye   o-lu-a
Kakaire   NEG-PST₁-come-PFV   AUG₁₁-PP₁₁-CONN
eigulo   **a-Ø-yinz-a**   o-ku-id-a   leero
yesterday **SP₁-PRS-POT-IPFV** AUG₁₅-NP₁₅-come-FV today
'Kakaire did not come yesterday. He might come today.'
(Lusoga fieldwork, 2015–16)

In the North Nyanza Lugwere, the same verb form *-yînz-* exists. There, it expresses deontic possibility, as in (5), and epistemic possibility, as in (6). Sentence (5) is uttered by a really nice nurse to a family member who goes to visit a patient after visiting hours, yet family members are allowed to enter a patient's room only during visiting hours. In example (6), the speaker stresses the likelihood that Mr Abudu will come today. In addition to these clear uses of *-yînz-*, the verb is also hesitatingly used in the expression of situational dynamic possibility. For example, sentence (7) is acceptable with a situational dynamic possibility reading, although *-sobol-* is still by far the preferred option. Participant-inherent and participant-imposed dynamic possibility sentences are, however, unacceptable with *-yînz-* in Lugwere.

(5) *Ékíséera kibítírekú naye oyinzá ókwingírá.*
e-ki-seera   ki-Ø-bit-ire-ku   naye
AUG₇-NP₇-time   SP₇-PRS-pass-PFV-LOC₁₇   but
o-Ø-yinz-a   o-ku-ingir-a
SP₂SG-PRS-POT-IPFV AUG₁₅-NP₁₅-enter-FV
'The time is over, but you may enter.'
(Lugwere fieldwork, 2015–16)

(6) *Ómwamí Ábudu tiyáizíre eízo. Nayê ayínzá ókwizá ólwáti.*
o-mu-ami   Abudu   te-a-iz-ire   eizo   naye
AUG₁-NP₁-Mr Abudu NEG-PST₁-come-PFV   yesterday but
a-Ø-yinz-a   o-ku-iz-a   olwati
SP₁-PRS-POT-IPFV AUG₁₅-NP₁₅-come-FV today
'Mr Abudu did not come yesterday, but he may come today.'
(Lugwere fieldwork, 2015–16)

(7) *Omú Ugánda ókéndi ayinzá ókútoonyá ésáawá ibírí.*
o-mu   Uganda   o-Ø-kendi   **a-Ø-yinz-a**
AUG₈-LOC₁₈ Uganda   AUG₁-NP₁-rain **SP₁-PRS-POT-IPFV**
o-ku-toony-a   e-Ø-saawa   i-biri
AUG₁₅-NP₁₅-rain-FV AUG₁₀-NP₁₀-hour PP₁₀-two
'In Uganda, it can rain for two hours.'
(Lugwere fieldwork, 2015–16)

Cognates of *-yînz-* were not found in the Rutara subgroups of West Nyanza. In Table 1, a summary of the modal uses of *-yînz-* in the West Nyanza Bantu languages is presented.

Table 1: Present-day meanings of *-yînz-* in West Nyanza Bantu languages

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Luganda	(+)	(+)	+	+	+
Lusoga	–	–	(+) (1), (2)	+ (3)	+ (4)
Lugwere	–	–	(+) (7)	+ (5)	+ (6)
Runyoro-Rutooro	–	–	–	–	–
Runyankore-Rukiga	–	–	–	–	–
Kihaya	–	–	–	–	–
Kinyambo	–	–	–	–	–
Kikerewe	–	–	–	–	–
Kizinza	–	–	–	–	–

Although we did not find any speakers of Rushana, it is highly likely that *-yinz-* is (or was) not found in the language. Huntingford (1965: 165) provides *-amuca* as translation equivalent for 'be able', equating it to *-yinza* in Luganda. Therefore, apart from the North Nyanza Luganda, Lusoga and Lugwere, *-yinz-* is not found in any other language of the West Nyanza Bantu language group. In the present-day North Nyanza languages where it is attested, it is only in Luganda that it expresses participant-inherent and participant-imposed dynamic possibility, although even there both meanings appear to be on their way out within the semantic range of *-yînz-* (cf. Figure 2).

The use of *-sóból-* in West Nyanza Bantu languages

Unlike *-yinz-*, which is attested only in the North Nyanza group of West Nyanza Bantu languages, cognates of *-sobol-* are found in many languages of the West Nyanza group, including those where *-yinz-* is found. The meanings these cognates express differ from language to language as shown in detail below. Being a reflex of the proposed Great Lakes Bantu reconstruction *-còbʋd-* 'be able' (Bastin, Coupez, Mumba & Schadeberg, 2002), it is also found in some other Zone J languages outside the West Nyanza branch (cf. Maho, 2009, for an updated version of Guthrie's referential classification of the Bantu languages). It is, for example, found in Kirundi (JD62) (Bostoen et al., 2012: 13ff.; Mberamihigo, 2014: 80ff.), Kinyarwanda (JD61) (Coupez, Kamanzi, Bizimana, Samatama, Rwabukumba & Ntazinda, 2005: 2218), Kiha (JD66) (Harjula, 2004: 146), Kihavu (JD52) (Aramazani, 1985: 300) and Lunyole (JE35) (Musimami & Diprose, 2012: 30).

North Nyanza
Just as is the case for *-yînz-*, *-sóból-* is also found in Luganda, Lusoga and Lugwere. For Luganda, Figure 3, adapted from Kawalya et al. (forthcoming), shows the semantic range and evolution through time of *-sóból-*.

From Figure 3, it may be seen that like *-yînz-*, *-sóból-* expresses all the types of dynamic possibility as well as deontic possibility in Luganda. Unlike *-yînz-*, however, *-sóból-* does not express epistemic possibility. In addition to these modal uses, *-sóból-* is still involved, also unlike *-yînz-*, in the expression of lexical meanings, such as 'overcome, defeat', even though only very marginally at present. Figure 3 also indicates that participant-inherent and participant-imposed
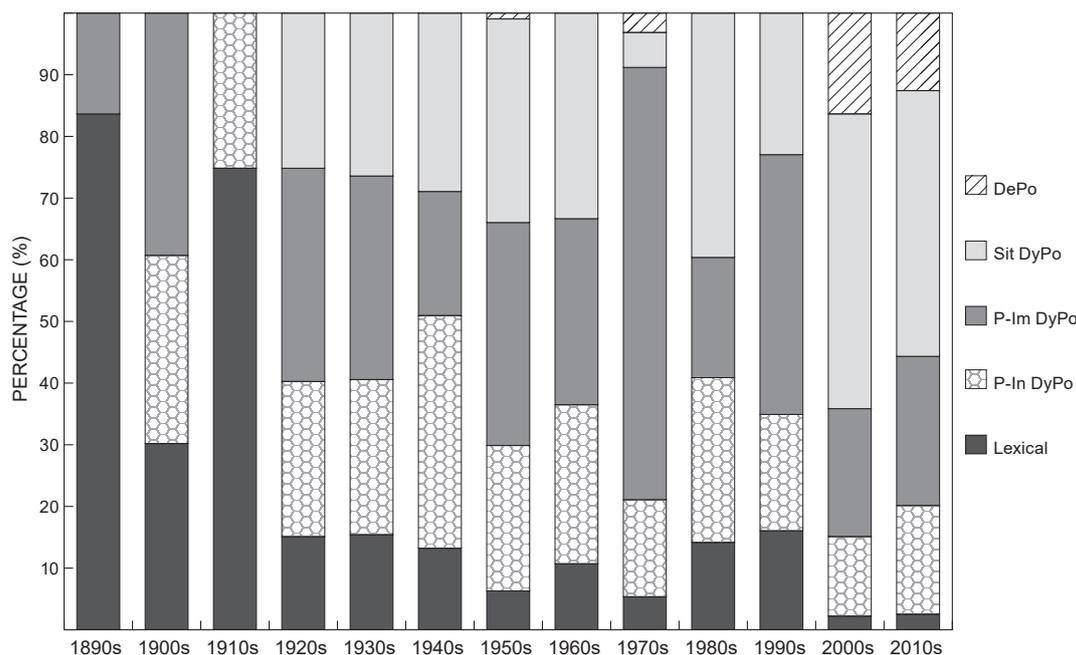
Figure 3: Percentage distribution of the uses of *-sóbol-* in Luganda through time

dynamic possibility uses of *-sóból-* have been significant throughout the decades, while situational dynamic possibility uses enter its semantic range during the 1920s and are seen to increase over time. Deontic possibility uses of *-sóból-* are meaningfully attested only from the 2000s onwards.

In Lusoga, *-sóból-* expresses the same range of modal meanings as in Luganda. In examples (8) to (10), it expresses participant-inherent, participant-imposed and situational dynamic possibility, respectively. In (8), Kakaire is portrayed as having the physical ability to run and complete a distance of 20 kilometres, while in (9) the child is only able to read well because of having glasses. With the inanimate first-argument participant *emótoká* 'car', *-sóból-* in (10) expresses a potentiality inherent in the situation as a whole, i.e. that it is possible for 20 people to move into that car.

(8) *Kakaire asóbólá ókúlúmúká kírómíta âbirí.*
     Kakaire   **a-Ø-sobol-a**   o-ku-lumuk-a
     Kakaire   **SP$_1$-PRS-POT-IPFV**   AUG$_{15}$-NP$_{15}$-run-FV
     Ø-kiromita   a-biri
     NP$_{10}$-kilometre   PP$_6$-two[5]
     'Kakaire can run 20 kilometres.'
                                    (Lusoga fieldwork, 2015–16)

(9) *Omwâna olwókúbá áfunye gaalubíndi, asóbólá*
     ókúsómá búlúngi.
     o-mu-ana   olwokuba a-Ø-fun-ye
     AUG$_1$-NP$_1$-child   because   SP$_1$-PRS-receive-PFV
     Ø-gaalubindi   **a-Ø-sobol-a**   o-ku-som-a
     NP$_{10}$-glass   **SP$_1$-PRS-POT-IPFV**   AUG$_{15}$-NP$_{15}$-read-FV
     bu-lungi
     PP$_{14}$-well
     'Because the child has received glasses, he can read well.'
                                    (Lusoga fieldwork, 2015–16)

(10) *Emótoká enó esóbólá ókútwalá ábántú amákumí abirí.*
     e-Ø-motoka   e-no   **e-Ø-sobol-a**
     AUG$_9$-NP$_9$-car   PP$_9$-DEMa   **SP$_9$-PRS-POT-IPFV**
     o-ku-twal-a   a-ba-ntu   a-ma-kumi
     AUG$_{15}$-NP$_{15}$-take-FV   AUG$_2$-NP$_2$-person   AUG$_6$-NP$_6$-ten
     a-biri
     PP$_6$-two
     'This car can take 20 people.'
                                    (Lusoga fieldwork, 2015–16)

Example (11) shows the use of *-sóból-* to express deontic possibility in Lusoga, i.e. it is acceptable for the listener to either leave the bag behind or to go with it.

(11) *Énsáwó yo osóbólá ókúgireká wanó obá okúgyá náyo.*
     e-N-sawo   e-o   **o-Ø-sobol-a**
     AUG$_9$-NP$_9$-bag   PP$_9$-POSS$_{2SG}$ **SP$_{2SG}$-PRS-POT-IPFV**
     o-ku-gi-rek-a   wa-no   oba
     AUG$_{15}$-NP$_{15}$-OP$_9$-leave-FV   PP$_{16}$-DEMa   or
     o-ku-gy-a   na-e-o
     AUG$_{15}$-NP$_{15}$-go-FV   with-PP$_9$-SBST
     'Your bag, you can either leave it here or go with it.'
                                    (Lusoga fieldwork, 2015–16)

Similarly, in Lugwere, *-sobol-* expresses participant-inherent, participant-imposed and situational dynamic possibility, as well as deontic possibility, as shown in (12) to (15) respectively. Analogous to (8), *-sobol-* in (12) shows that Kumaka is able to run and complete 20 miles on his own. In (13), it is because of having glasses that the child is able to read well. Sentence (14) is to be interpreted in the same way as (10) above, i.e. in terms of the potentiality inherent in the situation. In (15), according to the speaker, who is a doctor from the context, it is now acceptable for the parent to take the child home.

(12) *Kumáka asóbólá ókwirúká émáilo abiri.*
Kumaka   **a-Ø-sobol-a**   o-ku-iruk-a
Kumaka   **SP$_1$-PRS-POT-IPFV**   AUG$_{15}$-NP$_{15}$-run-FV
e-Ø-mailo   a-biri
AUG$_{10}$-NP$_{10}$-mile   PP$_6$-two
'Kumaka can run 20 miles.'
                                        (Lugwere fieldwork, 2015–16)

(13) *Olwókúbá ómwana yáfuníré gáálíbíndi gyê, asóbólá ókúsomá kúsa.*
olwokuba   o-mu-ana   a-a-fun-ire
because   AUG$_1$-NP$_1$-child   SP$_1$-PST$_1$-receive-PFV
Ø-gaalibindi   gi-e   **a-Ø-sobol-a**
NP$_{10}$-glass   PP$_{10}$-POSS1   **SP$_1$-PRS-POT-IPFV**
o-ku-som-a   ku-sa
AUG$_{15}$-NP$_{15}$-read-FV   PP$_{15}$-well
'Because he received his glasses, the child can read well.'   (Lugwere fieldwork, 2015–16)

(14) *Emótoká eyo esobolá ókútwalá ábántú abíri.*
e-Ø-motoka   e-o   **e-Ø-sobol-a**
AUG$_9$-NP$_9$-car   PP$_9$-DEMb   **SP$_9$-PRS-POT-IPFV**
o-ku-twal-a   a-ba-ntu   a-biri
AUG$_{15}$-NP$_{15}$-take-FV   AUG$_2$-NP$_2$-person   PP$_6$-two
'That car can take 20 people.'
                                        (Lugwere fieldwork, 2015–16)

(15) *Ómúsúúja gúkéndéírekú. Osóbólá ókúkanjá ómwaná eíka omú kíséerá kinu.*
o-mu-suuja   gu-Ø-kendeer-ire-ku
AUG$_3$-NP$_3$-fever   SP$_3$-PRS-reduce-PFV-LOC$_{17}$
o-Ø-sobol-a   o-ku-kanj-a
SP$_{2SG}$-PRS-POT-IPFV   AUG$_{15}$-NP$_{15}$-return-FV
o-mu-ana   e-ika   o-mu   ki-seera
AUG$_1$-NP$_1$-child   LOC$_{23}$-home   AUG$_{18}$-LOC$_{18}$ NP$_7$-time
ki-nu
PP$_7$-DEMa
'The fever has reduced. You can now take the child back home.'   (Lugwere fieldwork, 2015–16)

Our respondent did not, however, completely rule out the possibility of -*sobol*- expressing epistemic possibility in Lugwere. For example, using -*sobol*- rather than -*yînz*- in example (6) would be acceptable especially if the speaker's level of uncertainty of the likelihood that Mr Abudu will come today, is low. This is true if epistemic modality is construed as a scale 'from absolute certainty via probability to fairly neutral possibility that the state of affairs is real' (Nuyts, 2006: 6). It seems, therefore, that with a neutral possibility of realisation of the state of affairs, only -*yînz*- is used, but with a high probability (tending to absolute certainty) of occurrence of the proposition, speakers have a choice between -*sobol*- and -*yînz*-.

Observe that for (12), the verb -*ezy*- was provided as an alternative for -*sobol*-. Indeed, Nzogi and Diprose (2012: 150, 227) treat the verb *kwezya* as a modal verb with the meaning 'be able, possible, probable, capable of doing something', and provide *kusobola* as its synonym. Furthermore, Kagaya (2006: 237, 307, 481), who does not mention the verb -*sobol*- at all in his entire Lugwere lexicon, suggests that the Lugwere nominal form *óbú-sóbóze* 'ability' has its origin in Luganda and that the alternative form *óbw-ezyé* has a Lugwere origin.

However, no conclusive evidence is provided to substantiate this claim, i.e. that -*sobol*- and its nominal derivations are borrowings in Lugwere. The uses of -*sóból*- in Luganda, Lusoga and Lugwere are summarised in Table 2.

North Rutara
In Runyoro-Rutooro, the cognate form -*sobor*- expresses all types of possibility, including epistemic possibility. Participant-inherent dynamic possibility is exemplified in (16) and participant-imposed dynamic possibility in (17).

(16) *Mitara asobora kwîruká orúgendo rwa kiromítá ábirí.*
Mitara   **a-Ø-sobor-a**   ku-iruk-a
Mitara   **SP$_1$-PRS-POT-IPFV**   NP$_{15}$-run-FV
o-ru-gendo   ru-a   Ø-kiromita   a-biri
AUG$_{11}$-NP$_{11}$-distance   PP$_{11}$-CONN   NP$_{10}$-kilometre   PP$_6$-two
'Mitara can run a distance of 20 kilometres.'
                                (Runyoro-Rutooro fieldwork, 2015–16)

(17) *Habwokuba omwana atungire gaarubindi ze, hati naasobora kusoma.*[6]
habwokuba   o-mu-ana   a-Ø-tung-ire
because   AUG$_1$-NP$_1$-child   SP$_1$-PRS-receive-PFV
Ø-gaarubindi   zi-e   hati   **ni-a-sobor-a**
NP$_{10}$-glass   PP$_{10}$-POSS1   now   **PRS-SP$_1$-POT-IPFV**
ku-som-a
NP$_{15}$-read-FV
'Because the child has received his glasses, he can now read.'   (Runyoro-Rutooro fieldwork, 2015–16)

In (18), -*sobor*- expresses situational dynamic possibility in Runyoro-Rutooro.

(18) *Emotoka ejo neesobora kutwara abantu abiri.*
e-Ø-motoka   e-ji-o   **ni-e-sobor-a**
AUG$_9$-NP$_9$-car   AUG$_9$-PP$_9$-DEMb   **PRS-SP$_9$-POT-IPFV**
ku-twar-a   a-ba-ntu   a-biri
NP$_{15}$-take-FV   AUG$_2$-NP$_2$-person   PP$_6$-two
'That car can take 20 people.'
                                (Runyoro-Rutooro fieldwork, 2015–16)

In example (19) -*sobor*- expresses deontic possibility in Runyoro-Rutooro, and in (20) it expresses epistemic possibility. No other modal verb seems to express possibility in Runyoro-Rutooro.

(19) *Oyizire obwîre búgénziré, kyŏnká osobora kutáahámu.*
o-Ø-ij-ire   o-bu-ire   bu-Ø-gend-ire
SP$_{2SG}$-PRS-come-PFV   AUG$_{14}$-NP$_{14}$-time   SP$_{14}$-PRS-go-PFV
kyonka   **o-Ø-sobor-a**   ku-taah-a-mu
but   **SP$_{2SG}$-PRS-POT-IPFV**   NP$_{15}$-go-FV-LOC$_{18}$
'You have come when time has gone [when it is late], but you may go in.'
                                (Runyoro-Rutooro fieldwork, 2015–16)

Table 2: Present-day meanings of -*sóból*- in North Nyanza Bantu languages

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Luganda	+	+	+	+	-
Lusoga	+ (8)	+ (9)	+ (10)	+ (11)	-
Lugwere	+ (12)	+ (13)	+ (14)	+ (15)	(+)

(20) *Kintu ijó ataíje. Kiró kinu asobora kwîja.*

Kintu	ijo	a-Ø-ta-ij-ire	ki-ro
Kintu	yesterday	SP$_1$-PRS-NEG-come-PFV	NP$_7$-day

ki-nu	**a-Ø-sobor-a**	ku-ij-a
PP$_7$-DEMa	**SP$_1$-PRS-POT-IPFV**	NP$_{15}$-come-FV

'Kintu did not come yesterday. He may come today.'

(Runyoro-Rutooro fieldwork, 2015–16)

Runyankore-Rukiga does not have a cognate form for *-sobol-*. Instead the modal verb *-báas-*, which is translated as 'be able, may, can' in C. Taylor (1959: 49, 147, 154), expresses all possibility types. An example of the use of *-báas-* is given in (21), in which it expresses participant-inherent dynamic possibility. This verb is a reflex of the regional reconstruction *-báac-* (Bastin et al., 2002). It thus occurs in a number of other Great Lakes Bantu languages, such as Kirundi, where it conveys the lexical meaning 'to be active; to have a strong health' as well as participant-inherent and participant-imposed dynamic possibility (Bostoen et al., 2012: 11; Mberamihigo, 2014: 100). It also occurs in Great Lakes Mashi (JD53) (Polak-Bynon, 1978: 54; Bashi Murhi-Orhakube, 2005: 251).

(21) *Asíimwe naabaasá kwíruká orugyendó rwa kiromítá makúmí ábiri.*

Asiimwe	**ni-a-baas-a**	ku-iruk-a
Asiimwe	**PRS-SP$_1$-POT-IPFV**	NP$_{15}$-run-FV

o-ru-gyendo	ru-a	Ø-kiromita	ma-kumi
AUG$_{11}$-NP$_{11}$-distance	PP$_{11}$-CONN	NP$_{10}$-kilometre	NP$_6$-ten

a-biri
PP$_6$-two

'Asiimwe can run a distance of 20 kilometres.'

(Runyankore-Rukiga fieldwork, 2015–16)

The uses of *-sobor-* in Runyoro-Rutooro and *-báas-* in Runyankore-Rukiga are summarised in Table 3.

South Rutara

Although *-báas-* is currently the main possibility marker in both Kihaya and Kinyambo, expressing all possibility types, *-shobor-* (Kihaya) / *-sobor-* (Kinyambo) is also attested in these two languages from the South Rutara group. In Kihaya, *-shobor-* expresses participant-inherent, participant-imposed, situational dynamic possibility and deontic possibility, as respectively shown in examples (22) to (25). It is important to stress, however, that in all these examples, *-báas-* is still the preferred choice.

(22) *Muganyízi naashobóra kwíruka ekirométa makumi gábiri.*

Muganyizi	**ni-a-shobor-a**	ku-iruk-a
Muganyizi	**PRS-SP$_1$-POT-IPFV**	NP$_{15}$-run-FV

e-Ø-kirometa	ma-kumi	ga-biri
AUG$_{10}$-NP$_{10}$-kilometre	NP$_6$-ten	PP$_6$-two

'Muganyizi can run 20 kilometres.'

(Kihaya fieldwork, 2015–16)

Table 3: Present-day meanings of *-sobor-* resp. *-báas-* in North Rutara Bantu languages

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Runyoro-Rutooro	+ (16)	+ (17)	+ (18)	+ (19)	+ (20)
Runyankore-Rukiga	+ (21)	+	+	+	+

(23) *Orwókubá yaapatá émiwáani naashobóra kushomá ge.*

orwokuba	a-a-pat-a	e-mi-waani
because	SP$_1$-PST$_2$-receive-PFV	AUG$_4$-NP$_4$-glass

ni-a-shobor-a	ku-shom-a	ge
PRS-SP$_1$-POT-IPFV	NP$_{15}$-read-FV	well

'Because he received glasses, he can read well.'

(Kihaya fieldwork, 2015–16)

(24) *Emótoká egyó neeshobórá kutwâra abantu makúmi gábirí.*

e-Ø-motoka	e-gi-o	**ni-e-shobor-a**
AUG$_9$-NP$_9$-car	AUG$_9$-PP$_9$-DEMb	**PRS-SP$_9$-POT-IPFV**

ku-twar-a	a-ba-ntu	ma-kumi	ga-biri
NP$_{15}$-take-FV	AUG$_2$-NP$_2$-person	NP$_6$-ten	PP$_6$-two

'That car can take 20 people.'

(Kihaya fieldwork, 2015–16)

(25) *Omushwago gwâkéndeerá. Omwana nooshobóra kugenda nawé omúka.*

o-mu-shwago	gu-a-kendeer-a	o-mu-ana
AUG$_3$-NP$_3$-fever	SP$_3$-PRS-reduce-PFV	AUG$_1$-NP$_1$-child

ni-o-shobor-a	ku-gend-a	nawe
PRS-SP$_{2SG}$-POT-IPFV	NP$_{15}$-go-FV	with_him

o-mu-ka
AUG$_{18}$-LOC$_{18}$-home

'The fever has reduced. You may go home with the child.'

(Kihaya fieldwork, 2015–16)

For some speakers of Kihaya, it is possible to use *-shobor-* to express epistemic possibility in the language, as in example (26), especially if there is a high uncertainty pertaining to the realisation of the proposition. In this particular example, if it is highly probable (but not certain) that Mr James will teach today, then the speaker is likely to use *-báas-*, but if it is a mere possibility (especially with a low probability of realisation), then *-shobor-* is preferred. Once again, like in Lugwere, epistemic possibility is considered here as a scalar category with different epistemic scales calling for the use of different markers.

(26) *Omwalímu James naashobóra kwija kwégesa kiró ekí.*

o-mu-alimu	James	**ni-a-shobor-a**
AUG$_1$-NP$_1$-teacher	James	**PRS-SP$_1$-POT-IPFV**

ku-ij-a	ku-eges-a	ki-ro	eki
NP$_{15}$-come-FV	NP$_{15}$-teach-FV	NP$_7$-day	this

'Mr James may come and teach today.'

(Kihaya fieldwork, 2015–16)

In Kinyambo, both *-báas-* and *-sobor-* exist. They can be translated as 'be able, be strong enough to' and 'cope with, be able', respectively (Rugemalira, 1993: 233, 295). All possibility types can be expressed by *-báas-*. However, in the predominantly Kinyambo-speaking district of Karagwe, speakers are not aware of the existence of *-sobor-* in the language. Only one speaker, in his 50s and living in the Kihaya-speaking district of Misenyi, mentioned the word's existence in Kinyambo. One clear example in which it is used is (27), where it expresses participant-inherent dynamic possibility. It could, however, not be clearly ascertained whether *-sobor-* can substitute *-báas-* in sentences where the latter expresses other types of possibility. Another (much

younger) speaker of Kinyambo, living in the same Kihaya-speaking district of Misenyi, had no knowledge of -sobor- in Kinyambo. This would imply that -sobor- possibly existed in Kinyambo, but it disappeared (or is in the process of disappearing) from the language. It is still in use in Kihaya, possibly because of the language's close contact with Luganda, in which the verb is popular.

(27) *Muganyizi naasobora kushutura eigunia rya kiro bibiri.*
Muganyizi **ni-a-sobor-a** ku-shutur-a e-i-gunia
Muganyizi **PRS-SP₁-POT-IPFV** NP₁₅-lift-FV AUG₅-NP₅-sack
ri-a Ø-kiro bi-biri
PP₅-CONN NP₁₀-kilo PP₈-two⁷
'Muganyizi can lift a sack of two hundred kilos.'
(Kinyambo fieldwork, 2015–16)

The uses of -shobor- in Kihaya and -sobor- in Kinyambo are summarised in Table 4.

Rutara south of Lake Victoria

In Kikerewe and Kizinza, no cognate form for -sóból- is used today. In both, some speakers can only recollect having heard about the verb, but they can neither use it in a sentence nor precisely explain its meaning. Others simply equate its meaning to that of the modal auxiliary -kuhích-, which is used to express all possibility types in the two languages. An example of the use of -kuhích- is given in (28), expressing participant-imposed dynamic possibility.

(28) *Omwalímú yakingura omulyango. Tukuhichya kuyingíra.*
o-mu-alimu a-a-kingur-a o-mu-lyango
AUG₁-NP₁-teacher SP₁-PRS-open-PFV AUG₃-NP₃-door
tu-Ø-kuhich-a ku-yingir-a
SP₁ₚₗ-PRS-POT-IPFV NP₁₅-enter-FV
'The teacher has opened the door. We can enter.'
(Kikerewe and Kizinza fieldwork, 2015–16)

The uses of -kuhích- in Kikerewe and Kizinza are summarised in Table 5.

Discussion

Table 6 offers a summary of the major possibility modal auxiliaries found in the different West Nyanza Bantu languages and the semasiological range of possibility types they express in the individual languages.

In Luganda, the potential modal verbs -sóból- and -yînz- express all dynamic possibility types as well as deontic possibility; in addition -yînz- also expresses epistemic possibility. Similarly, Lusoga uses both -sóból- and -yinz- as markers of possibility, with -sóból- expressing the same range of meanings as those it expresses in Luganda, while -yinz- expresses situational dynamic, deontic and epistemic possibility. For Lugwere, on the other hand, -sobol- expresses all dynamic possibility types as well as deontic possibility as in Luganda and Lusoga, while it is also possible to use -sobol- to express epistemic possibility, especially in cases where there is a high probability of realisation of the state of affairs. As for -yinz- in Lugwere, it expresses situational dynamic, deontic and epistemic possibility, as in the case of Lusoga. In this respect, Lusoga and Lugwere differ from Luganda, where -yînz- expresses all categories, including participant-inherent and participant-imposed dynamic possibility. Recall, however, that in present-day Luganda, participant-inherent and participant-imposed dynamic possibility uses of -yînz- are very infrequent. This suggests that these dynamic modal meanings could have historically existed for -yinz- in Lusoga and Lugwere, but have since disappeared from these languages, a direction the diachronic evolution in Luganda appears to be pointing to. The verb -ezy- seems to be highly threatened by -sobol- in Lugwere. The former is only provided as a synonym of the latter, but without clear contexts of usage.

In Runyoro-Rutooro, -sobor- simply expresses all possibility types, while in Runyankore-Rukiga, where there is no cognate form for -sóból-, -báas- expresses all possibility types.

In Kihaya and Kinyambo, -báas- also expresses all possibility types. However, speakers of Kihaya occasionally use -shobor- instead of -báas- to express especially dynamic possibility types and deontic possibility. In Kinyambo, where

Table 4: Present-day meanings of *-shobor-* resp. *-sobor-* in South Rutara Bantu languages

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Kihaya	+ (22)	+ (23)	+ (24)	+ (25)	(+) (26)
Kinyambo	(+) (27)	–	–	–	–

Table 5: Present-day meanings of *-kuhích-* in Rutara Bantu languages south of Lake Victoria

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Kikerewe	+	+ (28)	+	+	+
Kizinza	+	+ (28)	+	+	+

Table 6: Present-day meanings of individual modal auxiliaries in West Nyanza Bantu languages

Modal auxiliaries	*-sóból-*	*-yînz-*	*-báas-*	*-kuhích-*	*-ezy-*
Luganda	DyPo; DePo	(P-In DyPo); (P-Im DyPo); Sit DyPo; DePo; EPo	–	–	–
Lusoga	DyPo; DePo	(Sit DyPo); DePo; EPo	–	–	–
Lugwere	DyPo; DePo; (EPo)	(Sit DyPo); DePo; EPo	–	–	P-In DyPo
Runyoro-Rutooro	ALL	–	–	–	–
Runyankore-Rukiga	–	–	ALL	–	–
Kihaya	DyPo; DePo; (EPo)	–	ALL	–	–
Kinyambo	(P-In DyPo)	–	ALL	–	–
Kikerewe	–	–	–	ALL	–
Kizinza	–	–	–	ALL	–

a number of speakers have no knowledge of -*sóbór*-, the verb appears to have disappeared (or is in the process of disappearing) from the language.

From an onomasiological perspective, Table 7 shows how individual possibility types are expressed in the different languages.

All West Nyanza languages have at least one modal auxiliary that covers the entire domain of possibility, apart from Lusoga, where -*yinz*- probably once did, but where -*sóból*- took over as the most prominent marker of dynamic possibility. In none of the West Nyanza languages is this auxiliary a cognate form of -*sóból*-, except for Lugwere and Runyoro-Rutooro. In Runyoro-Rutooro, -*sobor*- is even the only potential auxiliary, and the only West Nyanza language where a cognate of -*sóból*- clearly expresses epistemic possibility. It can thus be said that -*sóból*- is not (firmly) associated with the most subjective modal category in any of the other West Nyanza languages considered here.

All this clearly suggests that despite -*sóból*- being the most widespread potential auxiliary within the West Nyanza group, the most established potential auxiliary, i.e. the one expressing the widest variety of possibility types, in all West Nyanza languages (apart from Runyoro-Rutooro and Lugwere) is an auxiliary other than -*sóból*-. In Luganda, this auxiliary is -*yînz*-; while it is -*báas*- in Runyankore-Rukiga, Kihaya and Kinyambo; and -*kuhích*- in Kikerewe and Kizinza. In Lusoga and Lugwere, the situation is somehow complex as the default marker of epistemic possibility, -*yinz*-, does not cover the entire possibility range, as would be expected. That notwithstanding, -*yinz*- expresses the more subjective categories of possibility in Lusoga and Lugwere. Since subjectivity is closely associated with modality (cf. Bybee, Perkins & Pagliuca, 1994: 176), this depicts -*yinz*- as a more developed modal marker compared to -*sóból*-/-*sobol*-, which is mostly associated with the objective categories, i.e. those that express meanings that pertain to the outside world (cf. Traugott, 1989). From this state of affairs, it appears that in Lusoga and Lugwere, -*yinz*- must have lost its participant-inherent and participant-imposed dynamic possibility uses. This semantic development would then be comparable to Luganda where

the same uses for -*yînz*- have considerably reduced over time and are, in present-day Luganda, almost non-existent.

Furthermore, in all the North Nyanza languages, there is evidence to the effect that -*yînz*- originated internally within the individual languages and that it is unlikely that it could have entered one language from another. In Luganda, -*yînz*- has been shown to have been derived as a causative from the base verb -*yîng*- (Le Veux, 1917: 997), involving the common Bantu sound change known as 'spirantisation' (cf. Hyman, 2003; Bostoen, 2008). In front of the short causative suffix *-i-, reconstructed in Proto-Bantu with a high front vowel (Bastin, 1986), the root's final pre-nasalised stop /ng/ shifted to the pre-nasalised fricative /nz/ and subsequently absorbed the glide of the following causative morpheme through the common Bantu process of 'y-absorption' (cf. Hyman, 2003; Bostoen, 2008). The same verb -*ying*- exists in Lusoga with the meaning 'overpower, be more than', as in (29), and in Lugwere with the meaning 'overwhelm, overpower, overcome, defeat' (Nzogi & Diprose, 2012: 138, 334–335), which implies that the same process led to the formation of -*yinz*- in these languages or in their most recent common ancestor.

(29) *…wábúlá ábásómesá bano abávúbúka bâbayinga amáani bazííká ómúntú kú sáawá 12.30.*
wabula a-ba-somesa ba-no a-ba-vubuka
but AUG$_2$-NP$_2$-priest PP$_2$-DEMa AUG$_2$-NP$_2$-youth
ba-a-ba-ying-a a-ma-ani
SP$_2$-PST$_2$-OP$_2$-have_more-PFV AUG$_6$-NP$_6$-power
ba-a-ziik-a o-mu-ntu ku Ø-saawa 12.30
SP$_2$-PST$_2$-bury-PFV AUG$_1$-NP$_1$-person at NP$_{10}$-hour 12.30
'…but these priests, the youths overpowered them and they buried the person at 12.30 hours.'
(BantUGent Lusoga corpus: Kodh'eyo | W • Journalism • Networking • 1997–98)

From Table 7, we further note that the modal verb -*sóból*- and its cognates -*sobol*-, -*sobor*- and -*shobor*- are found in most of the West Nyanza languages, and as we pointed out, this verb also exists in a number of other Great Lakes Bantu languages. Even in those West Nyanza languages where it is not presently attested, there are traces of this

Table 7: Individual possibility types and the modal auxiliaries that express them in West Nyanza Bantu languages

Meaning	P-In DyPo	P-Im DyPo	Sit DyPo	DePo	EPo
Luganda	(-*yînz*-)	(-*yînz*-)	-*yînz*-	-*yînz*-	-*yînz*-
	-*sóból*-	-*sóból*-	-*sóból*-	-*sóból*-	
Lusoga	-*sóból*-	-*sóból*-	-*sóból*-	-*sóból*-	
			(-*yinz*-)	-*yinz*-	-*yinz*-
Lugwere	-*sobol*-	-*sobol*-	-*sobol*-	-*sobol*-	(-*sobol*-)
	-*ezy*-		(-*yinz*-)	-*yinz*-	-*yinz*-
Runyoro-Rutooro	-*sobor*-	-*sobor*-	-*sobor*-	-*sobor*-	-*sobor*-
Runyankore-Rukiga	-*báas*-	-*báas*-	-*báas*-	-*báas*-	-*báas*-
Kihaya	-*báas*-	-*báas*-	-*báas*-	-*báas*-	-*báas*-
	-*shobor*-	-*shobor*-	-*shobor*-	-*shobor*-	(-*shobor*-)
Kinyambo	-*báas*-	-*báas*-	-*báas*-	-*báas*-	-*báas*-
	(-*sobor*-)				
Kikerewe	-*kuhích*-	-*kuhích*-	-*kuhích*-	-*kuhích*-	-*kuhích*-
Kizinza	-*kuhích*-	-*kuhích*-	-*kuhích*-	-*kuhích*-	-*kuhích*-

verb which may be seen in deverbative nominal forms, for example in Runyankore-Rukiga: *obushoborozi* 'power, ability, force', *omushoborozi* 'one with authority, almighty', *Kashoborozi* 'magistrate, pleader', *abashoborozi* 'authorities' and *Bashobora* 'personal name' (Davis, 1938: 16, 113, 261). These nominal forms provide evidence that *-sóból-* must have originated as a full verb and that its grammatical use and associated modal meanings are a later development after the verb underwent a process of grammaticalisation.

In the three North Nyanza languages, where *-sóból-/-sobol-* expresses dynamic possibility types and deontic possibility, it appears to be undergoing a similar grammaticalisation process from a full verb to an auxiliary. A fuller account of the grammaticalisation of *-sóból-* in Luganda is presented in Kawalya et al. (2014) and Kawalya et al. (forthcoming). In these studies, it is shown that the independent uses of *-sóból-* as a full verb used to be more prominent in the earlier stages of the language and that these have considerably reduced over time, becoming almost non-existent in present-day Luganda. At the same time, the use of *-sóból-* as an auxiliary in double verb constructions has increased over time, so much so that today *-sóból-* is almost exclusively used in double verb constructions. A similar grammaticalisation process has been described for Kirundi *-shóbor-* (Bostoen et al., 2012). For Lusoga and Lugwere, it is not easy to pinpoint grammaticalisation on the basis of the available data, which does not include historical material with a considerable time depth. However, the existence of deverbative nouns in Lusoga like *obúsóbózí* 'ability/abilities' (Nabirye, 2016: 163), and in Lugwere like *óbúsóbóze* 'ability' (Kagaya, 2006: 237) and *busoboli* 'competence, ability, capability' (Nzogi & Diprose, 2012: 25, 227, 247, 256), shows that *-sóból-/-sobol-* possibly originated as a full lexical verb, from which these nouns were derived and that its independent use has only reduced over time and is now mostly found in double verb constructions, that is, in combination with another verb which describes the main event of the clause.

In Runyankore-Rukiga, where *-shobor-* does not currently exist as a verb, there are nominal forms, as shown above, which appear to have originated as derivatives of *-shobor-*. In Kihaya, *-shobor-* is acceptable, but *-báas-* remains the major possibility modal verb. In Kinyambo, *-sobor-* appears to have disappeared or is in the process of disappearing. But nouns such as *Musobozi* 'personal name', *Rugasobora* 'personal name', *obusobora* 'ability, authority' and *Omusoborabyona* 'God, has power over everything' still exist in both Kihaya and Kinyambo. Lastly, in Kikerewe and Kizinza, where *-sobor-* is not used to express a single possibility type in either, there are nouns such as *Omusoboozi* 'Almighty' which can semantically be linked to *-sobor-*.

Conclusion

Building on two corpus-driven studies, i.e. Kawalya et al. (2014) and Kawalya et al. (forthcoming), and in order to go beyond the limited time depth of the text corpus material available for Luganda, i.e. 130 years, we have relied in this study on a more traditional historical-comparative approach to reconstruct the origins of Luganda's two most frequent possibility markers, viz. the near-synonymous modal verbs *-sóból-* and *-yînz-*. Our corpus-driven diachronic research

had shown that since the 1890s Luganda speakers had the two modal auxiliaries at their disposal to express possibility, though at first only for the expression of dynamic possibility in the case of *-sóból-* (cf. Figure 3). While *-yînz-* is attested in all subcategories of possibility since the start of the corpus in the 1890s (cf. Figure 2), the modal usage of *-sóból-* was only extended in the 1950s to include deontic possibility. This semantic broadening only happened very hesitantly in the first decades and until today *-sóból-* has not taken over from *-yînz-* as the most prominent marker of deontic possibility. As for the expression of epistemic possibility, currently the main function of *-yînz-,* it never suffered any competition from *-sóból-*; rather it did, very marginally, from the verbal prefix *-andi-* (Kawalya, de Schryver and Bostoen, 2018). From this language-internal situation, one would expect *-yînz-* to be the possibility marker with the greatest time depth within Luganda and possibly West Nyanza and *-sóból-* to be a relative newcomer. Nonetheless, the comparative data presented in this article contradict such a historical analysis. They rather indicate the opposite.

While *-yînz-* only exists in the North Nyanza languages, i.e. Luganda, Lusoga and Lugwere, *-sóból-* is attested in these and all other West Nyanza languages. Cognate verbal forms of *-sóból-* are found in Runyoro-Rutooro, Kihaya and Kinyambo, while Runyankore-Rukiga, Kikerewe and Kizinza, which no longer possess a reflex of the verb itself, have deverbative nouns derived from it. Moreover, the verb is also attested in other Great Lakes Bantu languages outside West Nyanza, which is exactly the reason why Bastin et al. (2002) propose the regional reconstruction **-còbʊd-* 'be able'. The dynamic meaning of the reconstructed verb, which is also expressed by all its reflexes in present-day Great Lakes Bantu languages, suggests that this specific modal usage is older than Luganda and any of the individual languages considered here (see also Bostoen et al., 2012, for Kirundi).

However, apart from Runyoro-Rutooro, where *-sobor-* is the only potential modal verb, and Lugwere with *-sobol-*, there is no other West Nyanza Bantu language in which the reflex of **-còbʊd-* expresses all possibility types. Moreover, in those languages where the reflex of **-còbʊd-* is still attested, it is mostly associated with the more objective categories of dynamic possibility, while the alternative marker expresses all categories, including the more subjective ones. In other languages, the main potential modal marker covering all kinds of possibility is a marker other than *-sóból-*, namely *-yînz-* for Luganda, *-báas-* for Runyankore-Rukiga, Kihaya and Kinyambo, and *-kuhích-* for Kikerewe and Kizinza. Despite the somewhat complex situation in Lusoga and Lugwere, it remains clear that for Luganda, just like in other languages, an alternative modal verb to *-sóból-*, i.e. *-yînz-*, is more semantically diversified than *-sóból-*. The involvement of *-yînz-* in the expression of participant-inherent and participant-imposed dynamic possibility has been declining over the years in Luganda, while the share of especially epistemic possibility in the semantic range of *-yînz-* has increased with time. With Lusoga and Lugwere using *-yînz-* only for epistemic and deontic possibility, and to a lesser extent for situational dynamic possibility, one may conclude that Lusoga and Lugwere are losing and must have lost dynamic possibility meanings of *-yînz-*, while Luganda is on the course of losing these same meanings.

In sum, the comparative West Nyanza data presented in this article allow us to reconstruct *-còbʋd-* as a marker of dynamic possibility in their most recent common ancestor, i.e. Proto-West Nyanza. On the basis of what we know from Great Lakes Bantu languages outside West Nyanza, Proto-West Nyanza probably inherited it as such from Proto-Great Lakes Bantu. Within West Nyanza, its development of the more subjective modal meanings, i.e. deontic and epistemic possibility, is to be seen as a later innovation that happened independently and to a different extent in each of its subgroups. This semantic shift clearly happened along the implicational hierarchy dynamic ⊃ deontic ⊃ epistemic possibility. In none of the West Nyanza languages, the reflex of *-còbʋd-* marks epistemic possibility without also marking deontic and dynamic possibility, or marks deontic possibility without also marking dynamic possibility, while it is found to mark deontic possibility without marking epistemic possibility, and dynamic possibility without deontic possibility. Remarkably, given their present-day distribution, those West Nyanza verbs covering the whole range of possibility seem themselves of more shallow time depth within Great Lakes Bantu than *-còbʋd-*, except maybe for *-báac-* 'to be able' which is also attested beyond West Nyanza, e.g. in Kirundi (Bostoen et al., 2012). Luganda's most wide-ranging marker of possibility, i.e. *-yînz-*, does not seem to be older than the most recent common ancestor it shares with Lusoga and Lugwere, i.e. Proto-North Nyanza or otherwise the ancestral language that arose after Rushana split off. Getting a better understanding of the interaction of *-còbʋd-* and *-báac-* within Great Lakes Bantu would need further comparative research that is, however, beyond the scope of the present article.

Abbreviations and symbols

AUGx	augment of class x
CONN	connective
DEMa	proximal demonstrative
DEMb	medial demonstrative
DePo	deontic possibility
EPo	epistemic possibility
FV	final vowel
IPFV	imperfective
LOCx	locative of class x
N	homorganic nasal
NEG	negative
NPx	nominal prefix of class x
Ø	null morpheme
OPx	object prefix of class x
PFV	perfective
P-Im DyPo	participant-imposed dynamic possibility
P-In DyPo	participant-inherent dynamic possibility
PL	plural
POSSx	possessive of class x
POT	potential auxiliary
PPx	pronominal prefix of class x
PRS	present
PST$_1$	near past
PST$_2$	remote past
REL	relative
SBJV	subjunctive

SBST	substitutive
SG	singular
Sit DyPo	situational dynamic possibility
SPx	subject prefix of class x
W	Written part (of the BantUGent Lusoga corpus)
(x)	inconclusive feature
–	absence of feature
+	presence of feature

Notes

[1] Runyakitara is an umbrella label for a group of four closely related languages: Runyoro, Rutooro, Runyankore and Rukiga. The first two are even more closely related, as are the last two.

[2] We are grateful to Minah Nabirye who compiled this corpus as part of her PhD project at Ghent University (UGent). This corpus is available from the UGent Centre for Bantu studies (BantUGent).

[3] 'Lexical⁺' refers to cases where *-yînz-* expresses meanings that are ambiguous between lexical and participant-inherent dynamic possibility, while 'Lexical' refers to clear lexical meanings.

[4] The word *amakumi* means 'tens'. *Amakumi abiri* is therefore 'two tens' or 'twenty'.

[5] The full form for 'twenty' is *amakumi abiri*, thus 'two tens'.

[6] This example, as well as example (18), are from Rutooro, which is considered to be 'non-tonal' (see Rubongoya, 1999). Tone marks are therefore not indicated. Rutooro also makes use of a pre-initial present marker *ni-* which is absent in Runyoro.

[7] The full form for 'two hundred' is *bikumi bibiri* 'two hundreds'.

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