

**The Kinyarwanda *-iz-* Morpheme:
Insights on causativity from novel consultant work**

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Abstract

This paper discusses the valence-changing morphology of Kinyarwanda, a Bantu language spoken in Rwanda. Traditionally, Kinyarwanda is believed to have four valence-changing suffixes, the causative/instrumental *-ish*, applicative *-ir*, reciprocal *-an*, and passive *-w*, in that order (Banerjee, 2019). However, this paper presents novel consultant work that suggests that the usage of these suffixes in older sentence corpora are no longer viewed as grammatical by younger, present-day speakers. This paper also discusses a relatively unexplored morpheme of the form *-iz-* (Kimenyi, 1980), which appears frequently between the reciprocal and passive slots. In analyzing the *-iz-* morpheme's usage, grammaticality, and interactions with other morphemes, this paper concludes that its usages are all connected to a second causative suffix *-y* in Kinyarwanda, which can appear either on its own or obligatorily alongside the *-ish* causative. I additionally discuss the semantics and development of the *-y* causative and its interactions with other suffixes, especially the applicative and perfective, and outline the differences between it and the *-ish* causative.

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1. Introduction

Kinyarwanda, the national language of Rwanda, is a Bantu language with around 15 million speakers in Rwanda, its neighboring countries, and the diaspora (Eberhard et al., 2024). It is closely related to and mutually intelligible with Kirundi, the national language of neighboring Burundi (Hammarström et al., 2024). Both Kinyarwanda and Kirundi are in the Ruanda-Rundi Bantu group, which also includes several other languages spoken on the northern edge of Lake Malawi such as Fuliuro, Hangaza, Ha, and Vinza (Maho, 2009). This smaller language family is within the larger Bantu group D in Guthrie (1948)'s classification system, as well as being within the Interlacustrine Bantu zone, a linguistic area with notable influence from Bantu, Nilo-Saharan, and Cushitic languages (Bastin, 2003). Kinyarwanda is additionally in regular contact with English and French, the two European languages with widespread national and educational roles in Rwanda (Rurangirwa, 2012).

This thesis discusses the *-iz-* morpheme, an unexplained morpheme in the “extension,” or valence-changing suffix, slot of the Kinyarwanda verb. The extension slot is believed to contain four possible morphemes, in the CARP (Hyman, 2003a) ordering of causative *-ish*, applicative *-ir*, reciprocal *-an*, passive *-w* (Banerjee, 2019). However, in some of my earlier fieldwork on Kinyarwanda, a morpheme of the form *-iz-* or *-ij-* would appear consistently between the reciprocal and passive slots, with no clear origin or meaning that my consultant or I could figure out.

This morpheme has been cited as existing for unclear reasons in a range of contexts, largely those involving causation and applicativization (Kimenyi, 1980; c.f. Good, 2003; Banerjee, 2019; Jerro, 2013). These contexts include applicativized causatives, some perfectives, and some non-causative applicative constructions. However, there is very little clear consensus on this morpheme. It always appears in the same spot in the verbal template, and is systematically present in verbs with the same combinations of suffixes, but existing literature cannot explain its origin or purpose. One of the few explicit mentions of the *-iz-* morpheme is from Kimenyi (1980), in which Alexandre Kimenyi, a Rwandan linguist and L1 Kinyarwanda speaker, writes the following:

1. “Whenever both instrumental and benefactive morphemes occur in the verb, an extra suffix -iz- appears in the verb, we don't know where it really belongs to; it may belong to the instrumental marker, the benefactive or the aspect marker” (Kimenyi, 1980:126).

In this thesis, I aim to characterize the *-iz-* morpheme, describing existing theories and explanations for its origin and current usage. In section 2, I contextualize the background required for discussing the *-iz-* morpheme, laying out an overview of Kinyarwanda verbal morphology, with a focus on the extension (valence-changing suffix) slot. In section 3, I discuss the problem of the *-iz-* morpheme, and existing attempts to explain it (either explicitly or implicitly) in Kinyarwanda, as well as touching on some Bantu languages with cognates to the

-iz- morpheme. In section 4, I propose my theory for the *-iz-* morpheme: it is a second causative suffix, a reflex of Proto-Bantu's short causative, with similar semantics to the first Kinyarwanda causative, that manifests typically as *-y* or as palatalization on the preceding consonant. When interacting with applicative or perfective morphology, the combination surfaces as *-iz-* or *-ij-* as the short causative palatalizes the other morphemes. I also propose the short causative to always be present within both causative morphemes, and in section 5 I lay out the contexts for choosing one causative morpheme over another.

2. Background

As this paper focuses on an element of Kinyarwanda verbs, it is first necessary to discuss the overall verbal morphology of Kinyarwanda, as well as the specifics of the problem at hand. Additionally, there are variations in Kinyarwanda verbal morphology and syntax that may complicate applications of existing theories to modern young speakers.

2.1. Kinyarwanda Verbal Morphology

Similarly to most other Bantu languages (Wald, 1987), Kinyarwanda verb structure is highly agglutinative, with a largely fixed order of morphemes. The ordering of possible Kinyarwanda verb morphemes is shown in Figure 1:

Figure 1. Kinyarwanda verb slots

NEG	Subject	NEG	Tense	Limitative	Object	Verb root	Extension	Aspect
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The most relevant elements of verbal morphology to this thesis are the extension (which will be discussed in detail in Section 2.3), subject agreement, object agreement, and aspect.

Subject agreement is encoded through a prefix on a verb, with each different form indicating some combination of (grammatical) number and person for human subjects, and the noun class for non-human subjects. Human subject agreement markers are shown in Figure 2:

Figure 2. Human subject agreement prefixes

	Singular	Plural
1st Person	n- ¹	tu-
2nd Person	u-	mu-
3rd Person	a-	ba-

¹ Kinyarwanda language use in this thesis will be written in Kinyarwanda orthography unless otherwise specified.

Agreement for non-human subjects is based on noun class. All Kinyarwanda nouns inherently have one of 16 grammatical categories which are present both on the noun itself and in any word agreeing with that noun. Classes 1 and 2 are reserved for humans, so their agreement morphology is determined via human subject agreement as in Figure 2. Noun class agreement is shown in Figure 3:

Figure 3. Noun class agreement prefixes

Class	Noun prefix	Verb Subject prefix	Example (noun, then conjugated verb)	Example translation
1	-mu-			
2	-ba-			
3	-mu-	u-	um urima u reru	The field is fertile
4	-mi-	i-	im irima i reru	The fields are fertile
5	-ri-	ri-	iri ba ri ratemba	The river flows
6	-ma-	a-	ama riba a ratemba	The rivers flow
7	-ki-	ki-	igi tabo ki ri ku tebe	The book is on the chair
8	-bi-	bi-	ibi tabo bi ri ku tebe	The books are on the chair
9	-N-	i-	im bwa i ramoka	The dog barks
10	-N-	zi-	im bwa zi ramoka	The dogs bark
11	-ru-	ru-	uru toki ru ri kumbabaza	The finger is hurting me
12	-ka-	ka-	aka na ka rasinziriye	The baby is sleeping
13	-tu-	tu-	utu wana tu rasinziriye	The babies are sleeping
14	-bu-	u-	ubu taka u bugari	The land is large
15	-ku-	ku-	uku boko ku wavunitse	The arm is broken
16	-ha-	ha-	aha nu ha za	The place is good

There is also an unconjugated placeholder subject prefix, *ku-*, which appears on verbs that do not have a specified subject.

Object agreement works similarly to subject agreement. For non-human objects, the same noun class agreement prefixes are used in both subject and object form. For human objects, the agreement morphemes change slightly, taking the forms outlined in Figure 4:

Figure 4: Human object agreement morphemes

	Singular		Plural	
	Subject	Object	Subject	Object
1st Person	n-	-n-	tu-	-tu-
2nd Person	u-	-ku-	mu-	-ba-
3rd Person	a-	-mu-	ba-	-ba-

The final morpheme on a Kinyarwanda verb is the aspect, which can be either the imperfective *-a* or the perfective *-ye*. While the aspect of a verb largely does not syntactically affect CARP suffixes, phonological effects often result from the proximity of valence-changing morphemes to the aspect suffix. These phonological effects are discussed below in section 2.2.

2.2. Relevant phonological effects

Adjacent morphemes in a Kinyarwanda verb frequently affect each other phonologically. Most relevant to this thesis is palatalization. When a verb stem ending in a consonant and a suffix beginning in the palatal glide /y/ (such as the perfective) are adjacent, the final consonant of the verb stem will experience palatalization effects. Verb stems can end in the consonants /b/, /m/, /n/, /s/, /z/, /h/, /t/, /r/, /d/, /g/, and /k/ (Kimenyi, 1979), and the effects of palatalization on these consonants is shown in Figure 5:

Figure 5. Palatalization effects (c.f. Kimenyi, 1979)

Original form	Palatalized	Original form	Palatalized
b	bj <by>	t	s <s>
m	mñ <my>	r	z <z>
n	nñ <nny>	d	z <z>
s	š <sh>	g	z <z>
z	ž <j>	k	ts <ts>
h	ħ <shy>		

The palatal glide is deleted after palatal consonants (Kimeyi, 1979). Thus, when these palatalization effects occur, the /y/ will not be pronounced, and its underlying presence will be indicated only via the palatalization of the preceding consonant.

2.3. Valence-changing suffixes

The valence-changing suffixes in Bantu languages, which are the morphemes in the “extension” position from Figure 1, traditionally occur as the Pan-Bantu C-A-R-P ‘default’ template (Hyman, 2003a) containing the causative, applicative, reciprocal, and passive morphemes, in that order by default. In some languages, the causative has additional complexities — in Proto-Bantu, the CARP template contained both a polyphone (-VC-) causative at the beginning of the set, as well as a monophone (-V-) causative (sometimes referred to as a transitive) between the reciprocal and passive (Bastin, 1986). The overall Proto-Bantu valence-changing template is the following (Hyman, 2003a):

2. CAUS²-APPL-REC-CAUS-PASS
 *-ic- -id- -an- -i- -u-

The templatic CARP ordering also holds for Kinyarwanda, which effectively never disobeys the templatic ordering. In cases where the Mirror Principle (Baker, 1985) is in conflict with the CARP template, periphrasis will typically be used to resolve the tension rather than disobeying CARP order (Banerjee, 2019).

The usage and Kinyarwanda-specific forms of the CARP suffixes will be detailed below, in the order that they appear in the template. The short causative will not be addressed in detail in this section, but will be the focus of section 4.

2.3.1. CAUSATIVE(S).

The Bantu causative is a verbal form, expressed via a valence-increasing morpheme suffixed to the verbal root or theme, which shows that a subject is helping to bring about the realization of an action in some way (Bastin, 1986). More syntactically, a causative form will differ from its non-causative variant in containing an additional argument, a subject, who is doing the causing to the verb. The argument that would be the subject of the non-causative form is expressed as an object in the causative form, or in some cases is not realized at all (Good, 2005).

The Proto-Bantu causative could take two forms. There was a monophone causative expressed with the suffix **-i-*, as well as a longer form expressed with the polyphone suffix **-ic-* followed by the monophone suffix. This thesis will refer to the **-ic-* form as the “long

² A full table of glossing abbreviations is in the appendix in section 8.

causative,” and the **-i-* form as the “short causative,” though in Bantu linguistics the short causative may be referred to as the “transitive” (Good, 2005), and the term “long causative” can be used to refer to the combination of both suffixes. Modern Bantu languages can have any of three situations: the Proto-Bantu pairing of both short and long causative, only the short causative (or almost only), or only the long causative (Hyman, 2003a). There is not always a semantic distinction between the two causative suffixes in languages that use both: the choice can also be phonological or lexical (as will be discussed fully in section 4.4), with only their ordering being consistent across Bantu languages (Good, 2005). In languages that do make a semantic distinction, the difference can be related to direct versus indirect causation, but this is not frequently the case (Good, 2005).

In Kinyarwanda, causatives are generally believed to be formed via the suffix *-ish*, or sometimes periphrastically with helping verbs *-teer-* or *-tuma-* (Kimenyi, 1980). The morphological causative typically indicates direct causal meaning, while periphrastic causatives are used for indirect or mediated causation (Jerro, 2013). The Kinyarwanda *-ish* suffix is a descendant of the Proto-Bantu long causative **-ic-*.

The causative suffix *-ish* also functions as an instrumental marker, which is uncommon in other Bantu languages. In cases when *-ish* indicates an instrument, there is no distinction in structure from a causative formation, except the entity being caused to act is typically animate in a causative and inanimate in an instrumental (Kimenyi, 1980). There is not a rigid causative/instrumental distinction, with instruments and causes being thematically similar (Jerro, 2013).

Some examples of causative structures in Kinyarwanda are as follows:

3. **kwigisha**³
ku-ig-**ish**-a
UNSP-learn-CAUS-IM
“to teach”

4. Mama **yatumye** mbiza amazi.
mama **a-a-tum-ye** n-biz-a a-ma-zi
mom 3SG-PST.REC-cause-PF 1SG-boil.TRANS-IM AUG-6⁴-water
“Mom made me boil water.”

5. Nandik**isha** ikaramo.
n-andik-**ish**-a i-Ø-karamo
1SG-write-CAUS-IM AUG-9-pen
“I write using a pen.”

³ Glosses of my own fieldwork will be expressed in this thesis via four lines: (1) the word in Kinyarwanda orthography, (2) the underlying morphemes in Kinyarwanda orthography, (3) glossing labels, (4) English translation

⁴ Noun class agreement morphology is denoted by a digit representing a noun’s class.

The sentence in (3) contains a morphological causative using the *-ish* suffix, the sentence in (4) contains a periphrastic causative with the verb *-tum-*, and the sentence in (5) contains an instrumental usage of the *-ish* suffix.

The use and reflex of the short causative in Kinyarwanda are less clear-cut, and will be detailed throughout the remainder of this thesis, with the short causative being the primary focus of section 4.

2.3.2. APPLICATIVE.

Applicativization in Bantu is typically conceptualized as a valence-increasing process that licenses an additional object to a verb's argument structure (Jerro, 2016). The applicative morpheme in Proto-Bantu took the form **-id-* (Hyman, 2003a), and is the ancestor of most modern Bantu applicative suffixes.

The specifics and semantics of exactly what is added to a sentence by the applicative are less clear — Pacchiarotti (2017) identifies four types of applicative constructions in Bantu languages: (A) constructions where the applicative morpheme introduces an obligatorily present applied phrase that previously was either not obligatory or impossible with the verb root; (B) constructions where the applicative introduces an obligatorily present applied phrase, and applies semantic/pragmatic functions on that applied phrase or entire clause; (C) constructions where the applicative morpheme indicates that the action described in the verb root is performed to completion, continuously, intensely, excessively, etc., without introducing an applied phrase; and (D) pseudo-applicative constructions. Type (C) and pseudo-applicatives are largely lexicalized processes, while Types (A) and (B) are generally more productive (Pacchiarotti, 2017).

In Kinyarwanda, the applicative takes the form *-ir*, descending from the Proto-Bantu **-id-*. Kinyarwanda applicatives can serve to introduce arguments that serve as beneficiaries, locatives, and reasons (Banerjee, 2019). Some examples of Kinyarwanda applicatives are as follows:

- | | | | |
|-----------------------------------|-------------|----------------------|----------|
| 6. Mukorera | imikoro | ye. | |
| n-mu-kor- ir -a | i-mi-koro | ye | |
| 1SG-3SG-do-APPL-IM | AUG-4-work | his | |
| “I do his homework for him.” | | | |
| | | | |
| 7. Imyenda | iraza | kumuk ira | hari. |
| i-mi-enda | i-ra-za | ku-muk- ir -a | ha-ri |
| AUG-4-clothing | 4-PRES-come | UNSP-dry-APPL-IM | 16-there |
| “The clothes will get dry there.” | | | |

Locatives can also be expressed through locative suffixes or prepositions, while object or non-subject argument introduction to a verb root is only achieved through the applicative suffix.

2.3.3. RECIPROCAL.

The Bantu reciprocal morpheme is a suffix that decreases valence by removing an object. It stems from the Proto-Bantu suffix **-an-*. This morpheme indicated that the action of a verb root was directed at “each other” (Meeussen, 1967), as in, some members of a plural subject performed the action unto each other.

The Kinyarwanda reflex of the reciprocal is also *-an*, with the same meaning as its Proto-Bantu ancestor. An example of the Kinyarwanda reciprocal is shown in (8).

8. Barabon**ana**.
 ba-ra-bon-**an**-a
 3PL-PRES-see-RECP-IM
 “They see each other.”

In certain cases, the reciprocal can also be used to express the manner of a verb (Kimenyi, 1980).

2.3.4. PASSIVE.

The passive in Bantu languages originated as **-u-* (Hyman, 2003a) or **-ú-* (Meeuseen, 1967) in Proto-Bantu. It functions as a straightforward passivizing morpheme, promoting the logical object of a passive-marked verb to the subject, while the logical subject is either no longer expressed, or expressed as an oblique argument such as an instrumental prepositional phrase (Good, 2007).

In Kinyarwanda, the passive form is the suffix *-u* before consonants and *-w* before vowels. The passive surfaces as *-bu* or *-bw* after vowel-final verb roots. It can promote either indirect or direct objects to the subject position in passivizing (Banerjee, 2019). When a verb is passivized, the logical subject can be made explicit as a prepositional phrase using the word *na*, meaning “by.” Some examples of the passive are in (9) and (10):

9. Nafash**we** amashusho.
 n-a-fash-**w**-ye a-ma-shusho
 1SG-PST.REC-record-PASS-PF AUG-6-picture
 “I was filmed.”

10. Ibiryo birib**wa** n’imbwa.
 i-bi-ryo bi-ri-**bu**-a na-i-m-bwa
 AUG-8-food 8-eat-PASS-IM by-AUG-9-dog
 “The food was eaten by the dog.”

With this survey of the Kinyarwanda CARP suffixes, we will now proceed into the current study's investigation of the *-iz-* morpheme and mismatches with the canonical CARP template in Kinyarwanda.

2.4. *Methods*

Unless otherwise specified, the data in this thesis were collected through elicitation sessions with an L1 Kinyarwanda speaker as a consultant. The consultant was a young woman from Kigali, who is attending college in the United States. In addition to Kinyarwanda, she is fluent in English and has varying levels of proficiency in Kirundi, French, Swahili, and Mandarin from school. She attended a French-medium kindergarten, and English-medium primary school, secondary school, and university, while speaking Kinyarwanda in non-academic settings. Elicitations occurred between Fall 2023 and Fall 2024. The data that was collected includes translations from English into Kinyarwanda, translations from Kinyarwanda into English, free-flowing speech in Kinyarwanda, and grammaticality judgments of Kinyarwanda language use produced by other people.

2.5. *Variation*

There is some amount of variation among Kinyarwanda speakers with respect to the syntax and semantics of valence-changing morphology. A sentence containing extension (valence-changing) suffixes that one speaker considers grammatical may not be perceived as such by another speaker, sometimes to the point that a sentence deemed valid by one speaker will be incomprehensible to another.

In particular, this can be seen with the disagreements between some present-day speakers and the variety of Kinyarwanda described by Alexandre Kimenyi. Kimenyi was an influential linguist of Kinyarwanda and an L1 speaker of Kinyarwanda from Butare, Rwanda (Kimenyi, 1980). He was the author of several books on Kinyarwanda linguistics, including notably *A Relational Grammar of Kinyarwanda*, a grammar of Kinyarwanda whose analysis and corpus of example sentences are cited frequently across published work that discusses or references Kinyarwanda valence-changing suffixes and often is treated as a singular authority on the language.

In my own elicitations, however, my consultant found many of Kimenyi's sentences to not conform to her own variety of Kinyarwanda. For example, she deemed Kimenyi's sentence in (11) to be completely ungrammatical to the point of complete incomprehensibility, and the sentence in (12) to have a translation much closer to (13) than Kimenyi's original translation.

11. Umuhuûngu y-a-andik-iish-ir-ije umukoôbwa íbarúwa íkarámu.⁵
 boy he-pst-write-instr-ben⁶-asp girl letter pen
 ‘The boy is writing the letter with the girl’s pen.’ (Kimenyi, 1980:112)
12. Umugabo a-ra-shyúuh-iish-a umugóre amáazi.
 man he-pres-warm-caus-asp woman water
 ‘The man is having the woman warm the water.’ (Kimenyi, 1980:180)
13. ‘The man is warming the woman using the water.’

My consultant had many more disagreements on both grammaticality and translations of sentences in Kimenyi (1980). This finding was also supported in Banerjee (2019)’s *Templatic morphology through syntactic selection*, in which Banerjee’s consultants also deemed a number of Kimenyi’s example sentences to be ungrammatical. Some of these differing judgements were the same as my consultant’s, such as the sentence in (11), which was rejected by all, and others had varying acceptability between Banerjee’s consultants and mine.

There is no clear explanation for this grammaticality variation so far — the difference could be sociolinguistic (my consultant differs in gender from Kimenyi, and is from Kigali, rather than Butare, where Kimenyi grew up). It could also be a rapid historical change, since my consultant is around 60 years younger than Kimenyi. Many of these explanations do not seem like they fully account for the dialectal differences, however, since one of the consultants from Banerjee (2019) was also a man from Butare, and was only around 30 years younger. According to my consultant, the grammaticality variations are likely related to the difference between spoken and written Kinyarwanda. This is supported by Nassenstein (2019), in which the author describes the centralization of standardized written Kinyarwanda around the Ikinyanduga dialect, which is the variant described in all available grammars, explicitly including Kimenyi. This lends credence to written Kinyarwanda being viewed as a different form of the language by many speakers, as it was based on only one specific dialect.

While it remains somewhat unclear what causes the grammaticality variation, it is clear that studies of extension morphology and Bantu languages as a whole would benefit from a decreased reliance on one single source as the authority on Kinyarwanda. There is relatively little study on the dialectology of Kinyarwanda. As Kimenyi’s description of standard written Kinyarwanda alone cannot account for all forms of the language and all speakers, more original work from Kinyarwanda-speaking linguists or involving a diversity of consultants should be done, focusing on capturing the dialectal variation of the language beyond just one standard variant. Going forward in this paper, I will be focusing on analyzing my consultant’s variant, only referring to Kimenyi if he and my consultant agree, and analyzing the differences between Kimenyi and my consultant only if they are relevant.

⁵ Kimenyi (1980)’s glosses are written mostly in standard orthography, but he adds tone marking and doubled letters for long vowels.

⁶ Kimenyi (1980) glosses the applicative as “ben,” for “benefactive”

3. The *-iz-* morpheme

The four-suffix CARP template has a glaring hole when applied to Kinyarwanda. Frequently, a fifth morpheme, expressed as *-iz-* or *-ij-*⁷, appears within the extension slot, always falling between the reciprocal and passive suffix slots in the template. This morpheme and its function will be the focus of the rest of this thesis. For simplicity, it will be referred to as the “*-iz-* morpheme” based on Kimenyi (1980)’s discussion, despite having multiple possible shapes.

Most often, the *-iz-* morpheme will be accompanied by either the causative or applicative suffixes. In particular, the *-iz-* seems to appear alongside causative forms nearly every time the causative is perfectivized, and appears variably after the applicative in both perfective and imperfective cases. The *-iz-* rarely appears solely with the reciprocal or solely with the passive – usually, when there is an *-iz-* + reciprocal or *-iz-* + passive combination, it occurs when there is already an applicative or a causative with perfective aspect. My consultant did not seem to view *-iriz* or *-ishij* as having significantly different meanings from *-ir* or *-ish* without the *-iz*, nor could she generally identify a contribution of the *-iz*, just that verbs with an *-iz* would be ungrammatical without it, which is reflected in Kimenyi (1980).

Some examples of the *-iz-* morpheme are as follows, with the morpheme **bolded**:

14. Ndahatoheje.

n-ra-ha-toh-**iz**-ye

1SG-PRES-16-be.wet-iz-PF

“I made it wet.”

15. Akohereza

impano.

a-ku-oh-ir-**iz**-a

i-m-pano

3SG-2SG-send-APPL-iz-IM

AUG-9-gift

“He sends you a gift.”

16. kwandikishiriza

ku-andik-ish-ir-**iz**-a

UNSP-write-CAUS-APPL-iz-IM

“write with help”

17. Ibaruwa

izandikwa

hakoreshejwe

ikaramo.

i-baruwa

i-za-andik-w-a

ha-kor-ish-**iz**-w-ye

i-karamo

AUG-(9)-letter 9-FUT-write-PASS-IM 16-do-CAUS-iz-PASS-PF

AUG-(9)-pen

“The letter will be written with a pen.”

⁷ The difference between *-iz-* and *-ij-* appears to be phonologically based — if the morpheme is followed by a palatal sound, it will surface as *-ij-*, but appears as *-iz-* in other cases. In Kinyarwanda, vowel harmony laws mean that an /i/ following a mid-height vowel will surface as [e]. As such, this morpheme can also take the forms *-ez-* and *-ej-*.

18. Barigishanije.

ba-ara-ig-ish-an-**iz**-ye

3PL-PST.REM-learn-CAUS-RECP-iz-PF

“They taught each other.”

The semantic contribution of *-iz-* is not immediately apparent from its behavior in these examples. It does, however, appear to be its own morpheme, despite this lack of semantic clarity. It does not appear to be part of an allomorph of any other CARP morpheme, given that it appears on its own in (14), though it very often coincides with the causative or applicative suffixes. Nor does it appear to be fully part of an aspectual suffix, given that it can be separated from the aspect by the passive suffix, as in the word *hakoreshejwe* in (17).

The various forms of the morpheme (*-iz-*, *-ij-*, *-ez-*, and *-ej-*) strongly appear to be the same morpheme, due to the rules of Kinyarwanda vowel harmony (an /i/ following an /o/ or /e/ will become /e/) and palatalization, the latter of which can be seen in (19) and (20):

19. Nzakohereza

n-za-ku-oh-ir-**iz**-a

1SG-FUT-2SG-send-APPL-iz-IM

“I will send you a letter.”

ibaruwa.

i-baruwa

AUG-(9)-letter

20. Nakohereje

n-a-ku-oh-ir-**iz**-ye

1SG-PST.REC-2SG-give-APPL-iz-PF

“I sent you a letter.”

ibaruwa.

i-baruwa

AUG-(9)-letter

From the aspectual minimal pair in (19) and (20), the *-iz-* morpheme (surfacing as *-ez-* due to vowel harmony) is changed to *-ij-* due to its interaction with the palatal approximant in the perfective suffix *-ye*. As noted in Figure 5, the palatalized form of /z/ is [j].

Although the *-iz-* morpheme appears to exist just as robustly and consistently as the four CARP morphemes, it is relatively understudied and unexplained in academic literature. For a full understanding of Kinyarwanda valence, the *-iz-* morpheme must be addressed and given its place in the CARP template.

3.1. Existing explanations for the Kinyarwanda *-iz-* morpheme

There have been a number of ways that the *-iz-* morpheme has been approached in literature on Kinyarwanda linguistics. This section will briefly discuss what prior analyses of the morpheme have said, as well as discuss these theories’ explanatory power regarding the *-iz-*

morpheme. Often, analyses of this morpheme are based on data from Kimenyi (1980), which means that they may not necessarily hold for all speakers of Kinyarwanda.

3.1.1. KIMENYI.

One of the earlier, and most direct, mentions of the Kinyarwanda *-iz-* morpheme comes from Alexandre Kimenyi, in the form of a footnote in his *Relational Grammar of Kinyarwanda*:

21. “Whenever both instrumental and benefactive morphemes occur in the verb, an extra suffix *-iz-* appears in the verb, we don't know where it really belongs to; it may belong to the instrumental marker, the benefactive or the aspect marker” (Kimenyi, 1980:126).

Although Kimenyi does not address the meaning or origin of the *-iz-* morpheme, this insight is useful in itself — as Kimenyi is an L1 Kinyarwanda speaker, his lack of knowledge of why he is producing this morpheme, only that sometimes he is required to, is telling. His analysis that the morpheme appears whenever both instrumental (synonymous with *-ish* causative) and benefactive (synonymous with *-ir* applicative) morphemes are present is true, but does not seem to give the full picture of contexts where an *-iz-* morpheme appears, as previous examples have shown a bare *-iz-* as in *ndahatoheje* in (14), or *-iz-* with only one of the causative or applicative as in *akohereza* in (15) or *barigishanije* in (18). As the *-iz-* morpheme can be present without the causative, without the applicative, and in either aspect, Kimenyi's assertion that *-iz-* must belong to one of these other suffixes is misleading.

Kimenyi calls attention to the *-iz-* morpheme without theorizing heavily on its semantics or grammaticality contexts. His analysis is largely implicit; he says that he is not sure which other morpheme the *-iz-* ‘belongs to,’ offering the causative, applicative, and aspect as options for the *-iz-*'s owner, not considering the possibility of *-iz-* as its own morpheme.

3.1.2. APPLICATIVE ALLOMORPH.

A frequently-floated explanation (Banerjee, 2019; c.f. Maganga & Schadeberg, 1992; Abasheikh, 1978) for the *-iz-* is that it is part of an allomorph of the applicative suffix, likely stemming from Kimenyi (1980)'s hypothesizing of morphemes, including the applicative, that *-iz-* may belong to. In this theory, the applicative has two forms, *-ir* and *-iriz*. This can be exemplified in Banerjee (2019)'s *Templatic morphology through syntactic selection*, which posits the CARP morphemes as in Figure 6:

Figure 6. Kinyarwanda valency changing morphology (Banerjee, 2019).

Morpheme	Realisation	Behaviour
CAUS	-ish	Causative, Instrumental
APPL	-ir(iz)	Benefactive, Locative, Reason
RECP	-an	Reciprocal, Depatientive
PSV	-(b)u	Symmetric

The distribution of these two allomorphs is explained as *-ir* being the default form of the applicative suffix, while *-iriz* is an allomorph used specifically for verbs that bear both applicative and causative marking (Banerjee, 2019).

The analysis of *-iz-* as half of an allomorph of the applicative does not fully explain all use cases for the morpheme. As previously mentioned, there are a number of words with only the causative and the *-iz-*, such as in (22):

22. Ndi kwandikira ibaruwa murwanda nkoresheje
 n-ri ku-andik-ir-a i-baruwa mu-rwanda n-kor-ish-iz-ye
 1SG-be UNSP-write-APPL-IM AUG-(9)-letter LOC-Rwanda 1SG-do-CAUS-iz-PF

ikaramo.
 i-karamo
 AUG-(9)-pen

“I’m writing a letter from Rwanda with a pen.”

This analysis also posits that verbs using the *-iriz* variation of the applicative are doing so due to having causative marking, which is not necessarily true. Take, for instance, the sentence in (23):

23. Akohereza impano.
 a-ku-oh-ir-iz-a i-m-pano
 3SG-2SG-send-APPL-iz-IM AUG-9-gift
 “He sends you a gift.”

The word *akohereza* in (23) does not have the *-ish* causative marking, but still has the *-iriz* variant of the applicative.

This analysis, once again, seems to miss some use cases of the *-iz-* morpheme in claiming it to only co-occur with the applicative, and does not fully explain when its presence is required

in applicative constructions, as presence versus absence of a causative *-ish* morpheme does not entirely predict whether the *-iz-* morpheme will appear.

3.1.3. ASPECTUAL MORPHOLOGY.

The *-iz-* is also sometimes posited to be part of the Kinyarwanda aspect morpheme. This may also follow from Kimenyi (1980)'s hypotheses of *-iz-*'s ownership, in which one of the options he gives is that the *-iz-* morpheme belongs to a verb's aspect marking.

This can be exemplified in Jerro (2016)'s work on Bantu applicatives, which focuses on Kinyarwanda, and posits that *-iz-* morpheme, specifically in its *-ij-* form, is part of the perfective ending. This paper attributes *-iz-* solely to the perfective, although Kimenyi (1980) includes several examples of *-iz* being attributed to the imperfective suffix.

In Jerro (2016), the following analysis of the Kinyarwanda perfective is provided:

24. The Kinyarwanda perfective suffix (–e) has several allomorphs (–eje, –ije, –eye, –iye) and often causes palatalization of the final consonant of the stem. Most notably for the data presented through the dissertation, the consonant *r* [r] is palatalized to the glide [j] (orthographically *y*) when the perfective morpheme follows it. This is important to note because the applicative morpheme –ir immediately precedes any aspect morphology, and thus the concatenation of /–ir/ and /–e/ is pronounced [ije] (orthographically ‘iye’). (Jerro, 2016:11)

This explanation of perfective allomorphy does not account for the full spectrum of perfective behavior in Kinyarwanda. The perfective suffix in Kinyarwanda, based on the majority of my data as well as in Kimenyi (1980), is *-ye* at its base form, rather than *-e* or *-iye*, as can be seen from aspectual minimal pairs like in (25) and (26) and in (27) and (28), whose roots end in /n/ and a vowel, which are unlikely in Kinyarwanda to be affected by interactions with the perfective suffix:

25. Urambona.
u-ra-n-bon-a
2SG-PRES-1SG-see-IM
“You are seeing me.”

26. Urambonye.
u-ra-n-bon-ye
2SG-PRES-1SG-see-PF
“you just saw me.”

27. Ndarya
 n-ra-ri-a
 1SG-PRES-eat-IM
 “I am eating.”

28. Ndariye
 n-ra-ri-ye
 1SG-PRES-eat-PF
 “I just ate.”

Jerro (2016) does not address the *-ije* and *-eye* allomorphs, only talking in their explanation about the palatal glide variations *-iye* and *-eye*, so it is not clear why, in this theory, the perfective would take an *-ije* form over an *-iye* form.

In addition, the presence of *-iz-* in non-perfective verbs suggests that attributing *-iz-* exclusively to the perfective misses some number of its environments. For example, the pair in (29), repeated from (19) and (20):

- | | | |
|--------|--|--|
| 29. a. | Nzakohereza
n-za-ku-oh-ir- iz -a
1SG-FUT-2SG-send-APPL-iz-IM
“I will send you a letter.” | ibaruwa.
i-baruwa
AUG-(9)-letter |
| b. | Nakohereje
n-a-ku-oh-ir- iz -ye
1SG-PST.REC-2SG-give-APPL-iz-PF
“I sent you a letter.” | ibaruwa.
i-baruwa
AUG-(9)-letter |

(29a) and (29b) both contain a morpheme with an *-iz-* shape directly before the aspect, though in (29b) the /z/ appears to have been palatalized into [j] by the *-ye* perfective suffix. In (29a), the verb ends in *-a*, the imperfective suffix, while in (29b), the verb ends in the perfective *-ye*. Given the *-iz-*’s presence regardless of aspectual morphology, in both perfective and imperfective forms, it does not seem to be solely attributable to the perfective suffix.

3.1.4. APPLICATIVE-TRANSITIVE FUSION

A final explanation for the Kinyarwanda *-iz-* morpheme has been that the morpheme is not one morpheme, but rather a combination of two: this theory describes the *-iz-* as being a reflex of a fusion of the applicative and transitive (another term for the short causative) suffixes.

This theory is exemplified in Good (2003)’s dissertation on morphosyntactic template constructions, where Kinyarwanda is discussed within a larger section on Bantu causativization

3.2.1. CHIMWIINI

Chimwiini (sometimes referred to as Chimbalazi, or by Europeans as Bravanese) is a Bantu language spoken in southern Somalia. It is Eastern Bantu and closely related to Swahili, sometimes being viewed as a dialect of the latter, but has notable syntactic differences from Swahili affecting valence-changing morphology (Abasheikh, 1978).

The valence-changing suffixes of Chimwiini largely resemble those of Kinyarwanda – Chimwiini has a CARP template of the morphemes *-ish* (causative), *-il* (applicative), *-an* (reciprocal), and *-ow* (passive). There is also a variant of the applicative of the form *-iliz*, the equivalent of the Kinyarwanda *-iriz* combination of applicative *-ir* and *-iz*. The Chimwiini *-iliz* allomorph appears instead of the default *-il* in cases when the preceding verb root ends in the consonants *s*, *z*, *sh*, or *ñ* (Abasheikh, 1978). Since the presence of a causative always makes the preceding verb root end in *sh*, the applicative always takes the *-iriz* form when it follows a causative. This is a similar analysis to Banerjee (2019) on Kinyarwanda, as it posits the *-iz* to be part of a causativized allomorph of the applicative. For Chimwiini, though, the allomorphy is believed to be phonologically conditioned, with the association with causativization being a product of the phonological properties of the causative.

There is also an irregular, non-productive causative suffix in Chimwiini of the form *-iz* or *-ez*. Abasheikh (1978) does not relate this to the *-iliz* form of the applicative.

3.2.2. KINYAMWEZI

Kinyamwezi is a Central Bantu language spoken in the Kigoma and Rukwa regions of Tanzania (Eberhard et al., 2024). Kinyamwezi's CARP template morphemes take the form *-ch*, *-sh*, or *-j* for the causative, *-il* or *-el* for the applicative, *-aan* or *-an* for the reciprocal, and *-(i)w* for the passive (Kanijo, 2019). There is a class of verbs that are marked for applicativization and causation via the form *-ilij* (Maganga & Schadeberg, 1992), which, similarly to Chimwiini and Kinyarwanda, appears to be the applicative ending with an extra morpheme of the form *-ij* afterwards.

3.2.3. TONGA

Tonga is a Bantu language spoken in Zambia and Zimbabwe. It has several different causative forms, including *-i*, *-esy*, and *-isy* (Hang'ombe et al., 2020). Causative Tonga verbs will often become perfective by adding a suffix of *-iz* to the causativized verb root, but this sometimes is doubled, with an *-iziz* being added instead. This variation in single versus double endings is posited to be due to a phonological requirement for having a *-siz-* or *-ziz-* sequence in perfectivized causative forms (Hyman, 2003b).

3.2.4. SHONA

Shona is a Central Bantu language spoken largely in Zimbabwe (Eberhard et al., 2024). There are two causatives in Shona — one is a reflex of the Proto-Bantu transitive *-i-*, but exists currently mostly as unproductive lexicalized palatalization, and the other is an *-is* suffix that signals indirect causation. The applicative suffix is *-ir* or *-er* (Fortune, 1955). There is a separate, productive morpheme of the form *-idz* that on its own signals the combination of causativization and applicativization. This form is believed to be a combination of the applicative and transitive/short causative, despite Shona only productively using *-is* for causation (Good, 2003).

3.2.5. KIRUNDI

Kirundi, or Rundi, is a Bantu language spoken in Burundi, which neighbors Rwanda. It is closely related to and mutually intelligible with Kinyarwanda (Hammarström et al., 2024). The valence-changing suffixes in Kirundi are likewise very similar to those of Kinyarwanda — the causative is *-iish*, the applicative is *-ir*, the reciprocal is *-an*, and the passive is *-w*. There is also a reflex of the short causative, *-y*, which is only used for certain stems, and a variant of the applicative *-iriz* that typically appears when causative and applicative appear together (Meeussen, 1959). The *-iriz* ending is used for causativized applicatives regardless of whether a root typically uses the *-iish* or *-y* causative form. This morpheme is theorized by Meeussen (1959) to be a combination of a reduplicated applicative and a short causative, contracting *-ir-ir-y* together into *-iriz*. When a Kirundi verb root ends in an /r/, however, the *-ir* applicative does not reduplicate, adding only an *-iz* rather than an *-iriz*. This can be seen in the difference between (31) and (32), from Meeussen (1959) with my English translations bracketed:

31. shyúuh- *être chaud* [be hot]
 -shyúuh-y- (-shyúushy-) *chauffer* [warm]
 -shyúuhh-y-ir (-shyúuhiriz-) *chauffeur pour, à* [warm for, to]
32. -ráar- *passer la nuit* [spend the night]
 -ráar-y-: -ráaz- *reserver au lendemain* [reserve for the next day]
 -ráar-y-ir-: -ráariz-: *réserver ... pour* [reserve ... for] (Meeussen, 1959:59)

Additionally, the Kirundi *-iriz/-iz* alternation can indicate scope distinctions, as in (33):

33. -gum- *être ferme* [be firm]
 -gum-ir- *tenir quelque part* (intr.) [hold somewhere]
 -gum-ir-y-: -gumiz- *faire tenir quelque part* [make hold somewhere]
 -gum-y- *tenir* [hold]
 -gum-y-ir-: -gumiriz- *tenir pour* [hold for] (Meeussen, 1959:59)

Meeussen (1959) theorizes *-iriz* to be a representation of *-y-ir*, a form that is originally causative and is applicativized, that surfaces as *-ir-ir-y*, with *-iz* being a representation of *-ir-y*, a form that is applicative and becomes causativized. He does not explain why the forms surface in this way, nor if there is a way to distinguish the relative scope of causative and applicative morphemes for verb roots that end with /r/. Overall, the Kirundi *-iz* is similar to Good (2003)'s theory of the Kinyarwanda *-iz* morpheme — it comes from a combination of applicative and short causative morphemes, although it does not always require reduplication of *-ir* as Good (2003) posits Kinyarwanda to, as it can appear as one single *-iz* without being part of the full *-iriz* sequence. The Kirundi *-iz* also can communicate scopal relations between the causative and applicative, which is not theorized of the Kinyarwanda *-iz*.

Kirundi is Kinyarwanda's closest relative, which suggests that its cognate of the *-iz* morpheme may provide significant insight into the Kinyarwanda equivalent.

4. The Kinyarwanda short causative

The theory that I have settled on to explain the *-iz-* morpheme in Kinyarwanda is that it is always a reflex of the Proto-Bantu short causative, though its shape may vary through interactions with other morphemes. While it brings about an *-iz-* or *-ij-* shape when appearing in conjunction with applicative or perfective morphology, this morpheme is fairly widely used in different forms across Kinyarwanda, functioning as a second causative suffix in addition to *-ish*, the typical causative. It manifests as palatalization or the palatal glide *-y* in imperfective verbs, and as an *-ij* in perfective verbs; the set of verbs that can use a short causative in place of a long causative are largely based on lexicalization. The short causative is also always present but largely unnoticed in any verb with a long causative *-ish*. This theory will be elaborated upon and discussed in the rest of this section. In this analysis, I aim to connect the conflicting theories involving this morpheme and explain its role in a wide range of unusual behavior in the Kinyarwanda verbal extension slot.

4.1. The morpheme alone

The Kinyarwanda short causative is a valence-increasing morpheme that introduces a new subject who performs causation, demoting the non-causative subject to the object of causation. Like the long causative *-ish*, it expresses that a subject is helping realize or bring about an action. The short causative appears in between the reciprocal and passive slots in the CARP template, for a full Kinyarwanda template of C₁ARC₂P. The default form of this morpheme in the imperfective aspect is *-y*, which often manifests solely as a palatalization effect on the preceding consonant due to the phonology of Kinyarwanda (as discussed in section 2.2). In perfective forms, the morpheme takes the shape *-ij*, in which case the palatalization effects from the imperfective will not occur. One example of the Kinyarwanda short causative is below, with a

non-causative version of the verb in (34), and the same root taking the short causative in imperfective and perfective aspect in (35) and (36), respectively:

34. gutoha
ku-toh-a
UNSP-be.wet-IM
“be wet”

35. gutosa
ku-toh-y-a
UNSP-be.wet-CAUS.S-IM
“to make something wet”

- | | | |
|---------------------------------|-----|---------|
| 36. Natoheje | mu | cyumba. |
| n-a-toh-ij-ye | mu | cyumba |
| 1SG-PST.REC-be.wet-CAUS.S.PF-PF | LOC | room |
| “I made the room wet.” | | |

As can be seen from (34) - (36), the verb root *-toh-* “be wet” experiences palatalization when causativized using the short causative, becoming *-tos-* as the /h/ palatalizes into [s]. However, it is clear that the verb stem *-tos-* is still underlyingly separable into its two parts, as when the verb is conjugated and expressed in the past tense using the perfective ending *-ye*, the short causative takes its perfective form *-ij*, and the /h/ is no longer palatalized into [s], reverting back to the underlying /h/ of the verb root.

Another example can be seen in (37) - (39):

37. kurara
ku-rar-a
UNSP-spend the night-IM
“to spend the night”

38. kuraza
ku-rar-y-a
UNSP-spend the night-CAUS.S-IM
“to put something off for the next day”

39. Nayimurarije.
n-a-i-mu-rar-ij-ye
1SG-PST.REC-9-3SG-spend the night-CAUS.S.PF-PF
“I put it [food] in the fridge for someone.”

Similarly to the previous example, the verb root is in its non-causativized form in (37), which in this case is *-rar-* “spend the night.” In (38), it is palatalized by the *-y* of the short causative in the imperfective aspect, becoming *-raz-* “put something off for the next day.” Literally, the *-raz-* verb could be understood as “cause to spend the night,” as the verb is used to express situations such as food leftovers being left overnight to be used the next day, thus causing the food to sit overnight. In (39), the verb is perfective, so the short causative takes its perfectivized form *-ij*, turning the putting-off-for-tomorrow into a past event, and *-raz-* depalatalizes back into *-rar-*.

The presence of the short causative in imperfective verbs can also be made clear through reciprocalization. Since the reciprocal suffix *-an* fits into the Kinyarwanda verbal template between the verb root and the short causative, the addition of a reciprocal will separate the short causative from the verb root, showing that the short causative is not fully fused with the verb root but rather a suffix that manifests as palatalization. This can be seen in (40) - (42), in which the verb root *-fat-* “take” in (40) is causativized into *-fash-* “help” in (41), thus causing the /t/ of *-fat-* to be palatalized into [sh] by the causative morpheme *-y*. However, this palatalization is blocked in (42) when a reciprocal *-an* is added in between *-fat-* and *-y*:

40. *gufata*

ku-fat-a

UNSP-take-IM

“to take”

41. *gufasha*

ku-fat-y-a

UNSP-take-CAUS.S-IM

“to help”

42. *gufatanya*

ku-fat-an-y-a

UNSP-take-RECP-CAUS.S-IM

“to help each other”

There is a predetermined set of words that can be causativized using the short causative rather than the long causative. When a word takes the short causative, it almost always can only use the short causative, and when a word takes the long causative, it almost always can only use the long causative. This set of verbs appears to be lexicalized rather than determined productively. For the few verbs that can take both causatives, the choice between causative suffixes will be discussed in depth in section 5.

4.2. The long causative

In addition to appearing on its own, the short causative *-y* is also obligatorily present alongside the long causative morpheme *-ish*, although the short causative's presence is often obscured as it manifests as palatalization on the already palatal-final suffix *-ish*. In this section, I argue that the Kinyarwanda causative suffix, which is traditionally believed to take the form *-ish*, is underlyingly *-ish-y*, a combination of both short and long causative, both of which are always present whenever the long causative is used.

As a default, when a causative Kinyarwanda verb appears in the imperfective with no other valence-changing suffixes, its form is overtly consistent with the causative suffix being just *-ish*, such as in (43) and (44):

43. *kwiga*
 ku-ig-a
 UNSP-learn-IM
 ‘‘to learn’’

44. *kwigisha*
 ku-ig-ish-(y)-a
 UNSP-learn-CAUS.L-(CAUS.S)-IM
 ‘‘to teach’’

However, when expressed in the perfective aspect, forms with the long causative will take on the trademark *-ij* of the perfectivized short causative, rather than simply adding a *-ye* to indicate perfectivity as verbs without the short causative do:

45. <i>Bigisha</i>	<i>imibare.</i>
<i>ba-ig-ish-(y)-a</i>	<i>i-mi-bare</i>
3PL-learn-CAUS.L-CAUS.S-IM	AUG-4-math
‘‘They teach math.’’	

46. <i>Bigishije</i>	<i>imibare.</i>
<i>ba-ig-ish-ij-ye</i>	<i>i-mi-bare</i>
3PL-learn-CAUS.L-CAUS.S.PF-IM	AUG-4-math
‘‘They taught math.’’	

The *-ij* of the perfective short causative maintains the short causative's slot between reciprocal and passive in the CAR(C)P template, rather than appearing together with the perfective *-ye* suffix. This can be seen when a perfective verb containing a short causative is passivized: the passive morpheme appears between the *-ij* and the perfective ending, separating

the two. This is true both in forms with only the short causative and forms with the full causative sequence of short and long, as can be seen in (47):

47. Nigishijwe.

n-ig-**ish-ij**-w-ye

1SG-learn-CAUS.L-CAUS.S.PF-PASS-PF

“I was taught.”

In addition, the two halves of the full Kinyarwanda causative can be separated by the insertion of a reciprocal suffix *-an*, which sits in between the short and long causatives in the CAR(C)P template, indicating perhaps even more clearly the presence of the short causative:

48. kwigishanya

ku-ig-**ish-an-y**-a

UNSP-learn-CAUS.L-RECP-CAUS.S-IM

“to teach each other”

The verb in (48) can be contrasted with other reciprocalized, but non-causative, verbs such as in (49), where the reciprocal *-an* is not followed by a palatal glide in the imperfective:

49. Barabonana.

ba-ra-bon-**an**-a

3PL-PRES-see-RECP-IM

“They see each other.”

In (48), the presence of the short causative is obvious, as the reciprocal suffix has a palatal glide following it, creating a sequence *-an-y*, which is not the default form of the reciprocal, as can be seen by the uncausativized reciprocal *-an* in (49). The form in (48) differs from the word *kwigisha* (“to teach”) in (44) solely in being reciprocalized. Therefore, there must be a short causative *-y* in *kwigisha*, although its presence is obscured by the fact that the short causative has no overt effects on the immediately preceding suffix, the long causative *-ish*, as that suffix already ends in a palatal sound. By separating the two causatives with the reciprocal, however, the presence of both can be clearly seen. The reciprocalized versions of forms with the full causative continue to display both aspectual forms of the short causative, with *-y* appearing in imperfective forms and *-ij* in perfective forms, as can be seen in (50) and (51):

50. Bazigishanya.

ba-za-ig-**ish-an-y**-a

3PL-FUT-learn-CAUS.L-RECP-CAUS.S-IM

“They will teach each other.”

51. Barigishanije.

ba-ara-ig-**ish**-an-**ij**-ye

3PL-PST.REM-learn-CAUS.L-RECP-CAUS.S.PF-PF

“They taught each other.”

This section has detailed the ways that the Kinyarwanda short causative manifests, both on its own and within the long causative suffix. This suffix, however, can interact unusually with morphemes that co-occur with it, notably the applicative and perfective suffixes, which will be addressed, explained, and historically contextualized in the next sections.

4.3. *Applicativized causatives*

Interactions between the causative and applicative suffixes present a much more complex situation in Kinyarwanda than any other causative interaction, as they can bring about suffix multiplication that does not always seem to have a morphosyntactic purpose. This section will discuss how the applicative and causative interact, focusing in particular on the role that the short causative plays in these interactions.

As discussed by Good (2003), when verbs are marked for both causativization and applicativization, the applicative appears to reduplicate in the imperfective (unless the verb root ends in an /r/, which is elaborated upon later in this section). The second of the two applicatives is palatalized by the short causative, turning the applicative *-ir* into *-iz*. This reduplication usually appears when the short causative and applicative are suffixed to the same root, regardless of whether the long causative is also present. If a verb typically causativizes using the long causative, then the long causative, applicative, and *-iz* will appear (*-ish-ir-ir-y-*), and if a verb typically causativizes using the short causative, then only the applicative and the *-iz* will appear (*-ir-ir-y-*). This is shown in (52) and (53):

52. Akohereza

a-ku-oh-**ir-ir**-y-a

3SG-2SG-send-APPL-APPL-CAUS.S-IM

“He sends you a gift.”

impano.

i-N-pano

AUG-9-gift

53. Nzawumugumishiriza

n-za-wu-mu-gum-**ish-ir-ir**-y-a

1SG-FUT-3-3SG-be firm-CAUS.L-APPL-APPL-CAUS.S-IM

“I will keep it [the pillow] there for someone.”

hariya.

ha-riya

16-there

When these applicative-causative forms are expressed in the perfective, they take on an *-irije* or *-ishirije* ending. This can be seen in (54), which is the recent past equivalent of (53),

which means it has a perfective rather than imperfective aspect. Due to the ambiguity of its analysis, the sentence in (54) is not glossed, but could be glossed as either (55) or (56):

54. Nawumugum**ishirije** hari(ya).

“I had kept it [the pillow] there for someone.”

The verb form in (54) could be explained in one of two ways. First, (54) may be the result of the imperfective verb in (53) taking on the perfective suffix *-ye*, causing the /z/ to palatalize into a [j], as in the gloss in (55):

55. Nawumugum**ishirije**

hari(ya).

n-a-wu-mu-gum-**ish-ir-ir-y**-ye

ha-riya

1SG-PST.REC-3-3SG-be firm-CAUS.L-APPL-APPL-CAUS.S-PF 16-there

“I had kept it [the pillow] there for someone.”

This is surprising, given that the short causative would be expected to take on its *-ij* form in the perfective, which would have predicted the verb in (54) to be *nawumugumishiririje*, maintaining the double applicative.

Second, the change between (53) and (54) could alternatively be the second of the two reduplicated *-ir* applicatives disappearing and being replaced by the *-ij-e* perfective short causative form, as in the gloss in (56).

56. Nawumugum**ishirije**

hari(ya).

n-a-wu-mu-gum-**ish-ir-ij-y**e

ha-riya

1SG-PST.REC-3-3SG-be firm-CAUS-L-APPL-CAUS.S.PF-PF 16-there

“I had kept it [the pillow] there for someone.”

This explanation is also surprising, since it is not clear why the *-ir* would un-reduplicate in the perfective, given that it is reduplicated in the imperfective.

Since both the morphologically transparent explanations seem to have irregularities and inconsistencies, another possible answer lies in phonological requirements and analogy.

Phonological requirements have been proposed before in relation to *-iz-* morphology — one such example is Hyman (2003b)’s discussion on Kirundi applicativized causatives based on Meeussen (1959)’s grammatical sketch. As discussed in section 3.2.5 on Kirundi cognates to the *-iz-* morpheme, Kirundi requires a *-riz-* sequence to be present in any applicativized causative verb. This will either occur through the appearance of an *-iz* (*-ir-y*) morpheme directly after the applicative *-ir*, or by adding *-iz* (*-ir-y*) to /r/-final roots, without reduplicating the applicative. This is shown in (57) and (58), repeated from (31) and (32) above:

57. -shyúuh- *être chaud* [be hot]
 -shyúuh-y- (-shyúushy-) *chauffer* [warm]
 -shyúuhh-y-ir (-shyúuhiriz-) *chauffeur pour, à* [warm for, to]
58. -ráar- *passer la nuit* [spend the night]
 -ráar-y-: -ráaz- *reserver au lendemain* [reserve for the next day]
 -ráar-y-ir-: -ráariz-: *réserver ... pour* [reserve ... for] (Meeussen, 1959:59)

The situation in Kinyarwanda is fairly similar for this context — *r*-final verb roots do not appear to always reduplicate the *-ir* in the same way that non-*r*-final verb roots do, such as in (59), where the verb root *-bir-*, which already has an *-ir* in the root, only takes one applicative rather than reduplicating:

- | | | |
|------------------------------------|------------------------------|-------------|
| 59. Ari | kumubiriza | amazi. |
| a-ri | ku-mu-bir-ir-y-a | a-ma-zi |
| 3SG-be | UNSP-3SG-boil-APPL-CAUS.S-IM | AUG-6-water |
| “She’s boiling water for him/her.” | | |

This is not the only situation in Kinyarwanda where certain phonological sequences are required in certain contexts. Phonological requirements can also explain the perfective forms of applicativized causatives, though the specifics of the phonological requirements differ. I would posit that in Kinyarwanda, the requirement is to have an *-iz* or its palatalized equivalent *-ij* in applicativized causative constructions — in a perfective verb, this requirement would be satisfied by the *-ij* that is already always present in perfectivized causatives, while in imperfective verbs, an *-iz* is added after the applicative suffix to satisfy this. Though there is not a clear reason why this requirement exists, it could be a strategy toward morphological transparency, given that the typical existence of the short causative as solely being present as palatalization on preceding consonants might obscure the presence of the applicative *-ir* by turning it into simply an *-iz*. This would also help explain why *r*-final roots do not need to reduplicate the applicative, as the /r/ is sufficiently applicative-like that the morphology becomes transparent.

It is also possible that the *-iz* originated as a reanalysis of the short causative’s perfective form, i.e., speakers took the *-ije* perfective ending to be a combination of *-iz* and *-ye*, and analogized that the imperfective form should contain an *-iz* when the perfective ending *-ye* is subtracted. This reanalysis would fit with other misanalyzed depalatalizations across Bantu languages (Hyman, 2003b), though it is not clear why this would only occur in applicativized causative verbs and not all verbs with a short causative.

A combination of both explanations may be the case — the language needed a way to make transparent the presence of the applicative *-ir* ending in the imperfective, and the most available option was to add an extra morpheme analogized from the perfective ending.

The paradigm becomes more complicated once the reciprocal is introduced, as in the following (forms of the verb root *-oh-* (“send”), where (60) and (61) do not have a reciprocal, while (62) and (63) do):

- | | |
|--------------------------------------|-------------|
| 60. Akohereza | impano. |
| a-ku-oh- ir-ir -y-a | i-m-pano |
| 3SG-2SG-send-APPL-APPL-CAUS.S-IM | AUG-9-gift |
| “He sends you a gift.” | |
| 61. Akohereje | impano. |
| a-ku-oh- ir-ij -ye | i-m-pano |
| 3SG-2SG-send-APPL-CAUS.S.PF-IM | AUG-9-gift |
| “He sent you a gift.” | |
| 62. Bohererezanya | impano. |
| ba-oh- ir-ir-iz -an-y-a | i-m-pano |
| 3PL-send-APPL-APPL-iz-RECP-CAUS.S-IM | AUG-10-gift |
| “They send each other gifts.” | |
| 63. Bohereranyije | impano. |
| ba-oh- ir-ir-an-ij -ye | i-m-pano |
| 3PL-send-APPL-APPL-RECP-CAUS.S.PF-PF | AUG-10-gift |
| “They sent each other gifts.” | |

Both of the reciprocal verbs in (62) and (63) preserve a reduplicated applicative, and have a short causative after the reciprocal suffix. The verb in (63) would be expected from (60), the non-reciprocalized, non-passivized version of the same verb root. In moving from (60) to (63), the reciprocal is added between the applicative and short causative slots, which causes the second applicative *-ir* in *-iriz* (surfacing as *-erez* due to vowel harmony) to no longer be palatal, and then the short causative takes on its perfective form *-ij*.

However, the verb in (62) has two overt applicative *-ir*’s, as well as an *-iz-* morpheme directly following the reduplicated applicative. If analyzable, this verb could be explained as having three applicatives, as well as two short causatives (one directly after the third applicative, palatalizing it into *-iz*, and one in its normal spot directly after the reciprocal). However, a simpler explanation would be that analogy, rather than a transparent morphological derivation, is the main factor at play here. If analogy is the reason behind these forms, I would posit that (63) is analyzable and constructed as described in the previous paragraph, while the form in (62) is analogized from the difference between (60) and (61). The analogy process would be the following: there is an extra *-iz-* morpheme in (60) after the applicative, compared to the lack of *-iz-* morpheme in (61), so speakers analogize that (62) should also have an extra *-iz-* morpheme

after the applicative compared to (63). This would mean that in this specific context, aspect is viewed as being indicated by the presence/absence of an *-iz-* morpheme in addition to the aspectual suffix. However, I present this only as a tentative solution, and leave open the possibility of an alternative explanation for causative-applicative-reciprocal forms.

It is clear that the interaction between applicatives and causatives causes a number of unusual morphological effects in Kinyarwanda. While the causes of applicative multiplication or addition of extra suffixes in causativized-applicativized contexts still are not fully certain, these unusual morphological effects seem to have causes beyond simply adding meaningful suffixes, instead being triggered by phonological requirements and analogy to related forms.

As the existence and interactions of the short causative expand the Kinyarwanda extension (or valence-changing suffix) morphology quite a bit, the rest of this thesis will address the historical and synchronic reasons behind the presence of two causatives in Kinyarwanda, and the reasons motivating the choice between them.

4.4. *Historical Bantu precedent*

4.4.1. HISTORICAL BANTU CAUSATIVES

As discussed in the background to this thesis, Proto-Bantu, like Kinyarwanda, also had two causative morphemes. There was a long causative and a short causative, which are reconstructed as **-icj-* or **-ici-* for the long causative and **-j-* for the short causative (Bastin, 1986), with the vowel *i* denoting the highest front vowel in the Proto-Bantu 7-vowel system (Meeussen, 1967). There is some disagreement in the literature about the nature of the long causative — by some accounts, the long causative was monomorphemic, taking the form **-icj-* invariably (Bastin, 1986). Others believe that the long causative was made up of two separate morphemes, **-ic-* and **-j-*, which were both required to be present when forming a long causative, but could have other morphemes intervene in between them (Hyman, 2003a), for a full template in (57), as repeated from (2):

64. CAUS-APPL-REC-CAUS-PASS

**-ic- -id- -an- -j- -u-*

Regardless of the true shape of the Proto-Bantu long causative, it seems clear that Kinyarwanda's reflex of the long causative is polymorphemic, with two separate morphemes *-ish* and *-y* that can be separated by the applicative or reciprocal. The Kinyarwanda causative situation mirrors the Proto-Bantu causatives very closely: there is a longer form that requires two morphemes, which are reflexes of **-ic-* and **-j-*, and a shorter form that only uses a reflex of **-j-*. The Kinyarwanda equivalent of the Proto-Bantu template, ignoring cases of applicative multiplication, would be the template in (65):

65. CAUS-APPL-RECP-CAUS-PASS

-ish- -ir- -an- -y- -w-

In Proto-Bantu, the motivations behind the choice between the two causatives are not completely clear. Reconstructions suggest that the distribution was largely formally determined, though had certain semantic elements — Bastin (1986) claims that the polyphone suffix was obligatory after vowels while the monophone suffix was used regularly after consonants, except for when marking indirect causatives. Bastin elaborates that the directness-marking nature of the causatives is a distinction that exists in some modern Bantu languages but is sometimes limited to certain phonological contexts. Schadeberg (2003) clarifies that, other than some exceptional vowel-final verb stems, the **-i-* causative was used after =CVC(-VC)- roots, while **-ici* was used after =CV- roots.

These two causative extensions are reconstructed with an originally complementary distribution (Schadeberg, 2003), although in Kinyarwanda there are some verb roots that can acceptably take either *-ish* or *-y*.

4.4.2. HISTORICAL BANTU PERFECTIVES

The Proto-Bantu perfective morpheme was, like the causative, made up of two not-always-adjacent halves. The perfective suffix is reconstructed as **-ide* (Meeussen, 1967) or **-ile* (Nurse, 2008). In either case, the morpheme could be separated into an initial VC and a final V suffix — either as a bimorphemic **-il-e* sequence (Nurse, 2008) or as a single morpheme **-ide* that can be bisected by intervening short causative **-i-* or passive **-u-* suffixes between the *d* and *e* (Meeussen, 1967).

The consonant in the perfective suffix is noted by Nurse & Phillipson (2006) to appear in Bantu languages as any of /d/, /t/, /l/, /r/, /n/, /y/, or ∅. As is shown in Nurse & Watters (2022), and as can be gleaned by the fact that the Kinyarwanda perfective suffix is *-ye* in all non-causative verbs, Kinyarwanda has lost the medial consonant in the perfective suffix, yielding a suffix that can be analyzed as *-i-e* or *-y-e*.

The *-ye* suffix is still, similarly to the Proto-Bantu perfective, separable by an intervening monophonic suffix. For example, the passive can come between the *-y-e* halves of the perfective suffix, as in the (66) and (67):

66. /ba-kubit-w-ye/

[bakubiskwe]

bakubiswe

‘they are just beaten’ (Kimenyi, 1979:61)

67. /ba-rer-w-ye/
 [barezgwe]
 barezwe
 ‘they just got educated’ (Kimenyi, 1979:61)

(66) and (67) are both cited by Kimenyi (1979) as examples of metathesis, in which the *-w* passive and the /y/ consonant beginning the perfective *-ye* are swapped, as evidenced by the fact that the /y/ of the perfective enacts palatalization effects on the final consonants of the verb roots *-kubit-* and *-rer-* despite the passive hypothetically intervening between the verb root and the perfective. However, given the proto-form of the perfective, I would analyze these verbs as having a suffixal ordering of *-y-w-e*, with the perfective’s two halves being bisected by the passive.

The other suffix capable of intervening in the perfective is the short causative (Meeussen, 1967), which is directly before the passive, for an overall Proto-Bantu perfective suffixal structure as in (68):

68. *id- i- u- e
 perf caus pass perf

This structure can also be used to explain the perfective-specific form of the short causative in Kinyarwanda. Recall the Kinyarwanda causative perfective form *-ij-e*, in which the short causative’s first half changes from its imperfective form *-y* to *-ij* in the perfective. Although typically the Kinyarwanda perfective has deleted the consonant of the Proto-Bantu perfective, when the short causative comes into contact with the perfective the consonant reappears. It appears that the presence of a short causative brings back the traces of the consonant in the perfective suffix that has been lost in Kinyarwanda, making overt the historical relic of a palatalization process /d/ or /l/ → [j] despite the /d/ or /l/ never otherwise appearing. As this is the only context that causes the Proto-Bantu perfective consonant to become overt, it is most likely that the presence of a consonant in the perfective is a fossilized reflex of a proto-morpheme, rather than a synchronic phonological process. The Kinyarwanda equivalent of (68) would therefore be the template in (69), with the [j] only appearing when both the perfective and causative are present:

69. i(j)- -i -w -e
 perf caus pass perf

Since there are no morphemes that can come between the first half of the perfective and the short causative, and since there seems to be such a specific unpredictable shape of the perfective-short causative interaction, for simplicity I will continue glossing the *-ij* as CAUS.S.PF,

treating it as one fused morpheme that appears specifically in cases of a perfectivized short causative.

4.5. Implications for previous analyses

The explanation I have outlined above of the Kinyarwanda short causative clarifies and expands upon a number of previous mysteries in Kinyarwanda and other Bantu languages' causative paradigms.

First, there are a few sources that have identified the existence of an alternative causative in Kinyarwanda.

For instance, Kimenyi (1980) notes that there are some verbs that can use a -y causative for direct causation:

70. "Some verbs such as *-shyuuh-* 'be warm', *-aambuk-* 'cross' use the suffix *-y-* to signal direct causation and still use *-iish-* for indirect causation" (Kimenyi, 1980:180).

Kimenyi (1980) does not discuss words that exclusively take the short causative, nor does he make note of the presence of the short causative within the long causative. He also does not mention interactions between the short causative and the applicative or perfective, analyzing the *-iz-* morpheme as being epenthesized for unknown reasons in the case of both the applicative and the perfective (Kimenyi, 1979; 1980).

Idiata-Mayombo (2003) also mentions there being two causatives, *-iis-* and *-y-*, with their combination being *-iish-*. His explanation is in (71), with my translation to follow in italics:

71. "Les morphèmes qui expriment le causatif sont *-iis-* et *-y-*. Sur le plan formel, le premier se combine nécessairement avec le second dans un groupe qui prend la forme *-iish-*. Du point de vue sémantique, ces deux morphèmes sont tantôt équivalents, tantôt distincts" (Idiata-Mayombo, 2003:177).

The morphemes that express the causative are -iis- and -y-. In the formal framework, the first necessarily combines with the second in a group that takes the form -iish-. From the semantic perspective, these two morphemes are sometimes equivalent, sometimes distinct.

Idiata-Mayombo (2003)'s explanation recognizes the dual causative situation (although claims the long causative on its own to take a different form from the combined causative, despite it still presenting as *-ish* when separated from the short causative by another morpheme), but still does not mention any interactions between the short causative and other morphemes, notably the presence of *-iz* or *-ij* in applicative and perfective causative verbs. His description of the distribution of the morphemes additionally does not seem to explain the contexts when either

would be used, and does not discuss the numerous cases when the short causative on its own are ungrammatical.

Jerro (2013) recognizes a class of verbs that block the *-ish* causative suffix, which they refer to as suppletive *r/z*-stem alternating forms. They discuss these as being a set of verbs whose roots end in /r/ and become causative through changing the /r/ to a [z], with no clear semantic cohesion determining verbs' membership in this set. Jerro also adds the following footnote:

72. Kimenyi (1980) mentions this class as a group of causatives that are causativized by a causative *-y*. Evidence for this as a separable morpheme has not been found, as all the forms under discussion seem to have lexicalized this contrast as a stem change (Jerro, 2013:13).

Jerro's analysis does not account for the fact that the short causative is, in fact, separable from the root (as outlined earlier in this thesis), and the *r/z* alternation is an effect of the /r/ being palatalized when in proximity to the short causative. This explanation also neglects any roots that take the short causative but do not end in an /r/ such as *gutoha/gutosa* and *gufata/gufasha*.

Additionally, the causativization paradigm in Kinyarwanda can help explain a number of paradigms in other Bantu languages that would otherwise rely on stipulated causative-specific allomorphy. One such example is Chimwiini — as discussed above, Chimwiini has several allomorphs of its CARP morphemes that occur when they interact with the causative. This includes the “reciprocal causative” *-añ* which is a palatalized version of the normal reciprocal, the applicative *-il* becoming *-iliz* after a verb root ending in a palatal sound (which is mentioned as being always true of causative roots), and the perfective becoming *-i:z-e* rather than *-i:l-e* in a causative form. There are also cases of certain verbs becoming causative through “consonant change” in which the final consonant in a verb root will become palatalized, but this is not true of all verbs (Abasheikh, 1978). Most of these effects are direct parallels to Kinyarwanda, and seem like they would be best explained by an equivalent short/long causative duality existing in Chimwiini as well.

It is clear that the existence of the short causative, as well as its requirement as a companion of the long causative, can solve a number of mysteries in Kinyarwanda and Bantu morphology. In particular, while the existence of the short causative, and the *-iz-* morphemes that it creates in interacting with the applicative, have been noted by some scholars, they are not always noted as being related, and the short causative is very rarely recognized as being part of the long causative if it is acknowledged. The other interactions between the short causative and additional morphemes are also largely not discussed, in particular the effects of the short causative on the perfective suffix, which has received effectively no study in Kinyarwanda linguistics.

There is also very little discussion on the semantics of the two Kinyarwanda causatives, or their distribution and grammaticality, and the discussion that does exist has no clear consensus. Outside of Kinyarwanda, while an exhaustive list of additional Bantu languages that

show signs of an unnoticed short causative is beyond the scope of this thesis, examples such as Chimwiini show that more Bantu languages may show current reflexes or historical traces of the Proto-Bantu short causative.

5. The choice between causatives

Given that there are two separate causatives in Kinyarwanda, the question arises of the difference between the two causative morphemes, and in cases where only one is grammatical, how the choice between them is made. This section will outline the use cases of the two causatives and discuss the semantics of different causatives in cases of overlap.

5.1. Forms taking one causative

First, most verbs only take one of the two causatives. For these verbs, there will be one valid causative formation by suffixing either the short causative or the long (combined) causative, while trying to suffix the other will be ungrammatical. As discussed above, the distinction between the two in Proto-Bantu is reconstructed as being formal — the short causative was used after consonant-final roots, while the long causative was used after vowel-final roots (Bastin, 1986).

The modern Kinyarwanda usage of these two suffixes does not appear to follow a distinct phonological or semantic pattern. While it is very difficult to draw conclusions about all verbs in the language, it does appear that at least for consonant-final roots, there is not a strong phonological backing for the choice between the short and long causative suffixes. Forms that take the *-y* causative, which appears to be the less common of the two, will often bear a strong phonological resemblance to other forms that use *-ish* causatives (see (73) and (74)'s example verb roots). The list of *-ish* causative verbs certainly is not constrained to only vowel-final roots, in fact, vowel-final roots are a fairly small proportion of Kinyarwanda verbs in general, and likewise a very small proportion of verbs taking the *-ish* causative.

73. Verbs using *-y* causative: *-rar-*, *-fat-*, *-ambuk-*, *-og-*, *-shyuh-*

74. Verbs using *-ish* causative: *-rer-*, *-kat-*, *-andik-*, *-ig-*, *-huh-*

It does appear to still be true, however, that vowel-final verb roots in Kinyarwanda will take the long causative. Some examples are as follows:

75. Verbs using *-ish* causative: *-ri-* (eat), *-nyu-* (drink), *-pfu-* (die), *-gu-* (fall over)

There also does not appear to be a clear semantic difference between verbs that can take the short versus long causative, as in (76) and (77):

76. Verbs using -y causative: -um- (dry), -huh- (blow), -fat- (take), -imur- (move)
 77. Verbs using -ish causative: -toh- (wet), -itsamur- (sneeze), -gur- (buy), -gend- (walk)

In addition, it appears that only the long causative continues to be productive for new verbs in modern Kinyarwanda, while the short causative can only be used for verb roots that it is known to accompany. When causativizing verb roots that are not of Kinyarwanda origin, and certainly cannot be dated back to Proto-Bantu, the -ish suffix will be used, while the -y suffix cannot be. This is exemplified in (78) and (79), in which English loanwords are causativized.

78. kumuwalking**isha**
 ku-mu-walking-**ish**-a
 UNSP-3SG-walking-CAUS.L-IM
 “cause another person to be walking”

79. kumugogling**isha**
 ku-mu-gogling-**ish**-a
 UNSP-3SG-gogling-CAUS.L-IM
 “cause another person to google”

In both of these cases, using a short causative in place of the long causative was deemed ungrammatical by my consultant.

In cases where only one causative is grammatical, the option to use the short causative without the long causative is lexicalized, with only a specific stipulated set of verb roots being able to use the lone short causative. I would posit the most likely explanation is that each root of Proto Bantu origin uses the causative that it historically used in Proto-Bantu, which at that point was based on the final segment in the verb root, although the phonological shape of the roots have changed throughout the development from Proto-Bantu to modern Kinyarwanda. The reflexes of the verb roots that took the Proto-Bantu short causative now take the Kinyarwanda short causative, while all other verb roots in Kinyarwanda take exclusively the long causative.

5.2. Multiple causative options

There are some verb roots that can be grammatical with either the -ish or -y causative suffixes. In a number of these cases, the -ish will not be understood as a causative, but rather as an instrumental suffix, with very few verb roots that can truly be understood to have two true causatives.

In Bantu languages where the short and long causative suffixes are used contrastively, the distinction is usually based in directness of causation: the short causative is used to mark direct causation (the causer is also the agent of the action) while the long causative is used to mark

indirect causation (the causer is not necessarily the agent of the action) on the same root (Good, 2005). This distinction has also been proposed for Kinyarwanda by Kimenyi (1980), in which Kimenyi describes that certain verbs “use the suffix *-y-* to signal direct causation and still use *-iish-* for indirect causation” (Kimenyi, 1980:180). One of the examples Kimenyi gives for this is the following:

80. a. *Ínka i-ra-ambuk-a urúuzi.*
 cow it-pres-cross-asp river
 ‘The cow is crossing the river.’
- b. *Umugabo a-ra-ambut-s-a ínka urúuzi.*
 man he-pres-cross-caus-asp cow river
 ‘The man is making the cow cross the river.’
- c. *Umugabo a-ra-ambuk-iish-a ínka urúuzi.*
 man he-pres-cross-caus-asp cow river
 ‘The man is having the cow cross the river.’ (Kimenyi, 1980:181)

My consultant did not see a significant difference between the two, describing the difference between (80b) and (80c) as being largely imperceptible, but that the scenario in (b) means the man is ‘directly helping the cow cross the river’ while the scenario in (c) could mean that the cow is among the man’s possessions as he crosses a river, but that he could be having other people physically carry the cow. This is consistent with a direct/indirect distinction between the short and long causative, although the distinction is not extremely salient.

However, the example in (80) is the only one of Kimenyi’s *-ish* vs. *-y* examples to be supported by my consultant’s judgments. As discussed much earlier in this thesis, there are many examples in Kimenyi (1980) that are deemed ungrammatical by my consultant as well as those in Banerjee (2019), or judged to have a completely different meaning from what Kimenyi intended. For a number of these, the disagreement was rooted in the long causative *-ish*. Some such examples are included below, with explanations of the grammaticality and semantic disagreements.

81. a. *Amáazi a-ra-shyúuh-a.*
 water it-pres-be warm-asp
 ‘The water is getting warm.’
- b. *Umugóre a-ra-shyúuh-y-a amáazi.*
 woman she-pres-warm-caus-asp water
 ‘The woman is warming the water.’
- c. *Umugabo a-ra-shyúuh-iish-a umugóre amáazi.*
 man he-pres-warm-caus-asp woman water
 ‘The man is having the woman warm the water.’ (Kimenyi, 1980:180)

My consultant described the sentence in (81c) as being confusing, as it would be misinterpreted by listeners, who would think that it meant the equivalent of the English sentence in (82):

82. The man is burning the woman with water.

She described a better Kinyarwanda translation of Kimenyi's intended meaning as being the sentence in (83):

83. Umugabo	ari	gutuma	umugore	ashyushya
u-mu-gabo	a-ri	ku-tum-a	u-mu-gore	a-shyuh-y-a
AUG-1-man	3SG-be	UNSP-make-IM	AUG-1-woman	3SG-warm-CAUS.S-IM

amazi.

a-ma-zi

AUG-6-water

"The man is having the woman warm the water."

Rather than keeping the *-ish* causative on the verb root *-shyuh-*, my consultant opted to use periphrasis for causation, employing the verb *gutuma* ("to cause") and using the short causative to transitivize *-shyuh-*, which together allow for the three arguments *umugabo*, *umugore*, and *amazi* to be present in the sentence. Her reading of (81c) as meaning (82) is due to the *-ish* suffix's dual meaning as both a causative and an instrumental (Jerro, 2013) in Kinyarwanda. Rather than interpreting the *-ish* as contributing a causative meaning in which the woman is being caused to warm the water by the man, the *-ish* is instead interpreted as licensing the water as an instrument through the use of which the man is warming the woman, i.e., the man is warming the woman, using the water. Swapping the order of *umugore* and *amazi* in (81c) did not change the reading; regardless of the relative ordering of "woman" and "water," my consultant's interpretation was consistently that the sentence in (81c) meant (82).

This same instrumentalization-rather-than-causation reading occurred as well for several others of Kimenyi's sentences, such as the following:

- | | | | |
|--------|--|-------------------------|-------------------------|
| 84. a. | Umugabo | a-rá-vun-a | <u>inkoni</u> . |
| | man | he-pres-break-asp | stick |
| | 'The man is breaking the stick.' | | |
| b. | Umugóre | a-rá-vun-iish-a | umugabo <u>inkoni</u> . |
| | woman | she-pres-break-caus-asp | man stick |
| | 'The woman is having the man break the stick.' (Kimenyi, 1980:180) | | |

My consultant interpreted (84b) as having a meaning of approximately "the woman is going to absolutely beat the man," or literally, "the woman is going to break the man using the

stick.” Once again, this interpretation did not change when the order of *umugabo* and *inkoni* was reversed. The grammaticality and interpretation differences between my consultant and Kimenyi can be to some extent attributed to my consultant interpreting verbs with *-ish* suffixes as being instrumentalized, while Kimenyi interprets these same verbs as being causativized. Typically, my consultant would opt for periphrasis using the verb *gutuma* as a way to resolve the instrumental/causative confusion.

In addition, in applying causation morphology to loanwords, the instrumental reading of *-ish* was often more salient to my consultant than the causative reading. For example, the verbs from (78) and (79), which are repeated below in (85) and (86), required an explicit object to be present in the verb in order to receive a causative reading.

85. a. **kumuwalkingisha**
 ku-mu-walking-ish-a
 UNSP-3SG-walking-CAUS.L-IM
 “cause another person to be walking”
- b. **kuwalkingisha**
 ku-walking-ish-a
 UNSP-walking-CAUS.L-IM
 “walking with the help of something (e.g., specific shoes)”
86. a. **kumugoglingisha**
 ku-**mu**-gogling-**ish**-a
 UNSP-3SG-gogling-CAUS.L-IM
 “cause another person to be Googling”
- b. **kugoglingisha**
 ku-gogling-**ish**-a
 UNSP-gogling-CAUS.L-IM
 “Googling with the help of something (e.g., an iPhone or computer)”

When the words in (85a) and (86a) were expressed without the overt 3rd person singular object *-mu-*, taking the form *kuwalkingisha* and *kugoglingisha*, they were interpreted as being instrumentalized, with *kuwalkingisha* meaning essentially “walking, using some instrument” and *kugoglingisha* meaning “Googling using some instrument.”

In general, Kinyarwanda causativity can be expressed through either the short or long causative morphemes. The short causative *-y* is no longer productive, and its grammaticality is lexicalized per verb root. The long causative remains productive, but it has semantically shifted to an extent — by default, it is interpreted as licensing an instrument, but in the appropriate context is still understood as a causative. To express unambiguous causation, especially in situations where *-ish* would be read as an instrumental, periphrasis will be employed using the verb *gutuma* (“make/cause someone to do something”).

6. Conclusion

In this thesis, I have discussed the grammar, form, and interactions of the short causative *-y* in Kinyarwanda. This morpheme functions as a causative, introducing a new causer argument to a verb and demoting the original subject to an object of causation. The short causative can only be used with a specific, stipulated set of verb roots, and will often present as palatalization on the final consonant of the root, which leads to it not always being fully identified as its own separate morpheme.

The short causative morpheme has largely been misidentified or unexplained in previous analyses — its various manifestations are attributed to being part of an allomorph of the applicative, belonging to the aspect, or as existing in contexts far more constrained than its actual use. There are some sources that recognize the existence of a second causative of the form *-y*, but then do not connect it back to the *-iz* of causativized applicatives or to the *-ije* variant of the perfective. Much of this is due to the short causative's interactions with other verbal suffixes. It palatalizes the /r/ of the applicative, turning the *-ir* into an *-iz*, a morpheme that is often noticed with no explanation of its origin. In interacting with the perfective, the short causative reveals a relic of the Proto-Bantu perfective's medial consonant, creating an *-ij-e* suffix, despite the perfective *-y-e* not preserving a consonant in any other context in Kinyarwanda.

This thesis also examined the relationship between the two Kinyarwanda causatives, *-ish* (underlyingly *-ish-y*) and *-y*. Although in the literature, these two causatives, if they are both recognized, are typically identified as being separate unrelated morphemes, this paper shows the *-ish* form of the causative to invariably include both the short and long causatives, expanding Kinyarwanda's CARP template to include a second causative slot between the reciprocal and passive. I have also outlined the current usage of the two morphemes: the verb roots that can take *-y* are lexicalized, and *-y* and *-ish* have largely equivalent meanings for roots that can only grammatically take one causative. In cases when both causatives can affix to the same verb root, the *-y* will typically be used for causation and the *-ish* will be used for instrumentalization. The *-y* causative is invariably interpreted as meaning causation or transitivization, while the *-ish* causative is often read as an instrumental suffix by default, with causation being the primary interpretation depending on the context.

There are still some open ends to the Kinyarwanda causativity paradigm. Future studies should be done into doubling and cyclicity (Hyman, 2003b) in Kinyarwanda causativization — there are some forms where the short causative has lexicalized more strongly to the verb root, and therefore is not separated, or only partially can be separated, from the root by the presence of another morpheme. This is the case in the verb *gufata*, which takes the short causative to become *gufasha*, and when reciprocalized can become either *gufatanya* (with just one *-y* causative suffix) or *gufashanya* (which appears to have two short causatives, one palatalizing the root and one in the normal slot) depending on formality. More cases like this verb may be revealed, in which formality can determine the level of lexicalization of the causative, resulting in the occasional

outward appearance of a doubled short causative. The possible triple-applicative double-short-causative construction of reciprocalized-applicativized-causativized verbs should also be expanded upon further, as the causes and etymology behind further suffix multiplication beyond applicative reduplication remain unclear.

While the grammaticality differences between Kimenyi and my consultant (and possibly also Banerjee (2019)'s consultants) seem related to Kinyarwanda's causativization-instrumentalization syncretism, it is still not clear whether this is a synchronic or diachronic difference, and if synchronic, how different dialects of Kinyarwanda differ in terms of valence-changing morphology. Further work involving more diverse arrays of Kinyarwanda speakers (in terms of age, background, region of Rwanda, etc.) can hopefully bring more clarity to the dialectology of the language. There is also still a possibility of some synchronic semantic or formal explanation for the causative duality, and I leave open the possibility that there could be a situation where the short causative could be applied to a novel form, as I could not exhaustively test every potential novel Kinyarwanda verb root for how it would causativize.

This finding on Kinyarwanda causation additionally should serve as motivation for similar work to be done across Bantu languages — as discussed, there are languages (such as Chimwiini) that show clear signs of having a short causative whose presence is equally obscured as in Kinyarwanda. Study across Bantu with a specific focus on the short causative in languages whose primary causative suffix is a reflex of **-ic* may reveal a double causative in far more languages than are previously believed to have them.

7. References

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8. Appendix: Glossing abbreviations

1SG	1st person singular
2SG	2nd person singular
3SG	3rd person singular
1PL	1st person plural
2PL	2nd person plural
3PL	3rd person plural
1, 2, 3, ... 15, 16	1st, 2nd, 3rd, ... 15th, 16th noun class
APPL	Applicative
ASP	Aspect
AUG	Augment
CAUS	Causative
CAUS.L	Long causative
CAUS.S	Short causative
FUT	Future
FV	Final vowel
IM	Imperfective
INST	Instrumental
LOC	Locative
NEG	Negative
PASS	Passive
PF	Perfective
PRES	Present
PST.REC	Recent past
PST.REM	Remote past
RECP	Reciprocal
TRANS	Transitive
UNSP	Unspecified subject