

# Interpretive effects of the copula *-ri* in Kinyarwanda and Kinyamulenge

Aron Finholt

University of Kansas, Universität Potsdam  
aron.finholt@uni-potsdam.de, [www.aronfinholt.com](http://www.aronfinholt.com)

55th Annual Conference on African Linguistics  
May 2nd, 2024

In present tense copular clauses featuring a third person subject, Kinyarwanda (Bantu, JD61; Maho 2009) features two copular forms: verbal *-ri* and invariant *ni*.

(1) Umw-aana **a-ri** i Kigali  
1-child 1SM-be-<sub>RI</sub> in Kigali  
'The child is in Kigali'

(2) Kyle **ni** mu-nini  
Kyle be-<sub>NI</sub> 1AGR-big  
'Kyle is big'

Kinyarwanda (Jerro 2015)

In present tense copular clauses featuring a third person subject, Kinyarwanda (Bantu, JD61; Maho 2009) features two copular forms: verbal *-ri* and invariant *ni*.

(1) Umw-aana **a-ri** i Kigali  
1-child 1SM-be<sub>-RI</sub> in Kigali  
'The child is in Kigali'

(2) Kyle **ni** mu-nini  
Kyle be<sub>NI</sub> 1AGR-big  
'Kyle is big'

Kinyarwanda (Jerro 2015)

The general observation is that these two forms are *distributionally* distinct:

- *-ri* appears only with locative (PP) predicates
- *ni* is more widely available

That said, Jerro (2015) reports that in some cases, both *-ri* and *ni* are available with locative predicates.

In these cases, a subtle interpretive contrast is reported:

- *-ri* describes a *location*
- *ni* describes an individual-level property

(3) Kigali **i-ri** mu Rwanda  
Kigali 9SM-be<sub>-RI</sub> in Rwanda  
'Kigali is in Rwanda' (statement about a location)

(4) Kigali **ni** mu Rwanda  
Kigali be<sub>NI</sub> in Rwanda  
'Kigali is in Rwanda' (general statement)                      Kinyarwanda (Jerro 2015)

With this in mind, Jerro (2015) posits a direct link between the location-oriented interpretation of *-ri* and its restricted distribution.

Specifically, Jerro proposes that *-ri* involves an inherently *locational semantics*:

## **Semantic account of *-ri* in Jerro (2015)**

*-ri* attributes a location to the subject of a predication relation

In this talk, I present novel field data from closely-related Kinyamulenge (JD61a) and other Great Lakes Bantu languages to address the interpretation of *-ri* in Kinyarwanda and beyond.

In this talk, I present novel field data from closely-related Kinyamulenge (JD61a) and other Great Lakes Bantu languages to address the interpretation of *-ri* in Kinyarwanda and beyond.

## Key observations

1. Kinyamulenge *-ri* can describe locations that are “context specific”
2. Kinyamulenge *-ri* is not restricted to statements about locations
3. *-ri* exhibits a similar interpretive profile to related copular forms (e.g., *-li*) in other Bantu languages

In this talk, I present novel field data from closely-related Kinyamulenge (JD61a) and other Great Lakes Bantu languages to address the interpretation of *-ri* in Kinyarwanda and beyond.

## Key observations

1. Kinyamulenge *-ri* can describe locations that are “context specific”
2. Kinyamulenge *-ri* is not restricted to statements about locations
3. *-ri* exhibits a similar interpretive profile to related copular forms (e.g., *-li*) in other Bantu languages

On the basis of these observations, I argue contra Jerro (2015) that *-ri* doesn't encode an inherently locational semantics.



Instead, I suggest that the locational-function of *-ri* arises from a more general meaning shared by *-li/-ri* cognates:

- Reflexes of proto-Bantu *\*-de* (e.g., *-li/-ri*) describe property ascriptions that are “limited” in some way, e.g., temporally, spatially, etc.

Instead, I suggest that the locational-function of *-ri* arises from a more general meaning shared by *-li/-ri* cognates:

- Reflexes of proto-Bantu *\*-de* (e.g., *-li/-ri*) describe property ascriptions that are “limited” in some way, e.g., temporally, spatially, etc.

## Central claim

The meaning of *-ri* predisposes it to locational uses, but *-ri* itself is not inherently locational

1. Introduction
2. Kinyarwanda Data
3. Comparing Kinyarwanda and Kinyamulenge
4. Analysis
5. Conclusion
6. References

# Kinyarwanda Data

Kinyarwanda (JD61) is a prominent Great Lakes Bantu language of the Ruandi-Rundi group spoken primarily in Rwanda.

Kinyarwanda exhibits three distinct forms of the copula in predicational clauses:

- Two verbal copulas: *-ri*, *-ba*
- One invariant copula: *ni*

The distribution of these forms is sensitive to multiple contextual factors, including tense, subject person, and predicate category.

First, these three forms generally appear in different tense environments:

Past Tense	Present Tense	Future Tense
<i>-ri</i>	<i>-ri, ni</i>	<i>-ba</i>

*Table 1. Copula form by tense - Kinyarwanda*

First, these three forms generally appear in different tense environments:

Past Tense	Present Tense	Future Tense
<i>-ri</i>	<i>-ri, ni</i>	<i>-ba</i>

Table 1. Copula form by tense - Kinyarwanda

In the present tense, two forms are attested: *-ri* and *ni*. In this case, two factors determine which form is used: subject person and predicate category.

Subject Person	Nominal Predicates	Adjectival Predicates	Locative Predicates
1st	<i>-ri</i>	<i>-ri</i>	<i>-ri</i>
2nd	<i>-ri</i>	<i>-ri</i>	<i>-ri</i>
3rd	<i>ni</i>	<i>ni</i>	<i>-ri (ni)</i>

Table 2. Copula form in present tense - Kinyarwanda

With a third person subject, both *-ri* and *ni* are attested. In this case, the two tend to appear with predicates of different categories:

- *-ri* is used with locative predicates
- *ni* is used with nominal/adjectival predicates

(5) Umw-aana **a-ri** i Kigali  
1-child 1SM-be-<sub>RI</sub> in Kigali  
'The child is in Kigali'

(6) Kyle **ni** mu-nini  
Kyle be-<sub>NI</sub> 1AGR-big  
'Kyle is big'

Kinyarwanda (Jerro 2015)



One possible conclusion from this data is that copular variation in Kinyarwanda is contextually-determined.

In clauses featuring a third person subject, *-ri* and *ni* are categorized to appear with distinct categories:

- *-ri* appears with locative (PP) predicates
- *ni* appears with all other predicate types

Jerro (2015) however argues that this analysis is incorrect.

Jerro (2015) however argues that this analysis is incorrect.

First, he shows that *-ri* can't be categorized to appear with locative (PP) predicates since it can also appear with locative adverbials, e.g., 'here' or 'there':

- (7) Umw-aana **a-ri** hano  
1-child 1SM-be<sub>-RI</sub> here  
'The child is here'

Kinyarwanda (Jerro 2015)

Jerro (2015) however argues that this analysis is incorrect.

First, he shows that *-ri* can't be categorized to appear with locative (PP) predicates since it can also appear with locative adverbials, e.g., 'here' or 'there':

- (7) Umw-aana **a-ri** hano  
1-child 1SM-be<sub>-RI</sub> here  
'The child is here'

Kinyarwanda (Jerro 2015)

Second, Jerro shows that in some cases, both *-ri* and *ni* are available with a locative predicate.

Specifically, he shows that either can describe the location of an inherently locational subject. In these cases, a subtle interpretive contrast is reported:

- *-ri* simply describes a *location*
- *ni* describes an individual-level property

(8) Kigali **i-ri** mu Rwanda  
Kigali 9SM-be-RI in Rwanda  
'Kigali is in Rwanda' (statement about a location)

(9) Kigali **ni** mu Rwanda  
Kigali be<sub>NI</sub> in Rwanda  
'Kigali is in Rwanda' (general statement)

Kinyarwanda (Jerro 2015)

To account for these observations, Jerro attributes the *-ri/ni* contrast to the *semantics*. Specifically, Jerro proposes that *-ri* is an inherently locational copula.

The interpretive distinction between *-ri* and *ni* is treated as a variation of the stage/individual distinction:

- *-ri* describes *locations* (which are stage-level properties)
- *ni* describes individual-level properties (i.e., “permanent” locations)

# Comparing Kinyarwanda and Kinyamulenge

# Comparing Kinyarwanda and Kinyamulenge

Kinyamulenge (JD61a) is a Ruanda-Rundi language spoken in Eastern D.R.C. and Rwanda that is mutually intelligible with Kinyarwanda. Speakers often describe it as a “dialect” of Kinyarwanda.

In general, Kinyamulenge features a nearly identical copular system to that of Kinyarwanda.

- Both languages feature the same three copular forms, e.g., *-ri*, *-ba*, and *ni*
- The distribution of these forms is the same across the two languages



# Comparing Kinyarwanda and Kinyamulenge

With a third person subject, Kinyamulenge features both *-ri* and *ni*. As before, these two tend to appear with different predicate categories:

(10) Johne **a-ri** mu Rwanda  
John 1SM-be<sub>RI</sub> 18LOC Rwanda  
'John is in Rwanda'

(11) Johne **ni** mu-ganga  
John be<sub>NI</sub> 1-doctor  
'John is a doctor'

Kinyamulenge

# Comparing Kinyarwanda and Kinyamulenge

With a third person subject, Kinyamulenge features both *-ri* and *ni*. As before, these two tend to appear with different predicate categories:

(10) Johne a-**ri** mu Rwanda  
John 1SM-be-<sub>RI</sub> 18LOC Rwanda  
'John is in Rwanda'

(11) Johne **ni** mu-ganga  
John be-<sub>NI</sub> 1-doctor  
'John is a doctor'

Kinyamulenge

Again however, *ni* can sometimes also be used with locatives in Kinyamulenge. In this case the two yield the same interpretive contrast reported by Jerro (2015).

- *-ri* is used for statements about locations
- *ni* describes more general, individual-like properties

## Comparing Kinyarwanda and Kinyamulenge

Kinyamulenge *-ri* describes a purely spatial relationship between two elements:

- (12) *Context: You have never heard of Kigali or Rwanda before, but you see an official-looking map of East Africa and there is a city named 'Kigali' marked inside the borders of 'Rwanda'.*

Kigali #ni/√i-ri      mu      Rwanda  
Kigali be<sub>NI</sub>/9SM-be<sub>RI</sub> 18LOC Rwanda  
'Kigali is in Rwanda'

Kinyamulenge

## Comparing Kinyarwanda and Kinyamulenge

Kinyamulenge *-ri* describes a purely spatial relationship between two elements:

- (12) *Context: You have never heard of Kigali or Rwanda before, but you see an official-looking map of East Africa and there is a city named 'Kigali' marked inside the borders of 'Rwanda'.*

Kigali #ni/√i-ri mu Rwanda  
Kigali be<sub>NI</sub>/9SM-be<sub>RI</sub> 18LOC Rwanda  
'Kigali is in Rwanda'

Kinyamulenge

In contrast, *ni* describes “known” properties:

- (13) *Context: You just got back from visiting Kigali, and you are listing all of the things you know about the city.*

Kigali √ni/#i-ri mu Rwanda  
Kigali be<sub>NI</sub>/9SM-be<sub>RI</sub> 18LOC Rwanda  
'Kigali is in Rwanda'

Kinyamulenge

# Comparing Kinyarwanda and Kinyamulenge

Despite their similarities, there are some salient differences between the copular systems of Kinyarwanda and Kinyamulenge.

# Comparing Kinyarwanda and Kinyamulenge

Despite their similarities, there are some salient differences between the copular systems of Kinyarwanda and Kinyamulenge.

The first difference is that Kinyamulenge also features a copular contrast in sentences featuring a non-locational subject.

# Comparing Kinyarwanda and Kinyamulenge

Despite their similarities, there are some salient differences between the copular systems of Kinyarwanda and Kinyamulenge.

The first difference is that Kinyamulenge also features a copular contrast in sentences featuring a non-locational subject.

Unlike Kinyarwanda, two copulas — *-ri* and *-ba* — can describe the location of a human subject. Again, the two forms yield distinct interpretations:

- *-ri* describes a “temporary” location
- *-ba* describes a “permanent” location

## Comparing Kinyarwanda and Kinyamulenge

Despite their similarities, there are some salient differences between the copular systems of Kinyarwanda and Kinyamulenge.

The first difference is that Kinyamulenge also features a copular contrast in sentences featuring a non-locational subject.

Unlike Kinyarwanda, two copulas — *-ri* and *-ba* — can describe the location of a human subject. Again, the two forms yield distinct interpretations:

- *-ri* describes a “temporary” location
- *-ba* describes a “permanent” location

(14) John a-**ri**            i        Kigali  
      John 1SM-be-<sub>RI</sub> LOC Kigali  
      ‘John is in Kigali’ (John’s current location)

(15) John a-**ba**            i        Kigali  
      John 1SM-be-<sub>BA</sub> LOC Kigali  
      ‘John is in Kigali’ (John lives in Kigali)

Kinyamulenge



## Comparing Kinyarwanda and Kinyamulenge

Another difference between the two languages is that Kinyamulenge *-ri* does not always yield locational readings.

## Comparing Kinyarwanda and Kinyamulenge

Another difference between the two languages is that Kinyamulenge *-ri* does not always yield locational readings.

In (16)-(17), *-ri* identifies the subject as a classificational member of the set denoted by the predicate.

- (16) Inka **i-ri** mu nyamanskwa  
9.cow 9SM-be-<sub>RI</sub> 18LOC 10.animal  
'The cow is an animal' (by classification)

- (17) Kigali **i-ri** mu mi-ji my-iiza  
Kigali 9SM-be-<sub>RI</sub> 18LOC 4-city 4AGR-nice  
'Kigali is one of the nice cities'

Kinyamulenge

Given the overall similarity between Kinyarwanda and Kinyamulenge, I argue that this data poses a problem for the semantic analysis of *-ri* in Jerro (2015).

**Issues:** a locational semantics for *-ri* ...

1. does not comment on the “temporary” interpretation of *-ri* in Kinyamulenge
2. cannot account for the taxonomic use of *-ri* in Kinyamulenge

# Analysis

In light of the Kinyamulenge facts, I argue contra Jerro (2015) that *-ri* does not have an inherently locational semantics in Kinyarwanda (and Kinyamulenge).

In light of the Kinyamulenge facts, I argue contra Jerro (2015) that *-ri* does not have an inherently locational semantics in Kinyarwanda (and Kinyamulenge).

Following accounts like Maienborn (2005) and Deo et al. (2017), I instead propose that *-ri* describes property ascriptions that are “limited”.

- *-ri* ties the property ascription to a particular context, e.g., a physical location, a temporal interval, etc.

In some cases, *-ri* describes a property ascription that is interpreted relative to a particular location:

- (18) Kigali **i-ri**            mu       Rwanda  
Kigali 9SM-be-<sub>RI</sub> 18LOC Rwanda  
'Kigali is in Rwanda' (looking at a map)

Kinyamulenge

In some cases, *-ri* describes a property ascription that is interpreted relative to a particular location:

- (18) Kigali **i-ri** mu Rwanda  
Kigali 9SM-be-<sub>RI</sub> 18LOC Rwanda  
'Kigali is in Rwanda' (looking at a map) Kinyamulenge

In other cases, *-ri* describes a property ascription that is interpreted relative to a particular temporal interval:

- (19) John **a-ri** i Kigali  
John 1SM-be-<sub>RI</sub> LOC Kigali  
'John is in Kigali' (John's current location) Kinyamulenge



I suggest that the taxonomic use of *-ri* also follows under this notion of a “limited” property ascription.

- Just as a property ascription can be limited to a particular physical context (e.g., a map), it may also be limited to a non-physical context as well (e.g., a taxonomic set).

In this case, a set relation is interpreted relative to a taxonomic tree.

- (16) Inka i-ri mu nyamanskwa  
9.cow 9SM-be-RI 18LOC 10.animal  
‘The cow is an animal’ (by classification) Kinyamulenge

This analysis of *-ri* finds considerable support from copular contrasts in other Great Lakes Bantu languages.

Cognates of *-ri* — e.g., reflexes of the proto-Bantu copula *\*-de* — exhibit similar interpretive profiles.

# Analysis

This analysis of *-ri* finds considerable support from copular contrasts in other Great Lakes Bantu languages.

Cognates of *-ri* — e.g., reflexes of the proto-Bantu copula *\*-de* — exhibit similar interpretive profiles.

Mashi (JD53) features an interpretive contrast between the copulas *-li* and *-ba*. Like its cognate *-ri*, *-li* describes property ascriptions that are “limited”.

- (20) a. O-ma-lunga ga-**li** ga-bulee  
AUG-6-sky 6SM-be-*LI* 6AGR-blue  
‘The sky is blue’ (in this context)
- b. O-ma-lunga ga-**ba** ga-bulee  
AUG-6-sky 6SM-be-*LI* 6AGR-blue  
‘The sky is blue’ (a fact about the world) Mashi (Finholt, 2024a)

As with *-ri*, the context-specific interpretation of *-li* can manifest in different ways.

## Limited to a particular location:

- (21) *Context: John's village is on the other side of the mountain and he calls to tell you it is storming, however you look outside and see that the sky is clear.*

O-ma-lunga ga-<sup>✓</sup>li/ #ba ga-bulee  
AUG-6-sky 6SM-be<sub>-LI</sub>/be<sub>-BA</sub> 6AGR-blue  
'The sky is blue'

Mashi

## Limited to a particular temporal interval:

- (22) *Context: It is noon, and you look outside and see that the sky is clear.*

O-ma-lunga ga-<sup>✓</sup>li/ #ba ga-bulee  
AUG-6-sky 6SM-be<sub>-LI</sub>/be<sub>-BA</sub> 6AGR-blue  
'The sky is blue'

Mashi

In Finholt (2024b), I show that similar interpretive facts also hold of Kihavu (JD52), Kirundi (JD62), and Kifuliiru (JD63).

- Reflexes of *\*-de* tend to describe property ascriptions that are limited.

In Finholt (2024b), I show that similar interpretive facts also hold of Kihavu (JD52), Kirundi (JD62), and Kifuliiru (JD63).

- Reflexes of *\*-de* tend to describe property ascriptions that are limited.

I argue that the “locational” function of *-ri* in Kinyarwanda and Kinyamulenge arises from the general meaning shared by reflexes of *\*-de*.

- Locations are stage-like (Jerro, 2015)
- Cognates of *-ri* are often associated with locative predication across Bantu languages (Schneider-Zioga, 2018; Gibson et al., 2019)

Under this analysis, it is still unclear why exactly *-ri* is restricted to locative predicates in third person copular clauses.

Under this analysis, it is still unclear why exactly *-ri* is restricted to locative predicates in third person copular clauses.

One possibility is that this restrictive distribution arises from the reanalysis of *ni* as a copula.

- *ni* is regularly restricted to present tense clauses featuring a third person subject and a non-locative predicate in Bantu languages (Lanham, 1953; Schneider-Zioga, 2018).



Under this analysis, it is still unclear why exactly *-ri* is restricted to locative predicates in third person copular clauses.

One possibility is that this restrictive distribution arises from the reanalysis of *ni* as a copula.

- *ni* is regularly restricted to present tense clauses featuring a third person subject and a non-locative predicate in Bantu languages (Lanham, 1953; Schneider-Zioga, 2018).
- Languages where *-ri/-li* is restricted to locatives generally feature *ni*

Under this analysis, it is still unclear why exactly *-ri* is restricted to locative predicates in third person copular clauses.

One possibility is that this restrictive distribution arises from the reanalysis of *ni* as a copula.

- *ni* is regularly restricted to present tense clauses featuring a third person subject and a non-locative predicate in Bantu languages (Lanham, 1953; Schneider-Zioga, 2018).
- Languages where *-ri/-li* is restricted to locatives generally feature *ni*

Further work is necessary to determine *why* the reanalysis of *ni* would result in *-ri* being restricted to locatives, however this seems to be a regular pattern.

Conclusion

## Conclusion

In Kinyarwanda, two copulas (e.g., *-ri/ni*) are attested in present tense copular clauses. To account for their distributional and interpretive profiles, Jerro (2015) proposes that *-ri* encodes an inherently *locational* semantics.

# Conclusion

In Kinyarwanda, two copulas (e.g., *-ri/ni*) are attested in present tense copular clauses. To account for their distributional and interpretive profiles, Jerro (2015) proposes that *-ri* encodes an inherently *locational* semantics.

I show that a purely locational semantics for *-ri* fails to capture two facts in closely-related Kinyamulenge:

1. *-ri* sometimes yields “temporary” interpretations
2. *-ri* doesn't always describe locations

# Conclusion

In Kinyarwanda, two copulas (e.g., *-ri/ni*) are attested in present tense copular clauses. To account for their distributional and interpretive profiles, Jerro (2015) proposes that *-ri* encodes an inherently *locational* semantics.

I show that a purely locational semantics for *-ri* fails to capture two facts in closely-related Kinyamulenge:

1. *-ri* sometimes yields “temporary” interpretations
2. *-ri* doesn't always describe locations

Instead, I suggest that the distribution and interpretation of *-ri* arises from a more general meaning shared by reflexes of the proto-Bantu copula *\*-de*:

- Reflexes of *\*-de* describe property ascriptions that are in some way “limited”, e.g., temporally, spatially, etc.

## Central claim

The meaning of *-ri* predisposes it to locational uses, but *-ri* itself is not inherently locational

- Botne, R. (1986). The temporal role of eastern Bantu -ba and-li. *Studies in African Linguistics*, 17(3):303–318.
- Clements, J. C. (1988). The semantics and pragmatics of the Spanish <copula + adjective > construction. *Linguistics*, 26(5):779–822.
- Clements, J. C. (2006). Ser-estar in the predicate adjective construction. *Functional approaches to Spanish syntax: Lexical semantics, discourse and transitivity*, pages 161–202.
- Deo, A., Sanchez-Alonso, S., and Pinango, M. (2017). Alternative circumstances of evaluation and the *ser/estar* distinction in Spanish. Ms. Yale University. URL: <http://ling.auf.net/lingbuzz/003543>.
- Finholt, A. (2024a). Copulas, possession, and the temporary-permanent distinction in Mashi: Evidence for decompositional HAVE. *Glossa: a journal of general linguistics*, 9(1).
- Finholt, A. (2024b). *Non-verbal predication and copular variation in Eastern Bantu*. PhD thesis, University of Kansas.

- Gibson, H., Guérois, R., and Marten, L. (2019). Variation in Bantu copula constructions. In Fábregas, A. and Marín, R., editors, *The grammar of copulas across languages*, pages 213–242. Oxford University Press.
- Jerro, K. (2015). Copulas and the semantics of location. In *Proceedings of 15th Meeting of the Texas Linguistic Society*, pages 91–105.
- Lanham, L. (1953). The copulative construction in bantu with special reference to Zulu. *African Studies*, 12(4):141–162.
- Maho, J. (2009). *NUGL Online: the web version of the new updated Guthrie List, a referential classification of the Bantu languages*. Gothenburg: Department of Oriental and African Languages, University of Gothenburg.
- Maienborn, C. (2005). A discourse-based account of Spanish ser/estar. *Linguistics*, 43(1):155–180.
- Schneider-Zioga, P. (2018). Non-verbal predication in Bantu. *Oxford Guide to the Bantu Languages*, forthcoming.



# Appendix

Following Clements (1988, 2006), Maienborn (2005), and Deo et al. (2017), I analyze *-li* and *-ba* as presuppositional variants.

- $\text{Bound}(P(x), c_0, i)$  presupposes that the truth of  $P(x)$  is restricted to a limited circumstance  $i$

$$(23) \quad \text{a. } \llbracket -li \rrbracket = \lambda P_{\langle s, et \rangle} \lambda x_{\langle s, e \rangle} \lambda i_s : \mathbf{Bound}(P(x), c_0, i). i \in \text{Circ}(c_0) \wedge P(x)(i) = 1$$

$$\text{b. } \llbracket -ba \rrbracket = \lambda P_{\langle s, et \rangle} \lambda x_{\langle s, e \rangle} \lambda i_s. i \in \text{Circ}(c_0) \wedge P(x)(i) = 1$$

$$\text{c. } \llbracket ni \rrbracket = \lambda P_{\langle s, et \rangle} \lambda x_{\langle s, e \rangle} \lambda i_s. P(x)(c_0) = 1$$

Invariant *ni* differs from the other copulas in that it does not involve the *Circ* function; it does not generate a set of alternative circumstances of evaluation. Instead, *ni* directly asserts  $P(x)$  of the utterance context.

Cognates of *-ri* and *-ba* exhibit similar distributions and interpretations across Great Lakes Bantu languages.

- *-ri*: realis environments (present/past) and “limited” interpretations
- *-ba*: irrealis environments (subjunctive/future) and general interpretations

The proposed meaning of *-ri* seems to match its function as an auxiliary verb:

Auxiliary *-ri* - one event is interpreted relative to a **particular moment** in another event

(24) a. a-**ri**            mu-kw-engá  
      1SM-be-<sub>RI</sub> 18LOC-15INF-brew  
      'S/he is (in the midst of) brewing'

b. na-**bâ**-ye                            nĩ-ga            n-tégere-je            Mihigo  
      1SM-be-<sub>BA</sub>.PST-COMPL 1SM-study 1SM-wait-COMPL Mihigo  
      'I studied while waiting for Mihigo'

Kinyarwanda (Botne, 1986, 313-315)