

Relativization and the grammaticalization of the stage-level vs. individual-level distinction in the languages of Senegal

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1. Introduction

An areal feature of the languages spoken in Senegal is that, regardless of their genetic affiliation (Atlantic or Mande), they have grammaticalized a distinction between relative clauses expressing a stage-level property of their head, and relative clauses expressing individual-level properties. As illustrated in (1), in the languages in question, relative clauses expressing individual-level properties of their head can be introduced by a complex expression whose literal meaning, originally ‘which you know that’, has undergone a process of semantic bleaching (and is not immediately perceived by speakers anymore).

(1) Fóoñi (Jóola, Atlantic) – pers. doc.

ka-jiil-a-k **k-an** **u-manj-umi** **k-oo-k-u**
CLk-stump-DEF- CLk CLk-REL 2SG-know-SBD CLk-LCOP-CLk-DX
tiitooraay **di** **ba-ŋaan-a-b**
in_the_middle LOC CLb-clearing-DEF-CLb
‘a stump which is in the middle of the clearing’
lit. /a stump / which / you know (that) / it is / in the middle / in / the clearing/

To the best of my knowledge, the possibility of a grammaticalized distinction between stage- and individual-level properties in the ‘noun + relative clause’ construction has not been discussed so far in the general literature on relativization. As regards the languages of Senegal, it was mentioned for the first time in Creissels & al. (2015), a paper devoted to impersonality in the languages of Senegal.

This paper is organized as follows. Section 2 consists of a succinct presentation of the relativization strategies found in the languages of Senegal. In Section 3, I provide illustrations of relative clauses expressing individual properties of their head in various Senegalese languages. In Section 4, I analyze the semantic evolution underlying the use of ‘which you know that’ to introduce relative clauses referring to an individual-level property of their head. In Section 5, I discuss the apparent mismatch between syntax and semantics that characterizes this construction in its present-day use. Section 6 summarizes the conclusions.

2. Relativization strategies in the languages of Senegal

Senegal is a multilingual country. Ethnologue lists 38 living languages. Of these, 31 are indigenous, and 7 non-indigenous.¹ Apart from the Portuguese-based creole traditionally spoken in the town of Ziguinchor and some of the surrounding villages, the indigenous languages of Senegal belong either to the Western branch of the Mande family, or to the Atlantic family as delimited by Pozdniakov & Segerer (Forthcoming).² Typologically, Atlantic and Mande languages sharply contrast in many respects, including their relativization strategies. For an overview of the structural particularities of Atlantic and West Mande languages, the interested reader is referred to Lüpke (Forthcoming), a volume on Atlantic languages which includes sketches of several Atlantic languages, but also of Mandinka (West Mande).

2.1. Relativization strategies in West Mande languages

Mandinka, mainly spoken in Middle Casamance, is one of the important regional languages of Senegal.³ Closely related Manding varieties (Niokolo Maninka, Dantila Maninka, etc.) are spoken in Eastern Senegal. The other two representatives of West Mande in Senegal, Soninke and Dialonke, are only distantly related to Mandinka, but their relativization strategies are basically the same. On the classification of Mande languages, see Vydrin (2009).

The most common relativization strategy in Mandinka, illustrated in (2), is a correlative strategy in which the relative clause is not embedded in the matrix clause. It may precede or follow it, but the order ‘relative clause – matrix clause’ is much more frequent than the order ‘matrix clause – relative clause’. Within the relative clause, the relativizer **mîŋ** (dialectal variants: **mêŋ**, **mûŋ**) occupies the position of the relativized NP, either alone or combined with the noun acting as the semantic head of the relative clause.⁴

(2) Mandinka (West Mande) – pers. doc.

(2a) **Mùsôo yè kèwôo lá kódoó tǎa.**
 woman.D CPL man.D GEN money.D take
 ‘The woman took the man’s money.’

(2b) **mùsôo mîŋ yè kèwôo lá kódoó tǎa**
 woman.D REL CPL man.D GEN money.D take
 ‘the woman who took the man’s money’

¹ Cf. <https://www.ethnologue.com/country/SN/languages> (accessed September 3, 2017).

² Pozdniakov and Segerer’s Atlantic is more restricted than Atlantic as delimited in the classical works of Greenberg and Sapir, since it excludes Mel languages (considered now as a distinct branch of the Niger-Congo macro-family) and some languages, previously classified as Atlantic, whose Niger-Congo affiliation is probable, but whose inclusion in one of the well-established branches of Niger-Congo is problematic.

³ Mandinka is also spoken in Gambia and Guinea Bissau. In Gambia, it is spoken as a first language by about 40% of the population, and is widely used as a lingua franca. In Guinea Bissau, the dominant language is the Portuguese-based Guinea Bissau Creole, but Mandinka is one of the important regional languages.

⁴ Comparative data show that the relativizer **mîŋ** originates from a demonstrative.

(2c) **mîŋ yè kèwôo lá kódoó tǎa**
 REL CPL man.D GEN money.D take
 ‘the one who took the man’s money’

(2d) **mùsôo yè kèwôo mîŋ ná kódoó tǎa**
 woman.D CPL man.D REL GEN money.D take
 ‘the man whose money was taken by the woman’

(2e) **mùsôo yè mîŋ ná kódoó tǎa**
 woman.D CPL REL GEN money.D take
 ‘the one whose money was taken by the woman’

(2f) **mùsôo yè kódoó mîŋ tǎa**
 woman.D CPL money.D REL take
 ‘the money that the woman took’

(2g) **mùsôo yè mîŋ tǎa**
 woman.D CPL REL take
 ‘the one that the woman took’, ‘what the woman took’

As illustrated in (3), the relativized NP is resumed in the matrix clause by a pronoun.

(3) Mandinka (West Mande) – pers. doc.

(3a) [**Mùsôo yè kèwôo_i mîŋ ná kódoó tǎa**], **ń níŋ wǒo_i bĕn-tà.**
 woman.D CPL man.D REL GEN money.D take 1SG with DEM meet-CPL
 ‘I met the man whose money was taken by the woman.’
 lit. something like ‘The woman took which man’s money, I met that one.’

(3b) [**Mùsôo_i mîŋ yè kèwôo lá kódoó tǎa**], **ń níŋ wǒo_i bĕn-tà.**
 woman.D REL CPL man.D GEN money.D take 1SG with DEM meet-CPL
 ‘I met the woman who took the man’s money.’
 lit. something like ‘Which woman took the man’s money, I met that one.’

Two other relativization strategies are found in Mandinka. In the first one, the relative clause precedes the matrix clause and is resumed by a pronoun, like in canonical relativization, but the head noun is found on the left edge of the relative clause, immediately followed by the relativizer and resumed by a pronoun occupying the position of the relativized NP – (4b), to be compared with the canonical construction in (4a).

(4) Mandinka (West Mande) – pers. doc.

(4a) [**Í bè súwòo_i mîŋ dâa tó**], **wó_i lè mú ń yââ tí.**
 2SG LCOP house.D REL door.D LOC DEM FOC EQCOP 1SG home.D POSTP
 ‘The house at whose door you are is my home.’

- (4b) [Súwòò; mîŋ í bé à; dâa tó],
 house.D REL 2SG LCOP 3SG door.D LOC
 wó; lè mú ń yââ tí.
 DEM FOC EQCOP 1SG home.D POSTP
 same meaning as (4a)

In the second type of non-canonical relatives, the internal structure of the relative clause is identical to that of canonical relatives, but it occurs as a constituent of the matrix clause. However, this is only possible if the relative clause occupies a peripheral position (either the subject position at the beginning of the clause, as in (5), or an oblique position at the end of the clause).

- (5) Mandinka (West Mande) – pers. doc.

[Sàâ mîŋ mú súŋkút-óo kèemáa tì] múrù-tá năŋ.
 snake.D REL EQCOP girl.D husband POSTP return-CPL CTRP
 ‘The snake who was the girl’s husband came back.’

For a more detailed description of relativization in Mandinka, the reader is referred to Creissels & Sambou (2013).

2.2. Relativization strategies in Atlantic languages

The vast majority of the languages of Senegal belong to one of the two branches of the Atlantic family as delimited by Pozdniakov & Segerer (Forthcoming): Northern Atlantic and Bak. The Northern Atlantic branch includes Wolof, by far the most important language of Senegal (spoken natively by at least 40% of the population, also spoken as a lingua franca throughout the country, and widely used in all areas of public life except formal education), and important regional languages such as Seereer and Pulaar. The Bak branch includes Jóola (aka Diola), an important regional language.

Atlantic languages have post-nominal relatives. There is variation as regards the use of verb forms distinct from those found in plain assertive clauses, the presence of pronouns resuming the head noun within the relative clause, and the presence of linkers at the junction between the head noun and the relative clause. The special verb forms found in relative clauses are typically also used in *wh*-questions, and in focalization. The linkers found at the junction between the head noun and the relative clause express gender-number agreement with the head noun, like determiners and other noun modifiers, but they provide no indication about the function of the relativized NP within the relative clause. They are often labeled ‘relative pronouns’ in the available descriptions, since they occupy a position superficially similar to that occupied by relative pronouns in many European languages. They are pronominal in the sense that, in the absence of a lexical head, they act as the head of the relative clause, but they do not have the properties that could justify analyzing them as real relative pronouns extracted from the relative clause.

For example, in Ganza (Balant, Bak, Atlantic), relative clauses are immediately postposed to their head. As illustrated in (6), the gap strategy is not limited to the relativization of subjects and objects. A resumptive element is used only in the relativization of genitives. The

verb is marked for backgrounding in the completive aspect, but in the incompletive aspect, the forms used in relative clauses are not different from those found in plain assertive clauses.⁵

(6) Ganja (Balant, Atlantic) – Creissels & Biaye (2016)

(6a) **à-láantè mà wús-nì f-ñjógób**

CLha-man D buy-BGR CLf-chair
‘the man who bought a chair’

(6b) **f-ñjógób mà à-láantè mà wús-nì**

CLf-chair D CLha-man D buy-BGR
‘the chair that the man bought’

(6c) **hòtó mà n-tóo-nì Dàagâr**

(CLu)car D 1SG-go-BGR Dakar
‘the car with which I went to Dakar’
lit. ‘the car (that) I went to Dakar’

(6d) **b-tá mà bì-búθá-nì hás**

CLb-tree D CLbi-see-BGR (CLu)monkey
‘the tree on which they saw a monkey’
lit. ‘the tree (that) they saw a monkey’

(6e) **à-láantè mà à-nîn ní mà dée-nì**

CLha-man D CLa-woman POSS.CLha D give_birth-BGR
‘the man whose wife has given birth’
lit. ‘the man (that) his wife has given birth’

In the languages of Sub-Saharan Africa in general, and in Atlantic languages in particular, it is common that relative clauses are headed by verb forms distinct from those that have the ability to head the corresponding independent clauses. However, most descriptions do not discuss the precise nature of the verb forms in question: do such ‘relative verb forms’ constitute a *dependent mood*, i.e. a set of verb forms that, although distinct from those found in independent clauses, are structurally similar to them (in the same way as ‘subjunctives’ in European languages)? or do they show the kind of deviation from the standard of the independent clause predicate that characterizes the forms traditionally designated as *participles*? In other words, in reference to the distinction between *deranking* and *balancing* introduced by Stassen (1985: 76-83), are relative clauses headed by special verb forms *balanced* or *deranked* dependent clauses?

In most cases, there does not seem to be evidence that the relative clauses of Atlantic languages involving special verb forms should be analyzed as deranked (i.e., participial). A relativization strategy involving verb forms analyzable as participles is however found in Jóola Fóoñi (Atlantic), a language using distinct relativization strategies for subject and non-subject relativization.

⁵ For a more detailed description of relativization in Ganja, see Creissels & Biaye (2016).

- (8) Mandinka (West Mande) – Creissels & al. (2015)

Sěejò mú bèn-dúlàa lè tí,
 Sédhiou EQCOP meet-place.D FOC POSTP
mí í yé à lôŋ kó sîi jámáa lè bé jěe.
 REL 2SG CPL 3SG know that ethnic_group many FOC LCOP there
 ‘Sédhiou is a crossroad where many ethnic groups can be found.’
 lit. ‘which you know that many ethnic groups are there’

- (9) Wolof (Atlantic) – Creissels & al. (2015)

ab dëkk-u kow boo xam né
 INDEF-CLb village-of upcountry CLb.REL.2SG know that
am mbey doŋŋ la dunde
 INDEF-CLm farming only FOC.3SG live.APPL
 ‘a remote subsistence farming village’
 lit. ‘a remote village which you know that it lives on some farming only’

- (10) Keerak (Joola, Atlantic) – Creissels & al. (2015)

ma-Hus-am mɔ-nɔ-haasom kaanako m-ɔmɔ mɔ-horom
 CLm-sand-D.CLm REL.CLm-2SG-know that CLm-COP CLm-salty
 ‘the sand which contains salt’
 lit. ‘the sand which you know that it is salty’

- (11) Sereer (Atlantic) – Creissels & al. (2015)

ox-e and-ooona ee ten sinj-u saate fan-e
 CL-REL know-2SG.SBD that 3SG found-FOC village CL-DEF
 ‘the one who founded the village’
 lit. ‘the one you know that it’s him who founded the village’

- (12) Gubéeher (Ñun, Atlantic) – Creissels & al. (2015)

taabl ə-gəni u-na buyɛnka ə-dej-i
 table CLa-REL 2SG-know that CLa-be_high-CPL
 ‘a table which is high’
 lit. ‘a table which you know that it is high’

- (13) Ganja (Balant, Atlantic) – Creissels & Biaye (2016)

bì-θásà mà ú-húr-ùn yàa bégè gî ngì à-nîn
 CLbi-young_man D 2SG-know-SBD that CLbi.DEM be with CLha-woman
 ‘the young men who are married’
 lit. ‘the young men you know that they have a wife’

In my fieldwork on Mandinka, I observed that, when asked to explain the meaning of a noun in Mandinka, speakers systematically use this kind of construction, as in (14).

(14) Mandinka (Mande) – Creissels & al. (2015)

Kòolée, wó lè mú dùlâa tí,
 kòolée.DEF DEM FOC FOC place.DEF POSTP
dáa-mì í yé à lŋ́ kó kòo-báŋk-òo lè bé jěe.
 place-REL 2SG CPL 3SG know that salt-soil-DEF FOC LCOP there
 ‘A *kòolée* is a place where the soil contains salt.’
 lit. ‘a place where you know that there is salted soil’

The grammaticalization of ‘which you know that’ is however not complete, in spite of the fact that ‘which you know that’ has lost its literal meaning. Relative clauses introduced by ‘which you know that’ can only be interpreted as referring to an individual-level property of the head, but the converse is not the case: constructions in which a relative clause interpreted as referring to an individual-level property of the head is not introduced by ‘which you know that’ are not considered ungrammatical by speakers. Unfortunately, large corpora that would make it possible to evaluate the frequency with which speakers use relative clauses explicitly marked as referring to an individual-level property are not available.

4. The semantic evolution underlying the use of ‘which you know that’ with relative clauses referring to an individual-level property of their head

It seems reasonable to assume that the use of *which you know that* to introduce relative clauses referring to an individual-level property of their head developed from the generalizing use of second person singular, rather than from second person referring specifically to the addressee. The use of 2nd person singular to express generalizations about humans is widespread in the languages of the world, and is particularly common in West African languages, including those that use *which you know that* to introduce relative clauses referring to individual-level properties of their head.

According to this hypothesis, the original meaning of the construction *N which you know that Cl* (N a noun, Cl a clause interpreted as expressing a property of N’s referent) was ‘N about which one knows that Cl’, ‘N about which it is well known that Cl’. Crucially, characterizing the referent of a noun by a property presented as common knowledge implies that the property in question is an individual-level rather than stage-level property.

However, it is clear that the notion of common knowledge is too restricted to account for the present-day use of ‘which you know that’ in Senegalese languages. For example, it is obvious from the context in which (13) was found that the intended meaning was simply ‘the young men that are married’, not ‘the young men about whom it is well known that they are married’, and similar observations can be made about the other examples quoted above.

This means that, in the present-day use of *which you know that*, *know* has been affected by a process of semantic bleaching. Formally, the verb *know* is still present (and as will be commented in the following section, still has the properties of the main verb of the relative clause), but the original meaning ‘N about which it is well known that Cl’ has evolved toward ‘N having Cl as one of its individual-level properties’. The notion of common knowledge has

been lost, and all that remains of the original meaning of the expression is the notion of individual-level property (originally implied by the notion of common knowledge).

5. Relative clauses introduced by *which you know that* and the syntax-semantics interface

Relative clauses introduced by *which you know that* are an interesting case of apparent mismatch between syntax and semantics: semantically, a construction superficially glossable literally as ‘N which you know that Cl’ is interpreted as if Cl were simply a relative clause modifying N, with just the additional precision that the property it expresses is an individual-level property of its head.

For example, the original structure of Ganja **bójà mà úhúrùn yàa mméèsè η háj mà áttálânθ** ‘a town where it is not easy to live’ can be represented as indicated in (15), with ‘know’ as the main verb of the relative clause, and the clause expressing the property attributed to **bójà** ‘town’ embedded as a complement clause within the relative clause.

(15) Ganja (Balant, Atlantic) – Creissels & Biaye (2016)

bójà mà [ú-húrù-n [yàa [m-méèsè η háj mà átt-álânθ]]]
 town DEF 2SG-know-SBD that CLb-living GEN place DEF NEG-be_easy
 ‘a town where it is not easy to live’
 lit. ‘a town you know that living there is not easy’

This constituent structure is still consistent with the morphological details: crucially, the subordination marker suffixed to verbs in relative clauses in the completive aspect is found on the verb *know*, not on the verb of the clause that expresses the property ‘Living in that place is not easy’, whereas *be_easy*, as the main verb of a complement clause introduced by the complementizer *yàa* ‘that’, is in a form that could be used as the main verb of an independent clause. However, if one adheres to the view that the meaning representation of an expression is built in parallel with the construction of its syntactic structure (as assumed in non-Chomskyan formal grammar frameworks – cf. Partee 2014), the constituent structure indicated in (15) can hardly be maintained in a synchronic account of the ‘noun + relative clause’ construction of Ganja. In this perspective, in some way or other, *be_easy* must be the main verb of a relative clause modifying *town*.

Two possible solutions come to mind:

- (a) **úhúrùn yàa mméèsè η háj mà áttálânθ** has been reanalyzed as a plain relative clause with *be_easy* as the main verb, and *you_know_that* is an unanalyzable block acting as a modifier of the main verb of the relative clause, adding the feature ‘individual-level property’ to its interpretation;
- (b) **úhúrùn yàa mméèsè η háj mà áttálânθ** has been reanalyzed as a relative clause with *be_easy* as the main verb, but of a distinct type, since *which_you_know_that* has been reanalyzed as a relativizer occupying a complementizer position at the left periphery of the relative clause (recall that no relativizer occurs in the relative clauses of Ganja that are not marked as expressing an individual-level property – cf. Ex. (6) above).

Solution (a) is ruled out by the mere fact that, in this construction, the verb acting as the main predicate in the construction of the property attributed to the head-noun (in this example, *be_easy*) cannot take the backgrounding marker it takes in the completive aspect in the relative clauses that are not marked as expressing an individual-level property. Moreover, in the relative clauses of Ganja that are not marked as expressing an individual-level property, a resumptive element occurs only if the relativized NP is not a term in the construction of the main verb (cf. Ex. (6) above), whereas in relative clauses introduced by *which you know that*, a resumptive element is obligatory (in Ex. (15), **hǎj mà** ‘the place’), because the relativized NP originally belonged to a clause complementing the main verb of the relative clause.

Consequently, the only possible solution is (b), according to which the grammaticalization of the stage-level vs. individual-level distinction in relativization has resulted in the emergence of a structurally distinct type of relative:

- the relative clauses of Ganja marked as expressing an individual-level property are introduced by the complementizer **úhúrùn yàa**, whereas no overt complementizer occurs with relative clauses unmarked for the stage- vs. individual-level distinction;
- the main verb of the relative clauses of Ganja marked as expressing an individual-level property is always in a form that could also be used in plain assertive clauses, whereas in relative clauses unmarked for the stage- vs. individual-level distinction, backgrounding marking is obligatory in the completive aspect;
- in the relative clauses of Ganja marked as expressing an individual-level property, the head noun must be resumed in some way or other, depending on the relativized function (subject index, object index, pronoun, or adverb), whereas in non-subject relative clauses unmarked for the stage- vs. individual-level distinction, resumptive elements occur only if the relativized NP is not a term in the construction of the main verb.

In other languages, the details may be different from those observed in Ganja, but similar observations can be made, leading in all cases to the conclusion that the grammaticalization of the stage- vs. individual-level distinction has led to the emergence of a structurally distinct type of relative clause.

For example, Wolof does not have special verb forms for relative clauses, but some of the verb forms that can be found in independent assertive clauses (and also in clauses complementing the verb *know*) are not allowed in relative clauses. For example in (9) (reproduced here as (16)), **la dunde** |FOC.3SG|live.APPL| is a verb form expressing focalization of an object or oblique phrase. In Wolof, such verb forms can be found in independent clauses, or in clauses complementing verbs such as **xam** ‘know’, but cannot act as the main verb of relative clauses.

(16) Wolof (Atlantic) – Creissels & al. (2015)

ab	dëkk-u	kow	boo	xam	né
INDEF-CLb	village-of	upcountry	CLb.REL.2SG	know	that
am	mbey	doŋŋ	la	dunde	
INDEF-CLm	farming	only	FOC.3SG	live.APPL	
	‘a remote subsistence farming village’				
	lit. ‘a remote village which you know that it lives on farming only’				

Similar observations can be made about the Fooñi example (1), repeated here as (17).

(17) Fooñi (Jóola, Atlantic) – pers. doc.

ka-jiil-a-k **k-an** **u-manj-umi** **k-oo-k-u**
CLk-stump-D-CLk CLk-REL 2SG-know-SBD CLk-LCOP-CLk-DX
tiitooraay **di** **ba-ŋaan-a-b**
in_the_middle LOC CLb-clearing-D-CLb
‘a stump which (you know that it) is in the middle of the clearing’

The point is that, in Fooñi:

- the use of the non-verbal locational copula **kooku** is possible in independent clauses, or in clauses complementing verbs such as ‘know’, but not as the main predicate of relative clauses, in which a verb ‘be’ must be used instead;
- the relativizer **kan** belongs to a paradigm of relativizers that can only introduce non-subject relative clauses, whereas subject relatives require the use of participial verb forms, as in (18), where **kammi** ‘being’ is a participial form of the verb ‘be’.

(18) Fooñi (Joola, Atlantic) – pers. doc.

ka-jiil-a-k **k-a-mmi** **tiitooraay** **di** **ba-ŋaan-a-b**
CLk-stump-D-CLk CLk-PTCP-be.SBD in_the_middle LOC CLb-clearing-D-CLb
‘a stump being in the middle of the clearing’

6. Conclusion

In this article, I have analyzed the relative clauses introduced by *which you know that*, a construction which constitutes an areal feature of the Atlantic and Mande languages spoken in Senegal. In this construction, *you know that* has lost its literal meaning, and just encodes that the clause superficially analyzable as the complement of *know* expresses an individual-level property of the head noun. After putting forward a hypothesis about the semantic evolution underlying the present-day use of this construction, I have discussed the apparent mismatch between syntax and semantics that characterizes it, and concluded that, in the languages in question the grammaticalization of the stage- vs. individual-level distinction has resulted in the emergence of a structurally distinct type of relative clause.

Abbreviations

APPL: applicative, BGR: backgrounding, Cl: clause CL: noun class, COP: copula, CPL: completive, CTRP: centripetal, D: definite, DEM: demonstrative, DX: deixis marker, EQCOP: equative copula, FOC: focalization marker, GEN: genitive, INDEF: indefinite, LCOP: locational copula, LOC: locative, N: noun NEG: negative, NP: noun phrase, OST: ostensive, PL: plural, PTCP: participle, POSS: possessive, POSTP: postposition, REL: relativizer, SBD: subordination marker, SG: singular

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