THE COPULA CYCLE IN KRIOL

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Abstract The present paper aims to study the item *i* in Kriol, the Portuguese-related creole of Guinea-Bissau. More specifically, *i* is 3SG subject pronoun and also functions as copula in individual-level predication. As a pronoun, *i* may also occur as resumptive to topic-comment structures. On the basis of the striking similarity between copular clauses with *i* and topic-comment structures with resumptive *i*, I will argue that the pronoun *i* and the copula *i* are not simple homophones, but represent two different syntactic functions of the very same item. I assume that the copula *i* derives from the resumptive pronoun *i* in topic-comment structures. This kind of grammaticalization of the pronoun into a copula, also known as copularization, is well documented in a number of languages. The main goal of the paper will be to reconstruct the path of grammaticalization of the copula *i* and to provide a syntactic account of it. I will follow Lohndal (2009) in assuming that this kind of grammaticalization, motivated by the ambiguity caused by certain topic-comment structures with resumptive pronoun, corresponds to an economy-oriented structural change: the pronoun shifts from the specifier to the head of the predication phrase (PredP). This shift is part of the type of structural changes described as copula cycle (see e.g. van Gelderen 2004, 2008, 2009, 2011, 2015; Lohndal 2009). Given that 3SG *i* is arguably a subject clitic and cannot sit in the specifier of PredP, I will argue, on the basis of Kihm's (2007) paper, that in the proto-creole that gave rise to Kriol and the other Upper Guinea creoles there was a 3SG nonclitic pronoun **ele*. It occurred as resumptive to topic-comment structures and was later reanalysed as a copula.

1 Introduction

Guinea-Bissau Creole, or simply Kriol,[1] is a Portuguese-related creole spoken in Guinea-Bissau, West Africa. It is one of the oldest creoles in the world: its

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1 *Kriol* is the most common autonym for this language within the speakers' community. In the preface to his (2018) dictionary, Scantamburlo argues that the proper name should be *Guineense*, since it is the language of national identity. The name *Guineense* dates back to the end of the 19th century, when it was first used by the Bissau-Guinean author Marcelino Marques de Barros. Similarly, the creole of Cabo Verde is usually referred to as *Caboverdean* or *Kabuverdianu*, although it also has other autonyms, among which *Kriolu* and *Badíu* (Lang

emergence dates back to the second half of the 15th century. Nowadays, it is spoken by the vast majority of the population and represents the *lingua franca* in Guinea-Bissau, allowing communication among the numerous local groups.

Kriol is an Atlantic creole belonging to the group of Upper Guinea creoles (UGCs) together with Caboverdean (CV) and Casamancese (CS).[2] According to Jacobs (2010), UGCs are genetically related and share a common ancestor, i.e. a proto-creole (proto-UGC).[3] This genetic affiliation builds on the structural similarity of UGCs and on a consistent percentage of shared African-derived lexicon: more specifically, UGCs share about 90% of their grammatical features (Baptista, de Mello & Suzuki 2007; for similarities in the copular systems of UGCs, see Truppi 2019a) and about 80% of their African-derived lexical items (Rougé 1999).[4]

As we will see in §2, the copular system of Kriol consists of several copulas, both verbal and non-verbal. The present paper will deal with one of them, the non-verbal copula *i*, which is homophonous with the 3SG subject pronoun. I will argue that the copula *i* derives from 3SG pronoun *i* used as resumptive to topic-comment structures. Due to the lack of written records of the early stages of this language, the present proposal represents a reconstruction of copula emergence in Kriol based both on first-hand Kriol data and on similar cases of grammaticalization found in several languages

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2013). Finally, in the case of *Casamancese* (Creole), the following autonyms are known from the literature (Biagui 2012, Biagui & Quint 2013): *Kriyol* and *Lingu Kristoŋ* ('Christian language').

2 There are different varieties of CV: the southern varieties (Sotavento), mainly represented by the variety of Santiago, which is the best documented and described (see e.g. Quint 2000 and Baptista 2002) are closer to Kriol than the northern varieties (Barlavento). With regard to CS, it is a later offshoot of Kriol: according to Biagui (2012: 5), in the mid-17th century, a group of colonists (probably including creole-speaking Africans) coming from Cacheu founded Ziguinchor (in Casamance, southern Senegal). How much CS has diverged from Kriol since then is still debated: CS is treated as a separate variety in Biagui (2012) and Biagui & Quint (2013), while other authors such as Doneux & Rougé (1988) describe one single variety spoken in Guinea-Bissau and Ziguinchor.

3 We will not discuss here the case of Papiamentu, a Spanish-related creole with Portuguese influence, spoken on the islands of Aruba, Bonaire, and Curaçao. For the inclusion of Papiamentu in the UGC group, see Quint (2000) and Jacobs (2010), among others.

4 For reasons of space, we cannot discuss in more detail the linguistic and historical data that led to the formulation of the genetic affiliation of CV and Kriol into the UGC group. We address the reader to Jacobs's (2010) work. Similarly, we will not discuss the question of the emergence of UGCs. The literature on these languages has proposed some plausible hypotheses of genesis, the main ones being the insular hypothesis (proto-UGC was born on the island of Santiago, Cabo Verde; see Jacobs 2010) and the continental one (the creolization started on the continent, namely in Cacheu and in the other *praças* – fortified trading posts – in present-day Guinea-Bissau; see Rougé 1986, 2006, among others). A further approach sees in *Língua de Preto* (LdP; lit. 'Black tongue') the origin of West African Portuguese creoles: LdP would be the basic variety of Portuguese spoken by African slaves brought to Portugal during the 16th century (see Kihm 2007: 291; Kihm & Rougé 2013).

for which records of earlier stages are available such as Chinese, Hebrew, and Sranan, among others. This kind of grammaticalization, viz. copularization, has been studied in depth in the literature (see e.g. Li & Thompson 1977, Katz 1996, McWhorter 1997, and Stassen 1997, among others). In particular, Katz (1996) noticed that copularization is not unidirectional. She described the case of Hebrew copula *hu* as a cyclical process: from copula to pronoun to copula.[5]

The idea that the source of Kriol copula *i* is pronominal is not novel. Works such as Peck (1988), Ichinose (1993), and Kihm (1994) have already noticed the suspicious homophony of 3SG pronoun *i* and the copular item *i*. Ichinose (1993) notices that the pronoun *i* also functions as topicalizer in Kriol: he assumes that the copula *i* derives from this topicalizing function. Kihm (2007) also assumes a pronominal origin for Kriol copula *i*: it derives from Portuguese 3SG pronoun *ele* 'he' through specific morphophonological transformations that we will explore in §2 and §4.2.[6] I will follow both Ichinose (1993) and Kihm (2007) in assuming a pronominal origin of *i*. In particular, I assume with Ichinose (1993) that copular clauses with *i* in Kriol derive from topic-comment structures with resumptive *i*. As a difference from previous works, the present paper aims to reconstruct the emergence of the copula *i* in Kriol and to provide a syntactic account of the grammaticalization of 3SG pronoun *i* into a copula. On the basis of first-hand data of Kriol,[7] I propose an analysis of grammaticalization of the copula *i* within a generative framework as developed by van Gelderen (2004, 2008, 2009, 2011, 2015, among others) and Lohndal (2009), i.e. the *copula cycle*, whereby copularization takes place through structural changes.[8] In particular, I will follow Lohndal's syntactic account of copularization in

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5 This is not the case for Kriol, where the grammaticalization consists, so far, of a change from pronoun *i* to copula *i*. Nonetheless, since we will provide a syntactic account of copularization within the copula cycle as developed in Lohndal (2009) and van Gelderen (2011), we will maintain the name of *copula cycle* in order to refer to this kind of grammaticalization.

6 More specifically, Kihm (2007) assumes different stages of Kriol: at an earlier stage, *i* was a pronoun; then, *i* became a predicate marker, and finally, it became a copula, whose presence is mandatory in copular clauses. The author assumes the existence of two parallel grammars in Kriol, i.e. a modern grammar (MK) and a more ancient one (AK). Within this account, the existence of copulaless clauses of the type 'NP Ø NP' would be a manifestation of grammar AK. As a difference, I do not postulate the existence of parallel grammars in Kriol and, in particular, I do not assume a stage where *i* was a predicate marker. Moreover, the definition of predicate marker given in Kihm (2007: 283) as a functional category – while copulas would be lexical verbs – is similar to my definition of copulas. Another relevant difference between Kihm (2007) and the approach presented in the present paper is that I do not assume *Língua de preto* to be the cradle for the emergence of UGCs.

7 The data have been collected during several fieldwork visits in Guinea-Bissau and among Bissau-Guinean communities in Europe (in particular, in Portugal, Germany, and Italy).

8 Van Gelderen (2011) was the first one to provide a syntactic account of the copula cycle within a generative framework; her (2011) work builds on a pre-print version, which was further developed by Lohndal (2009).

languages such as Chinese and Hebrew. According to him, topic-comment structures with a resumptive pronoun provide an ambiguous stimulus to the child acquiring the language. This ambiguity is the trigger for the reanalysis of such structures. More specifically, the reanalysis from pronoun into copula corresponds to a syntactic shift from specifier to head of the predication phrase, PredP.

The present study is based on data from the literature (Ichinose 1993; Kihm 1994, 2007; Truppi 2019a, Truppi 2019b, among others) and on first-hand data. The paper is organized as follows: in §2, we will provide a brief description of Kriol copulas and of their syntactic distribution. Moreover, we will provide syntactic evidence for the nonverbal status of the copula *i*. In §3, we will look at topic-comment structures in Kriol and discuss their resemblance to copular clauses with *i*. Then we will briefly review the case of a number of languages that also developed copulas from pronouns (or demonstratives). In §4, we will lay the basis for the syntactic analysis of *i*'s copularization: we will describe the copula cycle and its syntactic stages as developed in Lohndal (2009). Then we will look at the copula cycle in Chinese, as analysed by him. Finally, we will provide a syntactic account of the emergence of the copula *i* in Kriol within Lohndal's framework. In §5 we will summarize our findings.

2 A sketch of copulas in Kriol

In the present section, I will provide a sketch of Kriol copulas and of their distribution. Kriol has a varied system of copulas, consisting of both verbal and non-verbal items. According to Truppi (2019a), among the verbal items we find *sedu* 'to be', *sta* 'to be, to stay', and the past copula *(y)era* 'was/were'. Non-verbal copulas are *i* and Ø (zero copula).[9] Among the verbal copulas, we also find the past copula *foi*: it has a marginal distribution and is used by speakers, who are fluent in Portuguese.[10]

Kriol verbal copulas clearly come from Portuguese verbs. More specifically, like any other verb in Kriol, they come from 3SG present indicative forms of the corresponding Portuguese verbs. *Sta* derives from Port. 3SG *está* 's/he/it is/stays'. Like in its lexifier Portuguese, *sta* in Kriol is the locative

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9 By describing the absence of copulas in certain copular clauses in Kriol as instances of Ø, I am not assuming any theoretical approach with regard to null copulas. The term 'zero copula' is used as a descriptive label for the cases where, in the linear order, no copula occurs. As we will see in §4.2, the present study proposes that the functional category PredP is always present in the underlying structure.

10 Portuguese is the only official language in Guinea-Bissau and the only language allowed in the education system (apart from a few bilingual projects, i.e. Portuguese-Kriol and Portuguese-Manjaku, which is one of the languages spoken in the country). Despite the official role of Portuguese in the country, only a small part of the population is fluent in Portuguese (see e.g. https://www.ethnologue.com/country/GW/languages for more details).

copula and is also used with stage-level predicates. The past forms *(y)era* and *foi* derive from Port. *era* and *foi*, which are imperfective and perfective past forms of *ser*, respectively. While *foi* in Kriol is used in perfective past contexts only – it has retained its original Portuguese aspectual properties – *(y)era* is not limited to the imperfective contexts. As a difference, *sedu* comes from the infinitive form of Port. *ser* 'to be' with deltacism of /r/ and epenthesis of final /u/ (see Kihm 1994: 272). It is interesting to notice that *sedu* is the only verb in Kriol which derives from an infinitive form, and not from the 3SG present indicative.

With regard to the nonverbal copula *i*, the derivation is less straightforward. There are two possible etymologies for *i*: it comes either from Port. 3SG *é* 'is' from *ser* 'to be' or from 3SG subject clitic *i*. In line with Ichinose (1993) and Kihm (2007), I assume that the copula *i* comes from 3SG subject clitic *i*. More specifically, the pronoun *i* is used as resumptive to topic-comment structures. In these environments, given their ambiguity of interpretation, *i* was reanalysed as a copula.

Finally, we listed Ø among the copulas in Kriol. As a matter of fact, we can find copulaless clauses in this language. As we will see in §2.1, Ø occurs in the same syntactic contexts as *i*: this means that *i* and Ø are in competition for the same environments. This represents evidence in favour of an initial copulaless stage of the language, as we will assume in §4.2. Although copulaless clauses are found regularly in Kriol, elicitation tasks have revealed that Kriol native speakers generally prefer sentences with the copula *i* rather than copulaless structures.[11]

2.1 *The distribution of copulas*

The distribution of copulas in Kriol obeys certain criteria, which are shared crosslinguistically (see Stassen 1997), i.e. the predicate type and the aspect and tense properties of the sentence. The former determines an essential split in terms of copula selection in Kriol (Truppi 2019a). More specifically, nominal and adjectival predicates select the copula *i* (1 a and 1 b, respectively), while *sta* is selected by locative predicates (1 c).[12] In other words, *i*

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11 See Truppi (2019a) for more details on copulaless clauses in Kriol. However, a more in-depth study of the semantic-syntactic conditions that regulate the occurrence of Ø is needed.

12 Kriol displays both adjectives and property items. Following Kihm (1994, 2000), basic properties such as 'to be happy', 'to be tall' or 'to be red' are expressed through items with semi-verbal behaviour, i.e. property items. More specifically, items such as *kontenti* 'to be happy' do not need any copula, when used as predicates. Property items may also function as attributes: in this case, they directly modify the noun they refer to. While property items were most likely present in Kriol grammar since the early stages, adjectives were borrowed more recently from Portuguese. Similarly to its lexifier Portuguese, the locative copula *sta* in Kriol may be also used with adjectives and certain property items such as *duenti* 'be ill' for the expression of stage-level predicates (see Kihm 1994: 91f. and Truppi 2019a: 91).

is the individual-level copula in perfective present contexts. Recall from the previous section that *i* and Ø occur in the same syntactic environments, as (1 d) shows.

(1) a. *Kil   omi   **i**   piskadur.*
         DEM man COP fisherman
         'That man is a fisherman.'   ([Truppi 2019a](): 92)

     b. *Badjuda **i**   alema.*
         girl   COP German
         'The girl is German.'   (adapted from [Truppi 2019b]())

     c. *Si   kuku   **sta** dentru di kila.*
         POSS.3SG kernel COP inside of DEM-LOC
         'The kernel is inside it [the fruit].'   ([Truppi 2019a](): 100)

     d. *Kil   omi-s   la   (**i**) piskadur(-is).*
         DEM man-PL LOC COP fisherman(-PL)
         'Those men are fishermen.'   (ibid. p.95)

The absence of aspect markers yields a perfective interpretation. In the case of a stative verb like *sta* in (1 c), the reading will be in the present tense. In contrast, dynamic verbs such as *kumpra* 'to buy' or *bin* 'to come' yield a simple past interpretation (2).[13]

(2) *N   **kumpra** kil   libru.*
     1SG.CL buy   DEM book
     'I bought that book.'

Whenever an aspect marker is present, the copula *sedu* is selected (3 a). Aspect markers in Kriol are always imperfective: *ta* expresses the habitual, while *na* is the progressive marker and may yield either a progressive or a simple future reading. Notice that *sedu* may be used also without any aspect marker in contexts where we would expect *i*: according to [Truppi (2019a)](), *sedu* in these contexts may yield a slightly different reading (3 b).[14]

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13 For a more detailed description of aspect and tense in Kriol, see [Peck]() ([1988]()) and [Kihm]() ([1994]()).

14 According to more recent elicitation tasks with Kriol native speakers, copular clauses with bare *sedu* may also yield a resultative reading, similarly to what described with regard to the copula *sedi* in CS ([Biagui 2012](): 188). That means that (3 b) may also receive the following interpretation: 's/he has become a teacher'. [Ichinose]() ([1993]()) and [Kihm]() ([1994]()) provide different explanations with regard to bare *sedu*. According to [Ichinose]() ([1993](): 28f.), *sedu* is used in place of *i* in order to give more emphasis to the sentence. See [Kihm]() ([1994](): 35) for an analysis of bare *sedu* occurring "with less basic, stylistically more or less 'learned' quality items" (emphasis in the original) such as *sedu demokratiku* 'to be democratic'.

(3) a. *Bu* **na** **sedu** *pursor.*
         2SG.CL PROG COP teacher
         'You will be a teacher.'   ([Truppi 2019a](): 96)

     b. *(El)*   *i* **sedu** *pursor.*
         3SG.STRONG 3SG.CL COP teacher
         'S/He is a teacher/has always been a teacher.' (ibid. p. 97)

With respect to the past, the situation is quite varied. According to [Truppi](https://example.com) ([2019a](https://example.com)), the past tense in copular clauses may be expressed i) by adding the past marker *ba* after the nominal/adjectival predicate of a copular clause with *i*/Ø ([4 a]()), ii) by adding *ba* after *sedu* ([4 b]()) or iii) by using the suppletive form *(y)era* optionally followed by *ba* ([4 c]()). Finally, we have already discussed the use of the perfective past copula *foi* by speakers fluent in Portuguese ([4 d]()).

(4) a. *Abo*   *(i)* *bon* *alunu* **ba**.
         2SG.STRONG COP good student PST
         'You were a good student.'   ([Truppi 2019a](): 94)

     b. *Dipus i*   *ten* *ki* *Sanca* *[...]* *ke* **sedu ba** *rei.*
         after 3SG.CL have DEM Sanca   REL COP PST king
         'Then, there is that Sanca [from Bolama], who was the king.'
                                                        ([Truppi 2019b]())

     c. *Kil* **yera** **(ba)** *fidjus*   *di* *regulu.*
         DEM COP.PST PST child-PL of king
         'Those were the king's children.'   ([Truppi 2019b]())

     d. *N* **foi**   *jugadur di Bafata.*
         1SG.CL COP.PST player of Bafatá
         'I was a [football] player of Bafatá.'   ([Truppi 2019a](): 99)

2.2 *Evidence of the nonverbal status of i*

Previous studies such as [Peck]() ([1988]()), [Ichinose]() ([1993]()), Kihm ([1994](), [2007]()), and [Truppi]() ([2019a]()) have shown that the copula *i* in Kriol is not a verb.[15] First of all, the fact that only strong pronouns or nouns may be the subject of a copular clause with *i*, while only weak pronouns are allowed with verbs, indicates that *i* is not a verb (cf. [5 a]() and [5 b]()).

(5) a. **Ami**   *(*n)* *i* *pursor.*
         1SG.STRONG 1SG.CL COP teacher
         'I am a teacher.'   ([Truppi 2019a](): 93)

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15 Similar tests are carried out in [Baptista]() ([2002]()) with regard to the copula *e* in CV.

b. *(Ami)*   ***n***   *bai Cacheu.*
1SG.STRONG   1SG.CL   go   Cacheu
'(As for me), I went to Cacheu.'   (adapted, ibid.)

Second, the syntactic behaviour of the negation *ka* with respect to the copula *i* is different from its behaviour with verbs: *ka* is always preverbal (6 a), while it always follows the copula *i* (6 b).

(6)   a.   *N*   ***ka***   *na*   *lembra.*
          1SG.CL   NEG   PROG   remember
          'I don't remember.'   (Truppi 2019a: 93)

     b.   *Bula (*ka)* ***i*** *(**ka**) un*   *sidadi garandi.*
          Bula   NEG   COP   NEG   INDF   city   big
          'Bula is (not) a big town.'   (ibid.)

Furthermore, the copula *i* does not combine with verbal items such as tense or aspect markers. We already noticed above that aspect markers always select the verbal copula *sedu* (3 a). The sentence in (7) shows the ungrammaticality of the co-occurrence of the copula *i* (or Ø) with aspect markers.

(7)   *Abo*   ****na***   *(**i**)*   *pursor.*
     2SG.STRONG   PROG   COP   teacher
     'You will be a teacher.'   (adapted from Truppi 2019a: 94)

Finally, the behaviour of *i* with respect to the past marker *ba* is different from verbs. More specifically, *ba* always follows a verb (and its object clitics, whenever present). On the other hand, *ba* cannot be adjoined at the right of *i* (cf. 8 a and 4 a, repeated in 8 b).[16]

(8)   a.   *N*   *kumpra-l*   ***ba***   *libru.*
          1SG.CL   buy-3SG.CL.OBJ   PST   book
          'I had bought him/her a book.' [17]

     b.   *Abo*   *i*   *bon*   *alunu*   ***ba.***
          2SG.STRONG   COP   good   student   PST
          'You were a good student.'

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16 For more details and different perspectives on the syntactic and semantic behaviour of *ba*, see Kihm (1994), Rougé & Kihm (2008), and Truppi & Hagemeijer (2018).

17 The interpretation of (8 a) is a past-before-past: bare dynamic verbs such as *kumpra* 'buy' in Kriol yield a simple past reading, while the interpretation of bare stative verbs is in the present tense. *Ba* contributes a [+PST] meaning; as a consequence, stative verbs followed by *ba* receive a simple past reading, while *ba* after a dynamic verb yields a past-before-past interpretation.

So far, we have shown that Kriol copula *i* is not a verb. There are several languages in the world having nonverbal copulas, above all copulas deriving from pronouns, demonstratives, or (locative) adverbs such as Chinese, Hebrew, Sranan, and Saramaccan, to mention some. In the present paper, we are going to treat the copula as a functional category, which allows predication and lexicalizes the head of PredP (see e.g. Adger & Ramchand 2003). We will see these facts in more detail in §4.

3 Topic-comment structures as the *locus* for the emergence of copulas

The present section will lay the basis for the syntactic analysis of the emergence of the copula *i* in Kriol, as will be delineated in §4. The main goal of the present paper is to reconstruct the syntactic path of the emergence of the copula *i* in Kriol. As mentioned in §1, I assume with Ichinose (1993) and Kihm (2007) that the source of this copula is the 3SG pronoun *i*. More specifically, in a similar fashion to Ichinose (1993), I assume that the origin of the copular function of the item *i* has to be looked for in the resumptive use of the pronoun *i* in topic-comment structures. This claim is based upon the striking resemblance of topic-comment structures with resumptive *i*, as shown in (9 a-9 b) and copular clauses with the copula *i* (1 a-1 b, repeated in 10 a-10 b for convenience).

(9) a. *Badjuda i   kumpra pon.*
          girl   3SG.CL buy   bread
          'The girl, she bought bread.

     b. *Kil   omi   i   bai pa Cacheu.*
          DEM man   3SG.CL go   to Cacheu
          'That man, he went to Cacheu.'

(10) a. *Kil   omi   i   piskadur.*
          DEM man   COP fisherman
          'That man is a fisherman.'

     b. *Badjuda i   alema.*
          girl   COP German
          'The girl is German.

In the sentences in (9), the NPs *badjuda* and *kil omi* are topics, while *i* is the resumptive to the topic, i.e. *i* is the subject of the sentence. Despite the homophony of the 3SG subject clitic pronoun and the copula, it is clear that *i* in (9 a-9 b) is in its pronominal function, since it is followed by a verb. If we look at the sentences in (10), the main difference is that no verb occurs. The

linear structure is 'NP *i* NP' in (10 a) and 'NP *i* AP' in (10 b), respectively. Here, *i* is in its copular function.

The topics in (9 a-9 b) may be replaced by strong pronominal forms, which have the function of topics and subjects of copular clauses with *i* in Kriol grammar. In contexts other than copular clauses with *i*, their occurrence is optional and depends upon the speaker's choice and/or on semantic-pragmatic cues such as discourse emphasis (11 a). Notice that the subject clitic is (arguably) mandatory (see Kihm 1994 and Truppi 2009, 2016), as shown by the ungrammaticality of the sentence in (11 b).

(11) a. *(**El**)*   ***i***   *kumpra pon.*
       3SG.STRONG 3SG.CL buy   bread

    b. **El*   *kumpra pon.*
       3SG.STRONG buy   bread
       '(As for him/her,) s/he bought bread.'

In the present section, we have shown the similarity between topic-comment structures with resumptive *i* and copular clauses with copula *i*. Before we discuss the syntactic stages of the copularization of *i* in Kriol (§4), we will briefly review cases of pronouns (both personal and demonstrative) as the source of copulas in languages such as Chinese, Hebrew, and Sranan.

3.1 Pronouns as a common source of copulas crosslinguistically

Pronouns and demonstratives are not uncommon as a source for copulas crosslinguistically (see e.g. Stassen 1997 and Pustet 2003). Languages such as Chinese, Hebrew, and Sranan, among others, are well-known cases of languages with copulas derived from pronouns or demonstratives. According to Li & Thompson (1977), Archaic Chinese was a copulaless language (12 a). The demonstrative *shì* was used as resumptive in topic-comment structures in Archaic Chinese (12 b). In such environments, *shì* was reanalyzed as a copula and is regularly found as a copula in predicational clauses in Modern Chinese (12 c).

(12) a. *Wáng-Tái wù*   *zhě*   *yě.*
       Wang-Tai outstanding person DCL
       'Wang-Tai is an outstanding person.'
       (adapted from Li & Thompson 1977: 421, in Lohndal 2009: 219)

    b. *Zhī*   *ér*   *shǐ zhǐ,*   *shì bù rèn yě.*
       know then use 3SG.MASC DEM not kind DCL
       'To use him knowing (that he would rebel), that was unkind.'
       (adapted from Li & Thompson 1977: 424, in Lohndal 2009: 220)

c. *Nèi-ge   rén shì xuéshēng.*
DEM-CLASS man COP student
'That man is a student.'
(adapted from Li & Thompson 1977: 422, in Lohndal 2009: 219)

In Modern Hebrew, the 3SG pronoun *hu* is also used as a copula. As the sentence in (13 a) shows, the copula *hu* is an invariant form and does not agree in person and number with the subject. This is very similar to the case of Kriol, where the copula *i* is also an invariant form (5 a, repeated in 13 b). Moreover, *hu* in Hebrew can still function as 3SG pronoun; the same is true for Kriol *i* (9 a, repeated in 13 c).

(13) a. *'Ata   hu ha-'iš.*
2SG.MASC COP DEF-man
'You are the man.'
(adapted from Katz 1996: 90 in Lohndal 2009: 223)

b. *Ami   i   pursor.*
1SG.STRONG COP teacher
'I am a teacher.'

c. *Badjuda i   kumpra pon.*
girl   3SG.CL buy   bread
'The girl, she bought bread.'

Like Kriol, other creole languages developed their copulas from pronouns and demonstratives. The case of Sranan is well known. McWhorter (1997) argues, on the basis of data from Arends (1989), that Sranan was initially a copulaless language (14 a). The copula *da* in Modern Sranan emerged from the reanalysis of *da* used as resumptive in topic-comment structures such as (14 b). This is very similar to the cases discussed so far, namely Kriol, Chinese, and Hebrew.

(14) a. *Mi blibi   joe Ø wan bon   mattie fo dem.*
1SG believe 2SG Ø INDF good friend for 3PL
'I believe you're a good friend of theirs.'
(adapted from McWhorter 1997: 244)

b. *'Adjabre', da   Ø Djutongo.*
'adjabre' DEM Ø 'Jews' language'
'"Adjabre" is Saramaccan.'
(adapted from McWhorter 1997: 244)

4 THE COPULA CYCLE

In the present section, I will present the framework that I will use for the syntactic analysis of *i*'s copularization in Kriol, i.e. Lohndal's (2009) copula cycle. This represents a syntactic account of the grammaticalization of pronouns into copulas in languages such as Chinese, among others. More specifically, the full cycle includes the following stages: (i) a pronoun develops into a copula, (ii) a full verb develops into a copula, and (iii) a copula develops into a grammatical marker. Each stage corresponds to a syntactic shift: (i) takes place through a specifier-to-head shift within the same phrase. Stage (ii) triggers a head-to-head shift, while in (iii) the copula becomes an affix. Figure 1 represents the cycle schematically (Lohndal 2009: 218). However, we cannot discuss in detail all these types of grammatical change. In what follows, we will summarize the general idea of Lohndal's copula cycle – focusing on stage (i) – and the principles underlying it.

Dem/Pronoun	>	Copula	>	Grammatical marker
(Specifier)		(Head)		(affix)
(iF)		(uF)		---
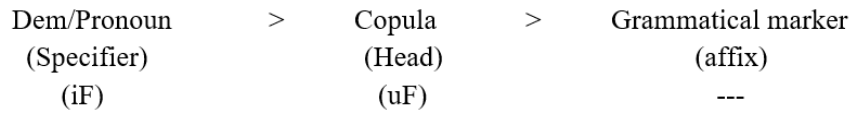
Figure 1 The copula cycle

According to Lohndal, the ambiguity of topic-comment structures with a resumptive pronoun or demonstrative sets the stage for the reanalysis of the pronoun/demonstrative into a copula. The ambiguity of the stimulus triggers, in fact, the reanalysis of an item by children acquiring the language. Lohndal's copula cycle is based on economy principles as elaborated by van Gelderen (2004, 2008, among others). In more detail, two principles would be responsible for syntactic changes such as the grammaticalization(s) accounted for by the copula cycle (see Lohndal 2009: 213):

(a) **Head Preference Principle (HPP)**
    Be a head rather than a phrase

(b) **Late Merge Principle (LMP)**
    Merge as late as possible

Briefly, the principles in (a) and (b) act whenever the stimulus is ambiguous and guide the child in the acquisition of the language. The HPP implies that "it is more economical to be a head than a phrase as heads are less complex" (ibid.); moreover, through late Merge, movement can be avoided. The HPP as defined in (a) underlies the shift from specifier to head, as in the case of pronouns that become copulas, while the LMP guides shifts from head to

head like (but not limited to) verbs that become copulas.[18] In her introduction to Cyclical change (2009), van Gelderen proposed a more general principle (c), which summarizes (a) and (b):

> (c) **Principle of Feature Economy**
> Minimize the semantic/interpretable features in the derivation

Adjunct		Specifier		Head	>	affix
Semantic	>	[iF]	>	[uF]	>	–

> (van Gelderen 2009: 8)

According to Lohndal, the PFE represents a formal definition of grammaticalization: "[i]t is a change whereby something becomes more economical, i.e. where semantic features are reduced (on the assumption that uninterpretable features are more economical than interpretable ones)" (Lohndal 2009: 216).

A further assumption that we will make is that the shift from specifier to head takes place within the same phrase, i.e. PredP. As explained in Lohndal (2009), for a pronoun/demonstrative to become a copula, it has to sit in the specifier of the same phrase where the copula lexicalizes. Since Bowers (1993), it is widely accepted that the clause consists of a predication core, i.e. PredP.[19] PredP is a functional category that mediates predication: the subject sits in its specifier, while the predicate is in its complement. Adger & Ramchand (2003), among others, have argued that the copula can lexicalize the head of PredP (or Pr, in Bowers' original proposal). These assumptions suggest that the copula is a functional category, which allows predication. The structure in (15), adapted from Bowers (1993: 595), represents a copular clause. As we will see below, the copula *i* is in the head of PredP.[20]

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18 We cannot discuss in more detail these principles of economy. For more details, see van Gelderen (2004, 2008, 2009, 2015) and Lohndal (2009).

19 Moro (1988: 96) also assumes a predication core of clause structure. More specifically, he proposes that the core of clause structure is the predicative connection (my paraphrase of the Italian original). This predicative connection is realized through number/gender agreement between the subject and its predicate. For more details, see Moro (1988).

20 The syntax of clause structure in Kriol has not been studied in depth, yet. For this reason, I prefer to simply show the structure of a copular clause in Kriol and, in particular, to show where the structural shift took place. However, Kriol clause structure seems to be quite similar to that of Caboverdean, for which in-depth studies have been realized, resulting in different approaches to CV clause structure (for more details, see Baptista 2002, Pratas 2007, and Alexandre 2012). Moreover, there is evidence that there is verb movement in Kriol (see Maria 2013 for more details; see also Alexandre, Duarte & Hagemeijer 2013 and Truppi & Hagemeijer 2018).

(15)

```
                    PredP
                   /     \
                  /       Pred′
            subject       /    \
              NP         /      \
                       Pred    NP/AP/PP
                       COP
```
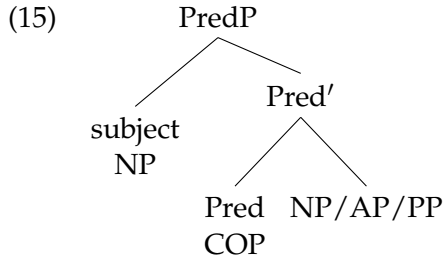
The assumptions made so far with regard to the syntax of copular clauses will be at the base of our syntactic account of the emergence of copulas.[21] The main purpose of the present section has been to provide the reader with a general idea of the syntactic account we are going to use for the analysis of copularization in Kriol. We saw that the HPP in (a), or its more general elaboration, i.e. the PFE in (c), guides the reanalysis of a less economical item, viz. a pronoun/demonstrative in the specifier of PredP, into a more economical one, viz. a copula in head of PredP. With this in mind, we will now take a look at the account provided in Lohndal (2009) for the reanalysis of Chinese demonstrative *shì* into a copula.

4.1 Lohndal's syntactic account of copularization in Chinese
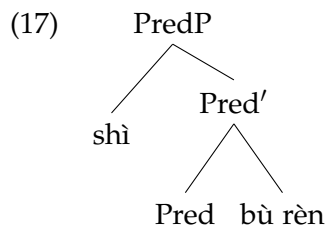
In §3.1, we discussed data from Chinese showing that this language developed its copula *shì* from the demonstrative *shì* in topic-comment structures of the type in (12 b), repeated in (16 a) for convenience. According to Li & Thompson (1977), the ambiguity of (12 b) gave rise to the reanalysis of *shì* into a copula (12 c, repeated in 16 b) by the acquiring child.

(16) a. *Zhī   ér   shǐ zhǐ,   shì   bù   rèn   yě.*
        know   then use 3SG.MASC DEM not kind DCL

        'To use him knowing (that he would rebel), that was unkind.'

     b. *Nèi-ge   rén   shì   xuéshēng.*
        DEM-CLASS   man   COP   student

        'That man is a student.'

Lohndal argues that the reanalysis of resumptive *shì* into copula *shì* triggers a shift from specifier to head of PredP. This means that the demonstrative in Archaic Chinese was in Spec,PredP, as the structure in (17) shows. Through

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21 This simplified account of copular clauses is functional to the purpose of the present paper. See Bowers (1993), Eide & Åfarli (1999), and Adger & Ramchand (2003), among others, for more fine-grained analyses of copular clauses. For a more comprehensive overview of syntactic approaches to copular clauses, see also Moro (1988, 1997, 2000, 2010), den Dikken (2006), and Pereltsvaig (2007), among others, and references therein.

the HPP, it was reanalyzed as a copula and shifted to the head of PredP (18). The structures in (17) and (18) are adapted from Lohndal (2009: 221).

(17)

```
        PredP
       /     \
      /      Pred′
    shì      /    \
           Pred   bù rèn
```

(18)

```
        PredP
       /     \
      /      Pred′
     XP      /    \
           shì    bù rèn
```
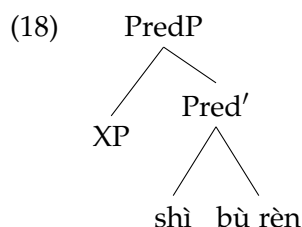
Lohndal clearly shows that *shì* in the topic-comment structure in (16 a) was in Spec of PredP (17): *shì bù rèn* (lit. 'that not kind') was, therefore, the comment to its topic *zhī ér shǐ zhǐ* 'to use him knowing' (cf. 16 a). Through reanalysis and subsequent shift to the head of PredP, *shì* becomes a copula: *shì bù rèn* is now a copular clause. In (18), XP is a general label for the subject of the copula *shì* , which in this case is the infinitive clause *zhī ér shǐ zhǐ*.

4.2 The copula cycle in Kriol

In §3, we noticed the resemblance between topic-comment structures with resumptive *i* and individual-level copular clauses with the copula *i* in Kriol (cf. 9 a-9 b and 10 a-10 b). We will now show how the copular function of *i* derives from resumptive *i*.

We mentioned above that Ichinose (1993) and Kihm (2007) exclude a verbal origin for the copula *i*. According to Ichinose (1993: 26), its origin is in the 3SG pronoun *i* and in its "função topicalizadora de sujeito" (lit. 'function of topicalizer of the subject'). Kihm also argues in favour of the pronominal origin, although his conclusion is slightly different.[22]

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22 According to Kihm (2007: 286–294), the pronoun *i* was reanalysed as a predicate marker in Ancient Kriol; later, it became a copula in Modern Kriol and its use is mandatory. Here, we cannot discuss Kihm's analysis in more detail. Nevertheless, it is important to point out a crucial factor. Kihm gives a very strict definition of copula: "a copula is a verb with inflectional and/or syntactic properties which make it a member of at least a subclass of clearly verbal lexical items" (Kihm 2007: 283). Following this definition, *i* cannot be a copula. In contrast, I gave a different definition of the copula as a functional category, which allows predication (see §2.2 and §4); the copula would, thus, link a subject to its predicate complement (see

In the present section, I will delineate a syntactic account for the emergence of the copula *i* in Kriol in line with Lohndal's (2009) proposal as explained in §4.1. I will assume an initial stage of Kriol as copulaless language. This assumption is supported by the fact that the copula is often omitted or absent in simplified language varieties such as basic varieties (see e.g. Klein & Perdue 1997).[23]

Based on the striking similarity between topic-comment structures with resumptive pronoun *i* and copular clauses with copula *i*, I assume that the item *i* derives its copular function from the pronoun *i* as resumptive to topics. The sentence in (19) represents the (reconstructed) stage where Kriol was a copulaless language:

(19) *Rapas Ø piskadur.*
      boy   Ø fisherman
      'The boy [is a] fisherman.'

It is interesting to notice that copulaless sentences are still possible in present-day Kriol. Nevertheless, elicitation tasks have revealed that clauses with the copula *i* are more widely accepted than copulaless clauses. The fact that copulaless clauses still occur may represent evidence in favour of the assumption that Kriol was initially a copulaless language.

In §3, we discussed data showing that topic-comment structures with resumptive *i* are very similar to copular clauses with *i*. Compare the topic-comment structure in (9 a) and the copular clause in (10 b) repeated for convenience in (20 a) and (20 b), respectively.

(20) a. *Badjuda **i**   kumpra pon.*
          girl   3SG.CL buy   bread
          'The girl, she bought bread.'

      b. *Badjuda **i**   alema.*
          girl   COP   German
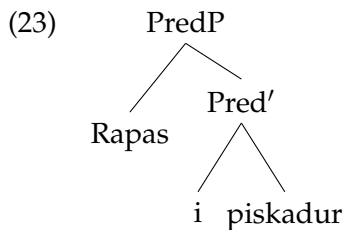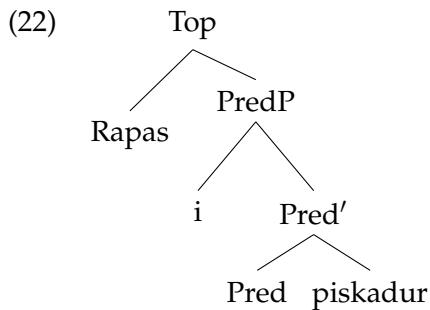   'The girl is German.'

Lyons 1968, among others). Summarizing, *i* is a nonverbal copula. It is interesting to notice that nonverbal copulas are also found in Mandinka, one of Kriol's substrate languages (see Creissels, to appear, and Creissels & Sambou 2013 for more details; see Truppi 2019a for substrate influence in the Kriol system of copulas).

23 In more detail, Klein & Perdue's (1997) study suggests that adult second language learners develop a basic variety, i.e. "a type of language which [. . .] regularly develops during second language acquisition" (p.305), "a well-structured, efficient and simple form of language" (p.301), in which the copula is often absent. Pidgins (and creoles) are usually seen as the result of some process of second language acquisition (ibid., p.337). The omission of the copula is also well attested in varieties such as baby talk and foreigner talk (see e.g. Ferguson 1971 and Becker 2000, among others).

Structures such as (21) are ambiguous: it is not easy to determine whether *i* is a pronoun or a copula. In the former case, i.e. if *i* is a pronominal subject, we have a copulaless clause, while if it is a copula, we have a clause without an expressed subject.[24]

(21)   **I**   *ka*   *kuma*   **i**   *un*   *tarbadju.*
       3SG/COP   NEG   COMP   3SG/COP   INDF   work
       'It's not a real job' (lit. 'It's not that it's a job').

The ambiguity of topic-comment structures with resumptive *i* led to the reanalysis of *i* as a copula. As we mentioned above, in line with Lohndal (2009), the ambiguity of the stimulus is the trigger for this kind of shift. The reanalysis of the pronoun *i* as a copula caused the shift from specifier to head of PredP. The structure in (22) represents the stage where *i* was a pronoun: it was in the specifier of PredP, while the noun it referred to, i.e. its topic, was in the specifier of the higher domain TopP (Rizzi 1997). The reanalysis of *i* as a copula is represented in (23): now *i* is in the head of PredP, while what was the topic in (22) is the subject in (23) and is, therefore, in the specifier of PredP.

(22)

```
            Top
           /    \
          /    PredP
       Rapas   /   \
             i     Pred'
                  /    \
               Pred   piskadur
```

(23)

```
        PredP
        /   \
       /    Pred'
    Rapas   /  \
           i   piskadur
```

Within this account, we immediately meet a problem: 3SG *i* is arguably a subject clitic and, therefore, cannot sit in the specifier position (Cardinaletti

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24 Although the subject is (arguably) mandatory in Kriol, i.e. Kriol is a non-pro-drop language (Truppi 2009, 2016), it may be phonologically non-realized, if it has already been referred to in the discourse context or if it can be easily inferred from it.

& Starke 1999).[25] The Kriol pronominal system consists of both strong and weak subject pronouns: we saw above that strong pronouns are optional whenever used as topics, while weak pronouns are clitics and their occurrence is arguably mandatory. This is shown in the sentences in (24 a-24 b):

(24) a. *(El)*   *i*   *na*   *bai fera.*
3SG.STRONG 3SG.CL PROG go market
'S/He is going/will go to the market.'

b. *(Elis)*   *e*   *manda-n*   *pa imbashada na*
3PL.STRONG 3PL.CL send-1SG.CL.OBJ P embassy in
Dakar.
Dakar
'They sent me to the embassy in Dakar.'

According to Cardinaletti & Starke (1999), clitics cannot occupy the specifier position; they must sit in X^0. But if *i* were already in the head of PredP, we would not have any shift and, as a consequence, no structural change to account for. A possible solution to this problem is offered by the reconstruction of the derivation of the 3SG pronoun as proposed in Kihm (2007). More specifically, in line with Kihm, we may postulate that in the proto-creole (i.e. proto-UGC) there was a single 3SG nonclitic pronoun **ele* (from Portuguese 3SG masculine *ele*). We may assume that it occurred as resumptive to topic-comment structures. Later, **ele* developed into two forms, i.e. strong *el* and weak *i* in Kriol,[26] while it retained /e/ in CV, where we have strong *el* and weak *e*. This fact is important within the purpose of our analysis: this represents strong evidence in favour of the view that the emergence of strong and weak pronouns took place in the proto-creole. Figure 2, adapted from Kihm (2007: 292f.), shows the derivation of 3SG pronouns in CV (a) and Kriol (b).[27] The development of strong + weak pronoun could be due to substrate influence: proto-UGC's substrate languages Mandinka and Wolof have pronominal systems made of strong and weak pronouns (see Creissels,

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25 Thanks to Tjerk Hagemeijer for making me aware of this problem and for his help in the development of an alternative proposal as presented at the DiGS 20 conference. The present proposal is a further development of that presentation.

26 In Kriol, the raising of Portuguese unstressed *e* to *i* is very common (see Kihm 1994).

27 Kihm (2007) bases his reconstruction on the assumption that West African Portuguese creoles such as Kriol derive from a basic variety of Portuguese spoken by the African slaves in Portugal in the 16th century, called *Língua de Preto* (LdP). The reconstruction of the 3SG pronoun as proposed in Kihm includes an initial stage with LdP as basis: LdP had the copula *sa*, which was lost in the pidginization/creolization. Therefore, the pidgin/proto-creole was a copulaless language. Kihm's proposal can be schematized as follows, where AK and MK stay for Ancient Kriol and Modern Kriol, respectively (adapted from Kihm 2007: 293): LdP COP *sa* > pidginized LdP Ø > protocreole Ø > AK *i* Predicate Marker > MK *i* COP.
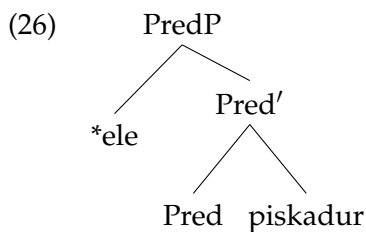
to appear; Torrence 2005, among others).[28]

   (a)   Port. 3SG.MASC *ele* > proto-creole *el-e > CV *el* 3SG.STRONG + *e* 3SG.CL

   (b)   Port. 3SG.MASC *ele* > proto-creole *el-e > Kriol *el* 3SG.STRONG + *i* 3SG.CL

Figure 2   The emergence of strong and weak pronouns in the proto-creole

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The reanalysis of the resumptive pronoun as a copula was triggered by the ambiguity yielded by structures such as (25). Given that we do not have historical records of proto-UGC nor of the initial stage of Kriol, the sentence below represents a reconstruction.

(25)   *Rapas,* ***ele***   *piskadur.*
        boy   3SG fisherman

       'The boy, he is a fisherman' (lit. 'Boy, he fisherman').

The structure in (26) represents the stage where *ele was a resumptive to topic-comment structures. The reanalysis of the structure in (25) probably happened concomitantly with the emergence of strong and weak pronouns. This well explains why *i* and not *ele (or *eli, according to Kriol phonological rules – see footnote 26) occurs in copular clauses. It is true that the emergence of strong and weak pronouns may have happened at a later stage; if so, the copula *ele (or *eli) was later reanalysed once again as *i*. The latter explanation seems, however, more costly and less plausible.

(26)   PredP

               Pred′

      *ele

           Pred piskadur

The ambiguity of (25) triggered the reanalysis of the pronoun *i* into a copula. Concomitantly, the development of the pronominal form *ele into strong *el* and weak *i* took place, as schematized in Figure 2(b) above. Figure 3 (adapted from Kihm 2007: 293) represents the emergence of the copula *i* from the 3SG
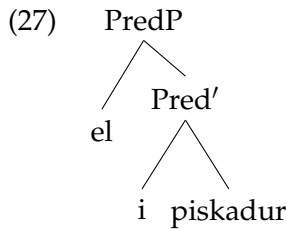
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28 While it is widely accepted in the literature on UGCs that Mandinka and Wolof are substrate languages of proto-UGC, the role of other Atlantic languages such as Temne is not well defined. Temne seems to have contributed some lexical items to the lexicon(s) of UGCs (see e.g. Rougé 1999; Quint 2008; Quint & Tavares 2019), but its contribution to UGC grammar needs to be assessed.

pronoun: AK and MK stay for Ancient Kriol and Modern Kriol, respectively (see footnote 27).

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proto-creole Ø.COP > proto-creole *ele.PRON >
proto-creole el.STRONG + e.CLITIC > AK el.STRONG + i.CLITIC > AK/MK
i.COP

Figure 3   The emergence of the copula *i*

The structure in (27) shows the stage where *el+i < *ele* was reinterpreted as subject + copula. As a consequence, *i* sits in the head of PredP and its subject *el* is in the specifier of PredP.

(27)   PredP
            / \
          /   Pred′
        el   / \
              i   piskadur

Summarizing, the reanalysis of the pronoun *i* into a copula has been accounted for and a syntactic analysis of it, based on Lohndal's copula cycle, has been developed. Importantly, *i* has not lost its original function: it is still a pronoun in Kriol and is still used as resumptive to topic-comment structures. As we saw in (21), this double function of *i* in Kriol grammar may still cause ambiguity in certain contexts. These facts are not unexpected: as we saw in §3.1, the copula *hu* in Hebrew has also retained its original function as 3SG pronoun.

5   Conclusion

The aim of the present paper was to show how the use of *i* as a resumptive to topic-comment structures was at the base of the emergence of the copula *i*. We assumed an initial copulaless stage. In line with Lohndal (2009), we argued that the ambiguity of topic-comment structures with resumptive *i* triggered its reanalysis as a copula. This was accounted for within the syntactic account proposed in Lohndal (2009) and van Gelderen (2011, 2015), i.e. the copula cycle. In particular, according to Lohndal, the reanalysis of pronouns and demonstratives into copulas takes place through the shift from specifier to head of PredP. Within this account, we met a problem: *i* in Kriol is arguably a subject clitic. As a consequence, it cannot sit in the specifier of PredP. According to Kihm (2007) and partially re-elaborating his account

of the emergence of the copula *i* in Kriol, we hypothesized an earlier stage of the language, i.e. the proto-creole, where there was a single pronominal form, i.e. **ele*. Given that **ele* is not a clitic, it can sit in the specifier of PredP. In the reanalysis of the resumptive **ele* as a copula, the spec-to-head shift took place. The reanalysis happened arguably in the proto-creole, before CV and Kriol split and diverged: evidence for this is the fact that, according to Baptista (2002), CV has a copula, i.e. *e*, with (mostly) nonverbal behaviour, like Kriol *i*.

The present paper also raises further questions with regard to UGCs and their common ancestor proto-UGC. In particular, it would be interesting to test in Caboverdean the copula cycle as proposed here for Kriol. The copular systems of the two UGCs share important similarities (Truppi 2019a), in particular with respect to the behaviour of the copulas *e* (in CV) and *i* (in Kriol). For Kihm (2007), the two copulas derive from the Portuguese 3SG pronoun *ele*. According to Baptista (2002), CV copula *e* displays both nominal and verbal behaviour. In contrast, we argued that Kriol *i* is a nonverbal item. With regard to CS, Truppi (2019a) noticed that its copular system is very similar to Kriol's copular system and that the behaviour of CS *i* is approximately the same as Kriol *i*. The fact that CS is a later offshoot of Kriol, as explained in §1, accounts well for these facts. In the present paper, it was not possible to extend the present line of analysis to the other UGCs, and in particular to CV. This will be the object of a future study.

Acknowledgements

Abbreviations

1,2,3 = person
AK = Ancient Kriol
AP = adjective phrase
CL = clitic
CLASS = classifier
COMP = complementizer
COP = copula
COP.PST = past copula
CS = Casamancese
CV = Caboverdean
DCL = declarative particle
DEF = definite
DEM = demonstrative
FOC = focalizer
HPP = Head Preference Principle
INDF = indefinite
LMP = Late Merge Principle
LOC = locative
MASC = masculine
MK = Modern Kriol
NEG = negation
NP = noun phrase
OBJ = object
PFE = Principle of Feature Economy
PL = plural
POSS = possessive
PP = preposition phrase
PROG = progressive aspect
PRON = pronoun
PredP = predication phrase
PST = past tense
REL = relative
SG = singular
STRONG = strong pronoun
UGC = Upper Guinea creole
VP = verb phrase
XP = NP/AP/PP

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