Pronoun Copying and the Realization of Copies

Coppe van Urk

1. Introduction

In this paper, I argue for the claim in (1).

(1) Pronouns can spell out full copies of lexical DPs.
   (e.g. Zaenen et al. 1981; Pesetsky 1998; Sichel 2014; Harizanov 2014)

If (1) is correct, then we expect to find at least three configurations, depending on which copy is spelled out as a pronoun:

(2) a. **Lowest copy:** [ . . . the book . . . it . . . ] Resumption
b. **Highest copy:** [ . . . it . . . the book . . . ] Clitic/subject doubling
c. **Intermediate copy:** [ . . . the book . . . <the book> . . . ] Pronoun copying

That (2a) and (2b) might underlie some instances of resumption and clitic doubling has been suggested in previous work (e.g. Zaenen et al. 1981; Engdahl 1985; Pesetsky 1998; Kandybowicz 2007; Harizanov 2014; Sichel 2014). This paper offers a novel instance of (2c) in the Nilotic language Dinka, in which intermediate copies left by successive-cyclic movement at the vP edge are spelled out as pronouns:

(3) **Plural pronoun copying at Dinka verb phrase:**
   a. **Kêek áa-cê Áyen [vP kêek tîñ].**
      3PL 3PL-PRF.NS Ayen.GEN 3PL see.NF
      ‘Them, Ayen has seen.’
   b. Ye kâc-kô yî Bôl [vP kêek luêel ê cê Áyen [vP kêek tîñ]].
      be people-which HAB.NS Bol.GEN 3PL say.NF C PRF.NS Ayen.GEN 3PL see.NF
      ‘Which people does Bol say Ayen has seen?’

I also show that the Dinka pronoun copying patterns display an asymmetry between person and number that mirrors asymmetries in other pronoun copying constructions. In addition, the copying pattern in (3a–b) shows a systematic gap, in that it is limited to plural DPs. I argue that these asymmetries and gaps point to a theory in which pronoun copy spell-out reflects partial spell-out, or spell-out of just the functional layer of a DP copy.

2. Resumption and clitic/subject doubling

2.1. Resumption as pronominal spell-out of a lower copy

Much work on resumption has shown that some languages have island-sensitive resumptive pronouns that act like full copies of their antecedents (e.g. Zaenen et al. 1981; Engdahl 1985; Aoun et al. 2001; Boeckx 2003; McCloskey 2006; Sichel 2014; cf. Asudeh 2012). In Lebanese Arabic and Hebrew, for example, resumptive pronouns may reconstrue for variable binding (4a), and anaphor binding (4b):

Lebanese Arabic resumptives reconstruct for variable binding:

a. 

\[
\text{tālmīiz-ā}_{\text{1}} \quad \text{l-kōs-leen} \quad \text{ma} \quad \text{ba-ddna} \quad \text{nyāabbīr} \quad [\text{DP wala m?allme}] \quad [\text{CP ?ωnno l-mudirra student-her the-bad want.1PL tell.1PL no teacher that the-principal.SF}] \\
\text{[ahat-ā-t-o} \quad \text{mn} \quad \text{l-madrase}] \\
\text{expelled.3SF-him from the-school} \\
\text{‘Her bad student, we don’t want to tell any teacher, that the principal expelled him from school.’} \\
\text{(Lebanese Arabic; Aoun et al. 2001:392)}
\]

b. 

\[
\text{ha-šmu’a} \quad \text{al} \quad \text{acmo}_{\text{1}} \quad [\text{CP še-dani, xašaš mimena] hufca al yedey rani, the-rumor about himself C-dani feared from.it was.spread by Rani} \\
\text{‘The rumour about himself that Dani feared was spread by Rani.’} \\
\text{(Hebrew; Sichel 2014:661)}
\]

2.2. Clitic and subject doubling as pronominal spell-out of a higher copy

A similar argument has been made for clitic doubling (e.g. Sportich 1996; Harizanov 2014). Doubled clitics act as spell-outs of full copies (Anagnostopoulou 2003; Harizanov 2014). I illustrate with variable binding (Anagnostopoulou 2003). As has been shown for Greek, Spanish, and Bulgarian, clitic doubling allows the associate to bind from the position of the clitic (5a–b):

(5) Clitic doubling allows object to bind into subject:

a. *\[ \text{DP I} \quad \text{mitera} \quad \text{tu}_{\text{1}} \quad \text{sinodhepse} \quad [\text{DP to kathe pedhī}]. \]
   the mother his accompanied the every child
   ‘His, mother accompanied every child.’

b. [\text{DP I} \quad \text{mitera} \quad \text{tu}_{\text{1}} \quad \text{to} \quad \text{sinodhepse} \quad [\text{DP to kathe pedhī}].]
   the mother his 3MS.ACC accompanied the every child
   ‘His, mother accompanied every child.’
   (Greek; Anagnostopoulou 2003:207)

Another construction argued to involve this configuration is subject doubling (Holmberg and Nikanne 2008), as in colloquial Finnish:

(6) Initial pronoun may double subject in Finnish:

\[
\text{Ne} \quad \text{si} \quad \text{kaikki lapset} \quad \text{samat oireet.} \\
\text{3PL got all children same symptoms} \\
\text{‘All the children got the same symptoms.’} \\
\text{(Finnish; Holmberg and Nikanne 2008:326)}
\]

Wh-copying in languages like German and Passamaquoddy may also instantiate this configuration (Felser 2004; Bruening 2006).

3. Ké-copying in Dinka

If the pronouns can realize the highest and lowest copy, we might wonder about the possibility of spelling out intermediate copies as pronouns as well, such as the copies bolded in (7).1

(7) \[ \ldots \text{the book} \ldots \text{<the book>} \ldots \text{<the book>} \ldots \text{<the book>} \ldots \]

This section shows that a clear case of (7) is found in the Nilotic language Dinka (South Sudan), in a process I call ké-copying. This data comes from fieldwork on Dinka Bor, the southeastern dialect, in the Boston Dinka community.

Ké-copying refers to the fact that the 3rd person plural pronoun ké(ek) accompanies A-movement through the edge of vP (8a–b).

---

1 Whether wh-copying could instantiate this is a topic of debate (e.g. Fanselow and Cavar 2000; Felser 2004; Pankau 2013).
A-movement of plural nominal triggers pronoun copying:

a. Kêék `aa-cíi Áyén [3PL ké tiiŋ].
   3PL 3PL-PRF.NS Ayen.GEN 3PL see.NF
   ‘Them, Ayen has seen.’

   Bol 3SG-PRF men PRF.3SG 3PL insult.NF see.NF
   ‘Bol has seen the men he has insulted.’

Topicalization

3.1. Ké-copying is copying of a pronoun

Let me first show that ké-copying involves a pronoun. The first piece of evidence for this is that the copied pronoun can take the same forms as independent occurrences of the pronoun. Like all pronouns in Dinka, the 3PL pronoun has a full (kêék) and reduced form (ké) (9a–b).

Ké-copying shows the same variation:

(10) Kê-copying allows full and reduced forms:

a. Yè kòxò-ko cíi Ból ké tiiŋ?
   be people-which PRF.NS Bol.GEN 3PL see.NF
   ‘Which people has Bol seen?’

b. Kêék `aa-cíi Áyén kêék tiiŋ.
   3PL 3PL-PRF.NS Ayen.GEN 3PL see.NF
   ‘Them, Ayen has seen.’

In addition to this, we can show that copied ké is free-standing. It can be followed by the verb (11a), an object (11b), or nothing (11c).

(11) Copied pronoun is free-standing:

a. Yè kòxò-ko cíi Ból [3PL ké(ek) tiiŋ]?
   be people-which PRF.NS Bol.GEN 3PL see.NF
   ‘Which people has Bol seen?’

b. Yè `uôn-kò cíi Ból [3PL ké(ek) Áyén tuooce]?
   be places-which PRF.NS Bol.GEN 3PL Ayen send.NF
   ‘Which places has Bol sent Ayen to?’

c. Yè kòxò-ko nhier Ból [3PL ké(ek)]?
   be people-which love.NS Bol.GEN 3PL
   ‘Which people does Bol love?’

If ké were a functional head in the extended projection of the verb, we would expect it to move along with the verb, but it does not.

2 There is no constraint on which form you use, so that you can mix and match in longer chains.
3.2. Ké-copying is a reflex of intermediate movement through vP

I now show that ké-copying diagnoses intermediate movement through the verb phrase. Ké-copying happens at every vP edge on the path of movement:

(12) Ké-copying targets each verb phrase edge:

Yè kɔc-kò yú Bòl [vP *(ké) lučèel [CP çì Ayèn [vP *(ké)]? ]

be people-which HAB.NS Bol.GEN 3PL say.NF C PRF.NS Ayen.GEN 3PL tji'ü

‘Which people does Bol say Ayen has seen?’

It is not limited to objects. Plural adjuncts that originate in the vP also trigger ké-copying (13a–b),

(13) Ké-copying with plural modifiers:

a. Yè tìgán-kò çì Bòl [vP ké Ayèn tùč̕əć]?

be places-which PRF.NS Bol.GEN 3PL Ayen send.NF

‘Which places has Bol sent Ayen to?’

b. Ye tóngy ké dú çì Bòl [vP ké cu’in thàal]?

be pots PL how PRF.NS Bol.GEN 3PL food cook.NF

‘How many pots has Bol cooked food with?’

In addition, we see a subject/non-subject asymmetry. Extraction of a local subject cannot trigger ké-copying:

(14) Subjects are not doubled by a plural ké locally:

Yè kɔc-kò çì [vP *(ké) cu’in càam]? 3PL eat.NF

be people-which PRF 3PL food eat.NF

‘Which people have eaten food?’

With long-distance subject extraction, however, a copied ké must appear at higher vP edges (15).

(15) Plural subjects are doubled by ké in higher clauses:

Yè kɔc-kò yúłkù [vP ké təak [CP càm [vP *(ké) cu’in]]]

be people-which HAB.1PL 3PL think.NF eat 3PL food

‘Which people do we think are eating food?’

This makes sense if ké-copying diagnoses intermediate movement to vP. If subjects are generated at the edge of the verb phrase, they only undergo intermediate successive-cyclic movement to higher vP edges in long-distance movement.

3.3. Copied ké is the spell-out of a gap

Let me finally motivate the idea that copied ké realizes a gap. Dependencies with ké-copying are island-sensitive, as the relative clause example in (16) illustrates.

(16) Ké-copying is island-sensitive:

*Yè kɔc-kò çì Bòl ké [DP ráan [CP çì ké cu’in càam]] tji’ü?

be people-which PRF.NS Bol.GEN 3PL person PRF 3PL food eat.NF see.NF

‘Which people has Bol seen someone who has eaten food with them?’

In addition, ké-copying chains show reconstruction effects. Dinka’s Condition A anaphor, which can trigger ké-copying, may reconstruct for local (17a), long-distance (17b), and intermediate binding (17c).
Kê-copying allows reconstruction:

a. Ròth-kènì áa-nhiärkì kéeek.
   self-PL.3PL 3PL-love.3PL
   ‘Themselves, they love.’

b. Ròth-kènì áa-yúùkù kú luëeel [CP é nìi kéeek].
   self-PL.3PL 3PL-HAB.1PL 3PL say.NF 3PL
   ‘Themselves, we say that they love.’

c. Ròth-kènì áa-yijikì kú luëeel [CP é nìëër Bòl kéeek].
   self-PL.1PL 3PL-HAB.3PL 3PL say.NF BoL GEN 3PL
   ‘Themselves, they say that Bol loves.’

Dependencies with kê-copying then do not behave any differently than other movement dependencies.

Finally, there is evidence from the interaction of kê-copying and verb phrase V2 that suggests kê-copying realizes an intermediate copy. Observe that copied ké(ek) appears before an in situ object when a non-object is extracted (18a–b).

Kê may appear before object:

a. Yè nújá-kò cì Bòl [vP ké Ayén tùcci]?
   be places-which PRF.NS BoL GEN 3PL Ayen send.NF
   ‘Which places has Bol sent Ayen to?’

b. Yè tíiny ké dû cì Bòl [vP ké cujin thàal]?
   be pots PL how PRF.NS BoL GEN 3PL food cook.NF
   ‘How many pots has Bol cooked food with?’

However, the Dinka verb phrase edge otherwise shows a strict V2 requirement and is strictly limited to one object. No adverbs or PPs can ever appear there, for example. Non-copied instances of ké(ek) obey this restriction and only appear at the vP edge by themselves (19a–b).

Independent ké(ek) cannot occur between subject and object:

a. Bòl á-cé [vP ké(ek) yiùxén kùaap],
   Bol 3SG-PRF 3PL give.NF book
   ‘Bol has given them a book.’

b. *Bòl á-cé [vP ké(ek) kùaap yiùxén],
   Bol 3SG-PRF 3PL book give.NF
   ‘Bol has given them a book.’

We can make sense of this pattern if ké realizes an intermediate copy. I posit two movement-driving features on v: one A-probe for intermediate successive-cyclic movement and one ϕ-probe, which attracts a DP object. If correct, there are two copies at the vP edge only in the case of intermediate movement; ké simply spells out that copy.

I have argued that copied ké is the spell-out of an intermediate copy in the configuration in (20).

[... the books ... they ... they ... <the books> ... ]

Not only is this additional evidence that pronouns can spell out more articulated copies, it is an instance of multiple copy spell-out at the vP edge. As a result, kê-copying provides a novel argument for the idea that vP is a cyclic domain, in addition to CP, as proposed by Chomsky (1986 et seq.).

4. Asymmetries, gaps, and partial spell-out

Having shown that pronouns can act as copies in all of the positions that movement leaves copies, the question that arises is what spell-out mechanism allows pronouns to spell out full copies. In this section, I argue that pronoun copying arises by means of partial spell-out. In particular, I propose that multiple copy spell-out of a DP obligatorily involves NP deletion (in the sense of Elbourne’s 2001 treatment of
E-type pronouns), because secondary copies must be as minimal as possible. If pronouns represent the functional layer of a DP (Postal 1969; Elbourne 2001), the result of this is a pronoun.

In support of this idea, I show that pronoun copying constructions may sometimes display gaps (some antecedents do not trigger copying) as well as a person-number asymmetry (copied pronouns may mismatch in person, but not number). I argue that asymmetries and gaps result from partial spell-out. Gaps arise when NP deletion does not leave enough structure to create a pronoun. A person-number asymmetry arises when NP deletion deletes person features that could appear on the pronoun.

4.1. Partial spell-out

I first outline the partial spell-out approach. I adopt two simplifying assumptions about multiple copy spell-out and copy deletion, given in (21).

(21) Two assumptions about copy deletion:
1. Multiple copy spell-out arises when a morphosyntactic/morphophonological requirement prevents full deletion of a copy.
2. Provided one occurrence of every head is spelled out, as much material as possible is deleted.

(See Landau 2006 for an example of a deletion algorithm along these lines.)

Given these two assumptions, it follows that DP copies in the context of multiple copy spell-out must receive a “minimal” spell-out. Because the heads that make up the DP are already pronounced elsewhere, it is not necessary for the secondary copy to be a “faithful” copy. As long as some material remains to satisfy the first assumption alluded to in (21), subdeletion can and must apply.

In particular, I propose that DP copies in the context of multiple copy spell-out must undergo NP deletion, in the sense of Elbourne (2001). I adopt the structures in (22a–b) for lexical DPs and pronouns (cf. Déchaine and Witschko 2002; Moskal, to appear).

(22) a. DP NumP Num D
   b. DP NumP Num PersP

Suppose now that the only licit subdeletion operations are those that are independently employed in the grammar. In other words, I suggest that copy deletion cannot just freely carry out subdeletion to whatever heads are capable of being deleted. Rather, I posit that subdeletion is generally prohibited, but that copy deletion may employ ellipsis operations instead to achieve the effect of subdeletion. Because NP deletion/ellipsis is generally available, and secondary copies must be minimal, this operation becomes obligatory in the context of multiple copy spell-out. That DP copies copy as pronouns and not as NPs then derives from the observation that there is a process of NP ellipsis but no corresponding process of D-ellipsis.

Assume then that NP deletion applies to the structure in (22a). Because the remaining functional structure is shared with pronouns (22b), the resulting DP shell can be realized as a pronoun (encoding the idea that pronouns represent the functional layer of a DP, as in Postal 1969 and Elbourne 2001).

Importantly, however, a lexical DP to which NP deletion has applied does not look exactly like a pronoun. As evident above, I propose that there is a phrase encoding person at the core of a pronoun that is absent in DPs (see Gruber 2013 and Moskal, to appear). This means that pronoun copying is only possible in a language if the copied pronoun is capable of spelling out just D and Num. The next section argues that this difference between copied and true-born pronouns gives rise to gaps and asymmetries.

4.2. Gaps in pronoun copying

I propose that 3rd person pronouns may vary as to whether they realize both Number and Person, or just the Number phrase. For the sake of concreteness, I adopt the notion of phrasal spell-out from
nanosyntax (e.g. Starke 2009). Suppose, for example, that a 3rd person plural pronoun can in principle spell out 3rd person and plural at the same time, or only plural:4

(23) Two forms of 3rd plural pronouns:

\[ [3, \text{PL}] \rightarrow \text{pronoun} \]
\[ [\text{PL}] \rightarrow \text{pronoun} \]

Given the model of partial spell-out outlined above, this predicts that we should find gaps in pronoun copying patterns. Suppose a language with multiple copy spell-out only has 3rd person pronouns that realize person and number at the same time. In this language, NP deletion does not leave enough structure for pronoun copying. However, when the relevant DP copy is itself a pronoun, we expect pronoun copying to be possible. This pattern, in which only pronouns participate in pronoun copying, is commonly found in wh-copying. Many researchers working on wh-copying have noted that, for many speakers, wh-copying is limited to wh-pronominals (e.g. Felser 2004:550; Pankau 2013:46–47). Such speakers allow (24a), but disallow copying with complex wh-phrases (24b–c).

(24) Some speakers only tolerate copying with pronouns:

a. \textbf{Wen} glaubst du \([\text{CP wen sie liebt}?\]
   who believe.2SG you who she loves
   ‘Which man do you think she loves?’

b. \textbf{*Welchen Mann} glaubst du \([\text{CP wen sie eingeladen hat}?\]
   which man believe.2SG you who man she invited had
   ‘Which man do you think she has invited?’ (German; Pankau 2013:1,47)

Craenenbroeck and Van Koppen (2002) document similar variation across dialects of Dutch. In Wambeek Dutch, both complex and pronominal subjects can be doubled by a pronoun. However, in other Dutch dialects, such as the Lapscheure or Brabant dialect, only pronouns participate in copying and never complex DPs:

(25) Subject doubling only with pronominal subjects in Brabant Dutch:

a. \textbf{*Die} vrau kommt zij.
   that woman comes she
   ‘That woman will come.’

b. \textbf{Zij} kommt zij.
   she comes she
   ‘She will come.’ (Brabant Dutch; Craenenbroeck and Van Koppen 2002:56)

In a partial spell-out approach, these patterns follow if 3rd person pronouns in these varieties realize both person and number.5

We might also expect to find asymmetries between the different 3rd person pronouns found in a particular language. I argue that this is the case in Dinka. Pronoun copying in Dinka is limited to plurals. It is not possible with A-movement of a singular nominal:

(26) No pronoun copying with extraction of a singular noun:

a. \textbf{Yè ñà} \([\text{CP cī Bôl [sp tǐn]\}?\]
   be who PRF.NS Bol.GEN see.NF
   ‘Who has Bol seen?’

---

3 This is for ease of exposition. Everything I say here can be translated into a model that denies the possibility of phrasal spell-out. There are several ways of interpreting the idea that pronouns realize both person and number in such a model. One method is to posit operations like Fusion, or head movement. Another is to require the spell-out rules for those pronouns to have contextual restrictions referring to the presence of such structure.

4 It is also possible that a 3rd person pronoun spells out only person.

5 This requires that copy deletion is blind to the fact that the DP shell it leaves behind cannot always be realized.
I propose that this reflects a difference between the 3rd person plural pronoun *kēek* and the 3rd person singular *yēen*. The morpheme *k(e)* serves as a crossparadigmatic spell-out of plural in Dinka and so I posit that the 3rd person plural spells out only [plural]. As a result, only plural lexical DPs can trigger pronoun copying. In languages with pronoun copying with all antecedents, I suggest that all 3rd person pronouns are realization only of number.

### 4.3. A person-number asymmetry in pronoun copying

Let me now turn to pronoun copying with a pronoun antecedent. There is another number-related effect in Dinka *kē*-copying that surfaces in this case, which has its counterparts in other languages as well. In particular, *kē*-copying does not match in person when the antecedent is a pronoun. A-movement of a 1st/2nd plural pronoun still triggers pronoun copying, but it is the 3rd person plural pronoun:

(27) *Kē*-copying does not match person:

- *Who has Bol seen?*

(28) Copied pronouns cannot match in person:

- *Us, Ayen has seen.*
- *You all, Ayen has seen.*

Using person-matching pronouns is ungrammatical (28a–b).

(29) Nupe resumptive with long-distance subject extraction:

(30) 1st/2nd person singular subjects resumed by 3rd person singular:
Similarly, 1st and 2nd person plural pronouns are resumed by the 3rd person plural (31a–b):

(31) 1st/2nd person plural subjects resumed by 3rd person plural:

a. Yi: Musa gàn [CP gànan $^{a/*yì/*ù}$ pa eci] o.  
   1PL Musa say C $^{3PL/1PL/3SG}$ pound yam FOC  
   ‘Musa said that WE pounded a yam.’

b. Ye: Musa gàn [CP gànan $^{a/*wo/*ù}$ pa eci] o.  
   2PL Musa say C $^{3PL/2PL/3SG}$ pound yam FOC  
   ‘Musa said that YOU ALL pounded a yam.’

We can also find this person-number asymmetry when a pronoun spells out a higher copy. In their examination of Finnish subject doubling, Holmberg and Nikanne document a similar asymmetry. For some speakers, the doubled subject need not match in person (32a–d).

(32) Finnish subject doubling can be person-insensitive:

a. Se ole-n minä-kin lopettanut tupakoinnin.  
   3SG are-1SG 1SG-too quit smoking  
   ‘I have quit smoking, too.’

b. Ne ollette te-kin lopettanut tupakoinnin.  
   3PL are.2PL 2PL-too quit smoking  
   ‘You all have quit smoking, too.’ (Finnish; Holmberg and Nikanne 2008)

No speaker allows subject doubling to display a mismatch in number, however (33a–b).

(33) Finnish subject doubling is never number-insensitive:

a. *Se ollaan me-kin lopettanut tupakoinnin.  
   3SG are.1PL 1PL-too quit smoking  
   ‘We have quit smoking, too.’

b. *Se ollette te-kin lopettanut tupakoinnin.  
   3SG are.2PL 2PL-too quit smoking  
   ‘You all have quit smoking, too.’ (Finnish; Holmberg and Nikanne 2008)

Finnish then displays the same pattern as Dinka and Nupe.

That this asymmetry is found in all pronoun copying configurations is additional evidence for a unified treatment of these constructions. As with the gaps described above, I propose that this asymmetry is the result of partial spell-out. In particular, suppose that languages may vary with regard to whether the PersP at the core of a pronoun is treated as a functional head like Num(ber), or as an NP that can be deleted. In this view, pronouns can take two forms across languages:

(34) a. DP  
   D NumP  
   Num NP$_{PERS}$  

b. DP  
   D NumP  
   Num PersP  

In an NP$_{PERS}$ language (34a), NP$_{PERS}$ undergoes deletion in pronoun copying and the resulting copied pronoun matches its antecedent only in number, as in Dinka, Nupe, or Finnish.$^6$ In a PersP language (34b), copied pronouns match pronouns in all features. This happens in Yoruba (Adesola 2010) and Seereer (Baier 2014), for example.

$^6$ This also explains why 3rd person singular pronouns in Dinka do not trigger copying, since they realize both Num(ber) and NP$_{PERS}$. 
5. Conclusion

In this paper, I presented a novel instance of multiple copy spell-out at the vP edge in the Nilotic language Dinka. I argued that the counterpart to verb copying with DPs is pronoun copying and proposed a partial spell-out model, according to which NP deletion is obligatory in the context of multiple copy spell-out. This model accounts for the existence of asymmetries and gaps in Dinka and in pronoun copying constructions across languages.

References


