Non-agreeing resumptive pronouns and partial Copy Deletion[*]

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(This is a work in progress, comments are very much welcome!)

1. Introduction

➢ The Copy Theory of Movement
- Movement creates **copies** rather traces (*cf.* Inclusiveness Condition)
- Both LF and PF interfaces may choose which copy to spell-out/interpret (see, e.g. Chomsky 1993; Nunes 1995, Nunes 2004, Bošković & Nunes 2007)
- **Partial** realizations of **both** copies (Bošković 2001, 2007, 2015; Fanselow & Ćavar. 2002; Pereltsvaig 2008, Fanselow & Féry 2013; among many others)

➢ Resumptive pronouns
- Pronominal elements that appear in a position in which syntactic gaps might have occurred (McCloskey 2017)
- Usually agree with the antecedent in *phi*-features

(1) There are guests$_i$ **who**$_i$ I am curious about what {***it**$_i$ is/ **they**$_i$ are} going to say.

(adapted from McCloskey 2017:1)

- **Non-agreeing resumptive pronouns** (RPs)[1]
  - □ Recently attracts much interest on how it sheds light on **partial** realization of the **lower/intermediate copies** (van Urk 2018, Scott 2021, Georgi & Amaechi 2021)

(2) **{ ḿ/ gí/ yá/ ànyí/ únù/ há}** ká Ézé kwè-rè nà **yá**
    1SG.ACC 2SG.ACC 3SG.ACC 1PL.ACC 2PL.ACC 3PL.ACC FOC Eze believe-rV in 3SG.ACC
    'Eze believes in me/you(sg)/him~her/us/you(pl)/them.' (Igbo, Georgi & Amaechi 2021:23)

(3) **Wewe** ndi-ye amba-ye Hadija a-li-kutana na-we/**ye**
    2SG COP-1 AMBA-1 Hadija 1-PST-meet with-2SG/1
    'It's you who Hadija met with.' (Swahili, Scott 2021:823; *ye* = 3SG pronoun)

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[1] Abbreviations: 1, 2, 3 = first, second, third person respectively; ADD = affixal additive quantifier; ALL = affixal universal quantifier; AN/IN = animate/inanimate; DET = determiner; DISP = disposal marker; CD = clausal determiner; CL = classifier; COMP = complementizer; MOD = modifier marker; NEG = negation; PERF = perfective aspect marker; PL = plural; PROG = progressive aspect marker; PST = past tense marker; REL = relative marker; SFP = sentence-final particle; SG = singular; TOP = topic marker.

- **Non-agreeing RPs in two typologically unrelated languages**
  - *Object* RPs in **Cantonese (Hong Kong)**
  - *Subject* RPs in **Akan (Asante Twi)**
  - In addition to agreeing RPs (which are allowed in other environments)

(4) <u>Non-agreeing resumptive pronoun in Cantonese</u>

Nei jiu zoeng **di syu**$_i$ tai-jyun { _$_i$ / **keoi**$_i$ / ***keoidei**$_i$ } (object movement)
2SG must DISP CL.PL book read-finish 3SG 3PL
'You must finish reading the books.' [Cantonese]

(5) <u>Non-agreeing resumptive pronoun in Akan</u>

A-sukuu-foɔ$_i$ **no** tumi { _$_i$ / **ɛ**$_i$ / ***wɔ**$_i$} tu ndwom (subject movement)
PL-student-PL DET can 3SG.IN/ 3PL.AN sing song
'The students can sing.' [Akan]

(6) <u>Main claims</u>

a.	Both ***non-agreeing*** and ***agreeing*** RPs are attested in Cantonese and Akan	(empirical)
b.	Non-agreeing RPs involve ***movement dependencies***, agreeing RPs do not	(analytic)
c.	**Copy Deletion may apply *partially*** to the lower copy on the ***featural level***, where the residue feature is realized as non-agreeing RPs	(theoretical)

<u>Roadmap:</u>

§2: Non-agreeing RPs §4: Proposal: partial Copy Deletion
§3: Movement properties §5: Concluding remarks

2. Non-agreeing resumptive pronouns

2.1. Pronoun inventories

➤ Cantonese
  - *Phi*-features: person and number
    - Plural morpheme *-dei*
  - Third person singular: **keoi**

(7) <u>Pronouns in Cantonese</u>

	SG	PL
1	*ngo*	*ngodei*
2	*nei*	*neidei*
3	***keoi***	*keoidei*

➤ Akan Twi
  - *Phi*-features: person, number, and animacy
  - Case: nominative vs. accusative
    (e.g. *no* 'it/(s)he' for 3SG.AN and 3SG.IN)
  - (Nominative) third person singular inanimate: *ɛ*

(8) <u>Nominative pronouns in Akan[2]</u>

	SG	PL
1	*me*	*yɛn*
2	*wo*	*mo*
3(anim.)	*ɔ*	*wɔ*
3(inanim.)	*ɛ*	*ɛ*

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[2] While the notation in the literature often treats nominative pronouns like proclitics (e.g. *ɔ=* in Campbell 1998 or *ɔ-* in Korsah 2016), they do not necessarily cliticize onto the verb. We thus represent them without clitic notations.

(i) ɔ tumi/ tae **tu** ndwom
3SG.AN can often sing song
'S/he can/often sing(s).' [Akan]

2.2. Resumptive pronouns with featural mismatch

➢ Cantonese object RPs ("dummy" pronouns in Cheung 1992, Man 1998, Mai 2003)
- **Mismatch** in *phi*-features with the antecedents
- Alternates with gaps in disposal constructions
- Only occur in *object* positions

(9) Nei jiu zoeng **di syu**$_i$ tai-saai { $\_i$ / **keoi**$_i$ }   (mismatch in <u>number</u>, cf. *keoidei*)
   2SG must DISP CL.PL book read-ALL   3SG
   'You must read all the books.'   [Cantonese]

(10) $^{(?)}$Aamingwui zoeng **ngodei geigo**$_i$ dou saat-saai { $\_i$ / **keoi**$_i$ } gaa! (<u>Pers</u> & <u>Num</u>, cf. *ngodei*)
   Ming will DISP 1PL several ALL kill-ALL   3SG SFP
   '(Don't go!) Ming will kill us (lit.: we several people) all!'   [Cantonese]

- Also found in Mandarin (more restricted) and Shanghainese (Xu 1999)[3]

➢ Akan (Asante Twi) subject RPs (Korsah 2016)[4]
- **Mismatch** in *phi*-features with the antecedents
- Alternates with gaps[5]
- Only occur in *subject* positions

(11) **M-mofra no**$_i$ { $\_i$ / **ɛ**$_i$ } tu ndwom   (mismatch in <u>animacy</u> and <u>number</u>, cf. *wɔ*)
   PL-child DET   3SG.IN- sing song
   'The children sing.'   [Akan]

(12) **Yɛn miensa**$_i$ { $\_i$ / **ɛ**$_i$ } tu-u ndwom   (mismatch in <u>person</u>, cf. *yɛn*)
   1PL three   3SG.IN sing-PST song
   'We three sang.'   [Akan]

- Only found in Asante Twi (*cf.* the Fante dialect of Akan, Korsah 2016)[6]

3. Movement properties of non-agreeing resumptive pronouns

3.1. Local and long-distance movement

➢ TP-internal "local" A-movement[7]

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[3] Non-agreeing object RPs are more restricted in Mandarin in two ways. First, the antecedents in Cantonese may be animate (=(10)) or inanimate (=(9)), while Mandarin only allows inanimate antecedents for non-agreeing RPs. Second, Cantonese non-agreeing RPs may occur in a variety of contexts (see footnote **Error! Bookmark not defined.**), whereas Mandarin non-agreeing RPs can only occur in imperatives.

[4] See Korsah & Murphy (2019) and Hein & Georgi (2021) for object RPs. They also discuss movement properties of objects RPs, which are not entirely the same with the (non-)agreeing subject RPs to be discussed here.

[5] Note that Korsah (2016) only discusses non-agreeing RPs in A'-dependencies, where gaps are systematically banned. As will be shown in (11)-(12) and Section 3, gaps are allowed and alternate with non-agreeing RPs in the A-dependencies.

[6] In Fante Akan, only agreeing RPs are allowed, as shown below.
   (ii)   [**N-nyipa du pɛ**]$_i$ na { **wɔ**$_i$- /***ɔ**$_i$-} hyia-i.   (Korsah 2016:110)
        PL-person ten only FOC 3PL- / DFLT- meet-PST
        'Only ten people (as opposed to more people) met.'   [Akan, Fante]

[7] In this talk, we limit ourselves to local A-movement only. cross-clausal A movement for objects (e.g. canonical long passives) is not common in Cantonese, if not unattested. Similarly, cross-clausal subject raising is also rare in Akan.

- Cantonese: Object movement
    □ From the complement of V to the edge of *v*P (*cf.* object shift, Travis 2010)
    □ Non-agreeing RPs: ✓, alternate with gaps
    □ Agreeing RPs: ✗, are banned

(13) Nei   jiu   [*v*P tai-jyun   [VP *t*V **di syu**   ]]   (baseline)
    2SG must   read-finish   CL.PL book
    'You must finish reading the books.'   [Cantonese]

(14) Nei jiu [*v*P zoeng **di   syu**ᵢ tai-jyun   [VP *t*V { _ᵢ / **keoi**ᵢ/ *keoidei*ᵢ }]]   (object movement)
    2SG must   DISP CL.PL book read-finish   3SG   3PL
    'You must finish reading the books.'   [Cantonese]

- Akan: Subject movement
    □ From the edge of *v*P to the edge of TP
    □ Non-agreeing RPs: ✓, alternate with gaps
    □ Agreeing RPs: ✗, are banned

(15) [TP ɛnora   [*v*P **A-sukuu-foɔ**ᵢ **no**   tu-u   ndwom]]   (baseline)
    yesterday   PL-student-PL DET   sing-PST song
    'The students sang yesterday.'   [Akan]

(16) [TP **A-sukuu-foɔ**ᵢ **no** ɛnora [*v*P { _ᵢ / **εᵢ**   / *wɔ*ᵢ}   tu-u   ndwom]] (subject movement)
    PL-student-PL DET yesterday   3SG.IN/   3PL.AN sing-PST song
    'The students sang yesterday.'   [Akan]

➢   A-bar movement beyond TP
- Relativization
    □ Cantonese: ✓ gaps, ✓ non-agreeing RPs, ✓ agreeing RPs

(17) Go di [CP ngodei jiu   zikhak   laai-saai { _ᵢ/ **keoi**ᵢ/ keoideiᵢ}] ge **taamgun**ᵢ (mono.)
    that CL.PL 1PL   must immediately arrest-ALL   3SG 3PL   MOD corrupt.official
    'Those corrupt officials who we must arrest immediately.'   [Cantonese]

(18) Go di [CP Aaming gokdak [CP ngodei jiu   laai-saai { _ᵢ/ **keoi**ᵢ/ keoideiᵢ}]] ge   **taamgun**ᵢ (ld.)
    that CL.PL Ming   think   1PL   must arrest-ALL 3SG 3PL   MOD corr.official
    'Those corrupt officials who Ming thinks that we must arrest.'   [Cantonese]

    □ Akan: ✗ gaps, ✓ non-agreeing RPs, ✓ agreeing RPs

(19) **M-mofra no**ᵢ   [CP aa { *_ᵢ / **εᵢ**   / wɔᵢ} kɔ-ɔ sukuu enora no]   (monoclausal)
    PL-child   DET   REL   3SG.IN 3PL.AN go-PST school yesterday CD
    'The children who went to school yesterday'   [Akan]

(20) **M-mofrai no**ᵢ [CP aa me dwene [CP sɛ { *_ᵢ / **εᵢ**   / wɔᵢ}   kɔ-ɔ   sukuu no]] (long-dist.)
    PL-child   DET   REL 1SG think   COMP 3SG.IN 3PL.AN go-PST school CD
    'The children who I think went to school'   [Akan]

- Focus movement
  - □ Cantonese: ✓ gaps, ✓ non-agreeing RPs, ✓ agreeing RPs

(21) Hai **ni di syu**$_i$ nei jinggoi faaidi tai-saai { _$_i$ / **keoi$_i$** / **keoidei$_i$**} (monoclausal)
FOC this CL.PL book 2SG should faster read-ALL 3SG 3PL
'It is these books that you should read them all ASAP (but not those).' [Cantonese]

(22) Hai **ni di syu**$_i$ ngo gokdak [$_{CP}$ nei jinggoi faaidi tai-saai { _$_i$ / **keoi$_i$** / **keoidei$_i$**}] (long-dist.)
FOC this CL.PL book 1SG think 2SG should faster read-ALL 3SG 3PL
'It is these books that I think that you should read them all ASAP (but not those).' [Cantonese]

  - □ Akan: ✗ gaps, ✓ non-agreeing RPs, ✓ agreeing RPs

(23) **Ama**$_i$ na { *_$_i$ / **ɛ$_i$** / ɔ$_i$} pɛ sika no (monoclausal)
Ama FOC 3SG.IN 3SG.AN want money CD
'It is Ama who wants the money.' [Akan]

(24) **Ama**$_i$ na Kofi dwene-e [$_{CP}$ sɛ {*_$_i$ / **ɛ$_i$** / ɔ$_i$} pɛ sika no] (long-distance)
Ama FOC Kofi think-PST COMP 3SG.IN 3SG.AN want money CD
'It is Ama who Kofi thought that she wants the money.' [Akan]

- Other A-bar movements not shown here:
  - □ *Wh*-movement (only in Akan, not Cantonese)
  - □ Topicalization/ left-dislocation (Cantonese allows both; Akan only allows agreeing RPs)
  - □ Right-dislocation (Cantonese allows both; Akan only allows agreeing RPs)

3.2. Movement properties of non-agreeing RPs
➢ Idiom preservation
- Idiom meaning is preserved: ✓ gaps, ✓ non-agreeing RPs, ✗ agreeing RPs
- Only literal meaning for agreeing RPs
- Assuming idioms form a constituent (in a local domain), idiom preservation suggests that the displaced objects/subjects were part of the idioms in an early stage of derivation
  → *movement for gaps and non-agreeing RPs*, but not agreeing RPs

(25) **Di seoi**$_i$ nei jinggoi ceoi-maai { _$_i$ / **keoi$_i$** / **keoidei$_i$**} sin (VO idioms)
CL.PL water 2SG should blow-ALSO 3SG 3PL SFP.first
Literal: 'As for those (that) water, you should blow them first.' (gap, *keoi*, *keoidei*)
Idiomatic: 'As for those gossips, you should finish them first.' (gap, *keoi*) [Cantonese]

(26) **Me pɔnkɔ**$_i$ dabiara { _$_i$ / **ɛ$_i$-** / ɔ$_i$-} pɛ ntem (SV idioms)
POSS horse daily 3SG.IN 3SG.AN want quickly
Literal: 'My horse is always eager.' (gap, *ɛ-*, *ɔ-*)
Idiomatic: 'I am always in a hurry.' (gap, *ɛ-*) [Akan]

➢ Island sensitivity
- Island sensitivity: ✓ gaps, ✓ non-agreeing RPs, ✗ agreeing RPs
  (Note: Akan gaps are independently banned in A-bar dependencies)
- Agreeing RPs ameliorate island violations
- Configuration: [XP$_i$ … [$_{island}$ *gap$_i$/*non-agreeing RP$_i$/^{OK}agreeing RP$_i$] …]

(27) Go di   [$_{CP}$ [$_{Adjunct}$ jyugwo ngodei laai-saai   { *$_{\_i}$/ *keoi$_i$/keoidei$_i$}]   (adjunct island)
      that CL.PL   if   1PL   arrest-PERF   3SG 3PL
            daaigaa   zau wui hou hoisam] ge   taamgun$_i$
            everyone then will very happy   MOD corrupt.official
      'Those corrupt officials$_i$ who if we arrested them$_i$ all everyone will be very happy'   [Cantonese]

(28) **M-mofra no$_i$** [$_{CP}$ aa me te-e   [$_{NP}$ n-konkonsa fa-a   wɔn   ho (complex NP island)
      PL-child DET   REL 1SG hear-PST   PL-rumor take-PST 3PL.POSS body
            [$_{CP}$ sɛ   {*$_{\_i}$/ *ɛ$_i$ / wɔ$_i$}   fa-a   pen no]]]
                  COMP   3SG.IN /3PL.AN take-PST pen DET
      'The children$_i$ who I heard a rumor about them$_i$ that they$_i$ took the pen'   [Akan]

➢ Strong crossover effects (i.e., reconstruction for Binding C)
- Strong crossover: moves across a c-commanding co-referential pronominal elements (i.e. the moved constituent is bound by the pronominal elements)
- SCO effects: ✓ gaps, ✓ non-agreeing RPs, ✗ agreeing RPs
- Agreeing RPs are inert to SCO effects
- Configuration: [XP$_i$ … [*pronoun$_i$* … [*gap$_i$/*non-agreeing RP$_i$/^{OK}agreeing RP$_i$]] …]
  ▫ Note: to avoid Binding B violation for the c-commanding pronouns (by the moved XP), all the examples below involve doubly embedded structure
    → XP and the pronouns are not in a local domain

(29) **Go di   taamgun$_i$**   ne, Aaming tengman [$_{CP}$ *keoidei$_i$* gokdak   (SCO in topicalization)
      that CL.PL corrupt.official TOP Ming   hear   3PL   think
            [$_{CP}$ daaigaa   dou soeng laai-saai {*$_{\_i}$/ *keoi$_i$/keoidei$_i$}]]
                  everyone all   want arrest-ALL   3SG 3PL
      'As for those corrupt officials$_i$, Ming heard that they$_i$ think that everyone wants to arrest them$_i$ all.'[C]

(30) **Politicians ben$_i$** na Ama te-e   [$_{CP}$ sɛ   *wɔ$_i$* dwene   (SCO in *wh*-movement)
      Politicians   which FOC Ama hear-PST COMP 3PL think
            [$_{CP}$ sɛ   {*$_{\_i}$/*ɛ$_i$ / wɔ$_i$}   bɛ di nkonim]]
                  COMP   3SG.IN/ 3PL.AN will eat victory
      'Which politicians$_i$ did Ama hear that they$_i$ think that they$_i$ will win?'   [Akan]

➢ Weak crossover effects
- Weak crossover: moves across a *non*-c-commanding co-referential pronominal elements
- WCO effects: ✓ gaps, ✓ non-agreeing RPs, ✗ agreeing RPs

- Agreeing RPs lack WCO effects
- Configuration: [XP$_i$ … [… *pronoun$_i$* …] … *gap$_i$/*non-agreeing RP$_i$/^{OK}agreeing RP$_i$ …]

(31) **Go di   sailou$_i$** ne, Aaming gokdak [$_{CP}$ [**keoidei$_i$**   aamaa]   (WCO in topicalization)
     that CL.PL child   TOP Ming   think   3PL.POSS mum

     jinggoi gaauhou   { *_$_i$ / *keoi$_i$/**keoidei$_i$**}]
     should teach.well   3SG   3PL

'As for those kids$_i$, Ming thinks that their$_i$ mum should teach them$_i$ to behave well.'   [Cantonese]

(32) **Asukuufoɔ ben$_i$**   na Ama te-e [$_{CP}$ sɛ   [**wɔn$_i$** tikya]   dwene   (WCO in *wh*-mvt.)
     Student.PL which FOC Ama hear-PST COMP POSS   teacher   think

     [$_{CP}$ sɛ   {*_$_i$ /*ɛ$_i$ / **wɔ$_i$**} bɛ di nkonim]]
           COMP   3SG.IN/ 3PL.AN will eat victory

'Which students$_i$ did Ama hear that their$_i$ teacher thinks that they$_i$ will win?'   [Akan]

3.3. Interim summary
- Gaps and non-agreeing RPs are allowed in local A-movement, but not agreeing RPs
  - i.e. gaps and non-agreeing RPs may associate with the antecedents *locally*
    → **no Binding B violation** → non-agreeing RPs do not pattern with referential pronouns
- In Akan, gaps are not available in A'-movement

(33) <u>Distribution by movement types</u>

	Gap		Non-agreeing RPs	Agreeing RPs
	Cantonese	Akan	(*keoi* and *ε-*)	
Local A-mvt.	YES	YES	YES	NO
A-bar mvt. monoclausal	YES	NO	YES	YES
A-bar mvt. long-distance	YES	NO	YES	YES

- Gaps and non-agreeing RPs show movement properties, but not agreeing RPs

(34) <u>Movement properties</u>

	Gap		Non-agreeing RPs	Agreeing RPs
	Cantonese	Akan	(*keoi* and *ε-*)	
Idiom preservation	YES	YES	YES	NO
Island sensitivity	YES	—	YES	NO
Strong crossover effects	YES	—	YES	NO
Weak crossover effects	YES	—	YES	NO

4. Proposal: partial Copy Deletion

4.1. Theoretical background

➢ Copy Theory of Movement (Chomsky 1995, Nunes 1995, Nunes 2004, Bošković & Nunes 2007)
- Movement creates copies
  - ▫ XP … <XP>
- **Copy Deletion** applies to the lower copy in typical cases, deleting all the features

➢ Distributed Morphology (Halle & Marantz 1993 *et seq.*)
- Functional elements only have SynSem features in syntax (i.e. no phonological content)
- Get phonological content through **Vocabulary Insertion** *post-syntactically* (i.e. in the PF)
- Recap: pronouns in Cantonese and Akan

(35) Pronouns in Cantonese

	SG	PL
1	*ngo*	*ngodei*
2	*nei*	*neidei*
3	**keoi**	*keoidei*

(36) Nominative pronouns in Akan

	SG	PL
1	*me*	*yɛn*
2	*wo*	*mo*
3(anim.)	*ɔ*	*wɔ*
3(inanim.)	*ɛ*	*ɛ*

- Featural compositions of the pronouns
  - ▫ The most unmarked (default) pronouns: 3SG **keoi** and 3SG.IN *ɛ*

(37) Vocabulary Items of Cantonese pronouns

[D, +author]	↔	*ngo*
[D, +addressee]	↔	*nei*
[D, +pl]	↔	*dei*
[D]	↔	**keoi**

(38) Vocabulary Items of Akan pronouns

[D, +animate, +pl]	↔	*wɔ*
[D, +author, +pl]	↔	*yɛn*
[D, +addressee, +pl]	↔	*mo*
[D, +animate]	↔	*ɔ*
[D, +author]	↔	*me*
[D, +addressee]	↔	*wo*
[D]	↔	*ɛ*

4.2. Non-agreeing RPs as a result of partial Copy Deletion

➢ Key components:
- Copy Deletion may apply *partially*, deleting all the features on the lower copy *except the label*
  - ▫ If the lower copy is a DP, delete everything except the label [D]
  - ▫ *Cf.* various proposals of distributed/scattered deletion (e.g. left branch extraction, as in Bošković 2001, 2015; Fanselow & Ćava 2002; and predicate fronting, as in Bentzen 2008, Larson 2020, van Urk 2021)
- The remaining [D] realizes as a default pronoun in the PF by Vocabulary Insertion
  - ▫ [D] ↔ *default pronoun*
- We will discuss the potential motivation for partial CD in concluding remarks

(39) <u>Partial and Full Copy Deletion</u>

  Syntax: $\alpha_{[\mathbf{D}],[\varphi],\,...}$ … $\beta_{[\mathbf{D}],[\varphi],\,...}$; where (α, β) is a chain created by movement

  CD: (i) *Full* $\alpha_{[\mathbf{D}],[\varphi],\,...}$ … $\beta_{\cancel{[\mathbf{D}],[\varphi],\,...}}$ → surface string = α

    (ii) *Partial* $\alpha_{[\mathbf{D}],[\varphi],\,...}$ … $\beta_{[\mathbf{D}]\cancel{[\varphi],\,...}}$ → surface string = α … exponent of D (=default pronoun)

➢ Implementation

(40) Nei jiu zoeng **di** **syu$_i$** tai-saai |keoi$_i$| (=(9))

  2SG must DISP CL.PL book read-ALL 3SG

  'You must read all the books.' [Cantonese]

(41) <u>The derivation of Cantonese non-agreeing RP *keoi* in (40)</u>

  a. Baseline (in syntax) [$_{vP}$ *zoeng* *v*-V [$_{VP}$ *di syu*$_{[\mathbf{D},\,+pl,\,n,\,\sqrt{BOOK}]}$]]

  b. Object movement (in syntax) [$_{vP}$ *zoeng di syu*$_{[\mathbf{D},\,+pl,\,n,\,\sqrt{BOOK}]}$ *v*-V [$_{VP}$ <*di syu*$_{[\mathbf{D},\,+pl,\,n,\,\sqrt{BOOK}]}$>]]

  c. Partial Copy Deletion (in PF) [$_{vP}$ *zoeng di syu*$_{[\mathbf{D},\,+pl,\,n,\,\sqrt{BOOK}]}$ *v*-V [$_{VP}$ <*di syu*$_{[\mathbf{D},\,\cancel{+pl,\,n,\,\sqrt{BOOK}}]}$>]]

  d. Vocabulary Insertion (in PF) [$_{vP}$ *zoeng di syu*$_{[\mathbf{D},\,+pl,\,n,\,\sqrt{BOOK}]}$ *v*-V [$_{VP}$ <*keoi*$_{[\mathbf{D}]}$>]]

(42) **mmofra** **no$_i$** |ɛ$_i$-|tu ndwom (=(11))

  Children DET 3SG.IN-sing song

  'The children sing.' [Akan]

(43) <u>The derivation of Akan non-agreeing RP ε- in (42)</u>

  a. Baseline (in syntax) [$_{TP}$ T [$_{vP}$ *mmofra no*$_{[\mathbf{D},\,+pl,\,+anim,\,n,\,\sqrt{CHILD}]}$ …]]

  b. Subj. mvt. (in syntax) [$_{TP}$ *mmofra no* $_{[\mathbf{D},\,+pl,\,+anim,\,n,\,\sqrt{CHILD}]}$ T [$_{vP}$ <*mmofra no*$_{[\mathbf{D},\,+pl,\,+anim,\,n,\,\sqrt{CHILD}]}$> …]]

  c. Partial CD (in PF) [$_{TP}$ *mmofra no* $_{[\mathbf{D},\,+pl,\,+anim,\,n,\,\sqrt{CHILD}]}$ T [$_{vP}$ <*mmofra no*$_{[\mathbf{D},\,\cancel{+pl,\,+anim,\,n,\,\sqrt{CHILD}}]}$> …]]

  d. VI (in PF) [$_{TP}$ *mmofra no* $_{[\mathbf{D},\,+pl,\,+anim,\,n,\,\sqrt{CHILD}]}$ T [$_{vP}$ <$\varepsilon_{[\mathbf{D}]}$> …]]

➢ Deriving the properties of non-agreeing RPs

- **Featural mismatch**
  - ❑ Only the label [D] survives Copy Deletion, and all the phi-features are deleted
  - ❑ Hence the form is always the *default pronoun* – but not the agreeing pronouns, or any other pronouns with phi-features
- **Movement properties**
  - ❑ Non-agreeing RPs are the realization of the "trace", i.e. the lower copy of movement chains
- **Local A-movement: no Binding Condition B violation**
  - ❑ Non-agreeing RPs are not genuine pronouns w/ anaphoric dependency with the antecedent
    - → They are not subject to the Binding Principle
    - → They can occur with the antecedent in a local binding domain, i.e. local A-movement

➢ Similar proposals have been adopted to derive **non-agreeing** resumptive pronouns in Igbo (Georgi & Amaechi 2021) and Swahili (Scott 2021)

4.3. The role of [D] in A-movement and why it's special

➢ [D] plays a crucial role in A-movement in both languages

- No *phi*-inflection on verbs in Cantonese and Akan
  - ❑ [D] is subject to Agree for movement, not *phi*-features

- Object movement in Cantonese (see more in Appendix)
  - ▫ Restriction on the *interpretation*: **indefinite** reading is not available
    → Li (1998): indefinite NPs in Chinese lacks a D head (i.e. *[Num [Cl [N]]])
  - ▫ Restriction on the *internal structure*: **bare nouns** are banned (i.e. *[NP N])

  - ▫ Consistent with the cross-linguistic facts that *v*P-internal object movement/ object shift is sensitive to definiteness, e.g. Yiddish, Icelandic, among may others (Travis 2010, Diesing 1992, 1997, Collins & Thráinsson 1996, Svenonius 2000)

  - ▫ ┌───┐
      The presence of a (covert) D-head licenses object movement in Cantonese
      └───┘

(44) <u>Definite objects and quantifiers</u>
   a. Nei heoi zoeng {**Aaming**/ **go hoksaang**_{def}/ **ni   go hoksaang**} daawan **keoi** laa
      2SG go   DISP Ming   CL student   this CL student   stun   3SG SFP
      'You go knock {Ming/ the student/ this student} down. '
   b. Nei heoi zoeng [**mui   jat bun syu**] tai-saai **keoi**
      2SG go   DISP every one CL book read-all 3SG
      'You go read every book.'

(45) <u>Indefinite objects, bare nouns, epistemic indefinites</u>
   *Nei heoi   zoeng { **hoksaang**/ **saam go hoksaang**/ **mzi bingo** } daawan **keoi** laa
   2SG go   DISP student   three CL student   MZI who   stun   3SG SFP
   Int.: 'You go knock {students/ three students /some unknown person} down. '

- Subject movement in Akan
  - ▫ A determiner/nominalizer is obligatory for non-DPs to be subjects[8]
  - ▫ Clausal determiner *no* (same form with the nominal determiner)

(46) <u>CP subjects with the clausal determiner</u>
   [[CP Sɛ   ɔ   tumi tu ndwom] *(**no**)] ɛ   yɛ adi pa
       COMP 3SG.AN can sing song   CD 3SG.IN be thing good
   'That s/he can sing is good.'

  - ▫ With conjoined CPs, *no* seems to be optional
  - ▫ However, a topic reading is obligatory when *no* is ***absent***, whereas a non-topic subject reading can be obtained with *no*
    → *no* is still needed for subjecthood
  - ▫ ┌──┐
      Potential role of [D] in licensing subject movement
      └──┘

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[8] For nominalizers, see the adjective phrase below:
(i) *(ɔ)-kese no   ɛ   tu   ndwom
     NMZL-big DET 3SG.IN sing song   'The big person sings'

(47) <u>Conjoined CPs</u>

    [[_{CP} Sɛ   ɔ   tumi tu   ndwom] ne [_{CP} sɛ   ɔ   tumi nanti kɔ parki no so]] **(no)**,

      COMP 3SG.AN can sing song   and   COMP 3SG.AN can walk go park DET LOC CD

          ɛ   yɛ adi pa

      3SG.IN be thing good

   With ***no***: 'That s/he can sing and that s/he can go to the park are good.'

   Without ***no***: 'As for the facts that s/he can sing and s/he can go to the park, they are good.'

➢   Speculation: [D] survives since it is ***the feature that Probe searches for*** (but not *phi*-features)
- If [D] enters into Agree relation with some A-Probe (that triggers subject/object movement), …
  - ▫ The [D] feature is checked on the higher copy, but not on the lower copy
  - ▫ [**D:+**] … [**D:_**]: distinct features?

➢   Prediction: **A-bar** movement with non-agreeing RPs require a **prerequisite A-movement**
- Seems to receives some support from Cantonese: the bare noun restriction holds

(48) <u>Bare noun contrastive topics</u>

   a. Siuseot ne,   Aaming jinggoi tai   _ , maanwaa zau m-hou   laa

     novel TOP Ming   should read   comics   then not-good SFP

    'As for novels, Ming should read (them); but not comics.'

   b. *Siuseot ne,   Aaming jinggoi tai-zo   **keoi** , maanwaa zau m-hou   laa

     novel TOP Ming   should read-PERF 3SG   comics   then not-good SFP

(49) <u>A-bar movement follows A-movement</u>

   [_{TopicP} **<Obj>** *_i* … [_{vP} <Obj>*_i* [_{VP} V <Obj>*_i*=***keoi***]]]   (intermediate copy not pronounced)

           ↑   A'   ↑   A

4.4. Agreeing RPs as base-generated pronouns

➢   Another type of resumption: Agreeing RPs
- We suggest that they are **base-generated pronouns**
- When they occur, the antecedents are also base-generated at the surface position
- **Anaphoric relation** between the agreeing RPs and the antecedents

(50) <u>Agreeing RPs as base-generated pronouns</u>

   Syntax: [antecedent_{[D],[φ]} … [… **[D]**,[φ]   …]]   (base-generation)

   PF: [antecedent_{[D],[φ]} … [… *agreeing RPs* …]]   (Vocabulary Insertion)

➢   Deriving the properties of agreeing RPs
- **Featural matching**
  - ▫ Born with *phi*-features which are not subject to Copy Deletion
  - ▫ Featural matching is a general requirement by pronominal dependencies, which holds cross-sententially:

(51) **Di hoksaang$_i$** mei dou. M-dang **{keoidei$_i$ / *keoi$_i$}** laa.
    CL.PL student   NEG arrive NEG-wait 3PL   3SG   SFP.
    'The students$_i$ haven't arrived yet. (I) won't wait for them$_i$.'   [Cantonese]

(52) Me hu-u **n-kwaala no$_i$** ɛnora.   Na **wɔ$_i$** di agorɔ.
    1SG   see-PST PL-child DET yesterday   PST 3PL   eat game
    'I saw the children yesterday. They$_i$ were playing.'   [Akan]

- **Lack of movement properties**
  - ▫ The surface position of the antecedents results from base-generation, but not movement from the (agreeing-)RP position
- **Banned in local A-movement: Binding B violation**
  - ▫ The agreeing RPs are bound by the antecedent in their binding domain

(53) *[$_{TP}$ Nei jiu [$_{vP}$ zoeng **di syu$_i$** tai-jyun   [$_{VP}$ t_V **keoidei$_i$**]]]   (=(14), Binding domain: TP)
      2SG must   DISP   CL.PL book read-finish   3PL
    Int.:'You must finish reading the books.'   [Cantonese]

(54) *[$_{TP}$ **A-sukuu-foɔ$_i$** no ɛnora   [$_{vP}$ **wɔ$_i$**   tu-u   ndwom]]   (=(16), Binding domain: TP)
       PL-student-PL DET yesterday   3PL.AN sing-PST song
    Int.:'The students sang yesterday.'   [Akan]

  - ▫ In A'-dependencies, the antecedents are outside the binding domain TP (i.e. Spec,CP) and are able to bind the pronouns without violating Binding B (*cf.* Bošković 2016: the phasal edge belongs to the higher binding domain)

(55) [$_{TopicP/CP}$ Aaming$_j$ ne [$_{TP}$ ngo gokdak [$_{vP}$ *(**keoi$_j$**) hou zang   **keoizigei$_j$**]]]
            Ming   TOP   1SG think   3SG   very hate   3SG.REFL
    'As for Ming$_j$, I think (he$_j$) hates himself$_j$.'   [Cantonese]

(56) [$_{FocP/CP}$ John$_j$ (**ankasa$_j$**) na [$_{TP}$ (***ankasa$_j$**)   [$_{vP}$ ɛ   tu-u   ndwom no]]]
           John REFL   FOC   REFL   3SG.in sing-PST song   DET
    'It is John$_j$ himself$_j$ who sang the song.'   [Akan]

    → Highest subject restrictions do not apply
    → agreeing RPs are allowed in mono-clasual A'-dependencies

- **Lack of movement properties**
  - ▫ The surface position of the antecedents results from base-generation, but not movement from the (agreeing-)RP position

➢   Predictions in ATB-movement[9]
- ATB-movement: both dependencies must be the same (i.e. movement)

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[9] We thank Martin Salzmann for drawing our attention to ATB-movement. Note that the patterns here are different from Zurich German, where gaps and base-generated resumptives can be "mixed" in ATB-movement (Salzmann 2012).

(57) <u>Non-agreeing RPs are predicted to alternate with gaps (in both word orders)</u>
    a. Antecedent … [… non-agreeing …] & [… _gap …]
    b. Antecedent … [… non-agreeing …] & [… non-agreeing …]

- With agreeing RPs: Mixed *base-generation* and *movement* dependencies fail to license ATB-mvt

(58) <u>Agreeing RPs are predicted to contrast with both gaps and non-agreeing RPs (in both word orders)</u>
    a. *Antecedent … [… agreeing …] & [… _gap …]
    b. *Antecedent … [… agreeing …] & [… non-agreeing …]
    c. Antecedent … [… agreeing …] & [… agreeing …]

(59) <u>Cantonese</u>
    a. *Antecedent … [… non-agreeing …] & [… non-agreeing …]*
        Godi [ngo gokdak [Aaming seong zikhak   laai-saai keoi$_k$] ji
        those I   think Ming   want immediately arrest-all 3SG   and
                            [Aafan m-seong zikhak   laai-saai keoi$_k$]] ge   **taamgun**$_k$
                            Fan   not-want immediately   arrest-all 3SG   MOD corrupt.officials
        'Those corrupt officials [who I think [Ming wants to arrest them all immediately] and [Fan doesn't
        want to arrest them all immediately]]'
    b. *Antecedent … [… non-agreeing …] & [… _gap …]*
        Godi [ngo gokdak [Aaming seong zikhak laai-saai _$_k$] ji
                            [Aafan m-seong zikhak laai-saai keoi$_k$]] ge **taamgun**$_k$
    c. **Antecedent … [… agreeing …] & [… _gap …]*
        *Godi [ngo gokdak [Aaming seong zikhak laai-saai keoidei$_k$] ji
                            [Aafan m-seong zikhak laai-saai _$_k$]] ge **taamgun**$_k$
    d. *??Antecedent … [… agreeing …] & [… non-agreeing …]*
        ??Godi [ngo gokdak [Aaming seong zikhak laai-saai keoidei$_k$] ji
                            [Aafan m-seong zikhak laai-saai keoi$_k$]] ge **taamgun**$_k$
    e. *Antecedent … [… agreeing …] & [… agreeing …]*
        Godi [ngo gokdak [Aaming seong zikhak laai-saai keoidei$_k$] ji [Aafan m-seong zikhak laai-saai
        keoidei$_k$] ge **taamgun**$_k$

(60) <u>Akan</u>
    a. *Antecedent … [… non-agreeing …] & [… non-agreeing …]*
        A-sukuufoɔ   no$_k$ aa   me   dwene sɛ   [ɛ$_k$ kɔ-ɔ   school] na
        PL-student.PL   DET   REL 1SG think   COMPL 3SG go-PST school   and
                                                        [ɛ$_k$ bɛ   ba   ahyia   no]
                                                        3SG FUT come afternoon DET
        'The children who I think [went to school] and [will be back in the afternoon].'
    b. **Antecedent … [… agreeing …] & [… non-agreeing …]*
        A-sukuufoɔ   no$_k$ aa   me   dwene sɛ   [wɔ$_k$ kɔ-ɔ   school] na
                                                        [ɛ$_k$ bɛ   ba   ahyia   no]
    c. *Antecedent … [… agreeing …] & [… agreeing …]*
        A-sukuufoɔ   no$_k$ aa   me   dwene sɛ   [wɔ$_k$ kɔ-ɔ   school] na
                                                        [wɔ$_k$ bɛ   ba   ahyia   no]

5. Concluding remarks

➢ Two types of resumption
- The dual nature of resumptive pronouns and cross-linguistic variations (Rouveret 2011)
  - ❑ Some behave like **traces**, e.g. Vata (Koopman 1983)
  - ❑ Some behave like **pronouns**, e.g. Irish (McCloskey 1990)
  - ❑ Some in-between, e.g. Swedish (Engdahl 1985)
- *Both* **types** are attested in Cantonese and Akan
  - ❑ Manifested as different morphological forms
  - ❑ *Cf.* two types of RPs in Igbo (Georgi & Amaechi 2021) & Swahili (Scott 2021)
  - ❑ *Cf. Strong-weak* distinction in Welsh (Tallermam 1983) and Hausa (Tuller 1986)

(61) <u>Two types of resumption in Cantonese and Akan</u>

	Generation	Features	Relation with the antecedent
Non-agreeing RPs	Partial Copy Deletion	[D]	Movement dependency
Agreeing RPs	Base-generation	[D] + [phi]	Pronominal dependency

➢ Partial Copy Deletion
- The growing literature of varieties of CD, among which CD may be:
  - ❑ distributed/scattered (Bošković 2001, 2015; Fanselow & Ćavar. 2002; Pereltsvaig 2008, Fanselow & Féry 2013; among many others);
  - ❑ suspended (e.g. Trinh 2009, Lee 2021); and
  - ❑ substituted (Mendes & Ranero 2021)
- Distributed/scattered deletion is essentially partial CD on both higher and lower copies
- Non-agreeing RPs as partial CD on the lower copy

➢ Restricting partial CD: Potential role of the [D] feature in A-movement

➢ Remaining issues and further steps
- The (non-)alternation of non-agreeing RPs and gaps
  - ❑ Akan: gaps are systematically banned in A-bar movement
  - ❑ Cantonese: gaps are degraded in if the antecedent is "too far away"

(62) Ngo daaseon ni wan zoeng **ni gin si**$_i$ (10 σ between the gap & antecedent)
1SG plan this time DISP this CL matter
<u>cungtaudoumei saamhaulukmin baaiming</u> $^{??}$(**keoi**$_i$)
thoroughly clearly settle.down 3SG
'This time, I plan to settle down this issue thoroughly and clearly.' [Cantonese, Mai 2003: 521]

  - ❑ Motivations for partial Copy Deletion? (i.e. last resort)
  - ❑ How about optional cases?

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Appendix: Post-verbal objects in Cantonese with non-agreeing resumptive pronouns

➢ 3SG *keoi* also optionally occurs with post-verbal objects, where no apparent gap is found (=55)

(63) <u>Pre-verbal objects with gaps</u>

Nei	jiu	zoeng	**di**	**syu**$_i$	tai-jyun	{ $_i$ / **keoi**$_i$ / *keoidei$_i$ }
2SG	must	DISP	CL.PL	book	read-finish	3SG 3PL

'You must finish reading the books.'

(64) <u>Post-verbal objects with no apparent gaps</u>

Nei	jiu	tai-jyun	**di**	**syu**$_i$	{ $_i$ / **keoi**$_i$ / *keoidei$_i$ }
2SG	must	read-finish	CL.PL	book	3SG 3PL

'You must finish reading the books.'

➢ Analysis: they undergo ***the same object movement***, with differences in ***whether verb moves***

(65) <u>Pre-verbal objects (e.g. *zoeng*-disposal constructions)</u>

[$_{vP}$ *zoeng* Obj$_i$ [$_{VP}$ V <Obj>$_i$=*keoi*]]]   (Object movement)

(66) <u>Post-verbal objects</u>

[V … [$_{vP}$ Obj$_i$ [$_{VP}$ <V> <Obj>$_i$=*keoi*]]]   (Object movement + Verb movement)

➢ Arguments: similar restrictions with regard to: (i) Objects; (ii) Argument structure; (iii) Aspect

(67) <u>Similarities between *zoeng*-disposal constructions and post-verbal object cases</u>

Restrictions	*Zoeng*	Post-verbal object cases
Objects	Definite/ quantifier	Definite/ quantifier
Argument structure	Transitive	Transitive
Aspect	Telic	Telic

➢ **Objects**: sensitive to the interpretation and the internal structure
- ✓ Definite objects, quantifier phrases
- ✗ Indefinite objects, bare nouns, epistemic indefinites *m-zi-wh* 'not-know wh' (Lee 2021)
- An object CL-N, ambiguous between a definite and an indefinite reading (Cheng & Sybesma 1999), is disambiguated as definite

(68) <u>Definite objects</u>

a. *Post-verbal O*

Nei	heoi	daawan	{**Aaming**/ **go hoksaang**$_{def}$/ **ni**	**go hoksaang**}	**keoi**	laa
2SG	go	stun	Ming CL student this	CL student	3SG	SFP

'You go knock {Ming/ the student/ this student} down. '

b. *Pre-verbal O with* zoeng

Nei	heoi	zoeng	{**Aaming**/ **go hoksaang**$_{def}$/ **ni**	**go hoksaang**}	daawan	**keoi**	laa
2SG	go	DISP	Ming CL student this	CL student	stun	3SG	SFP

'You go knock {Ming/ the student/ this student} down. '

(69) <u>Quantifer phrases</u>

    a. *Post-verbal O*

      Nei heoi tai-saai [**mui jat bun syu**] **keoi**

      2SG go read-all every one CL book 3SG

      'You go read every book.'

    b. *Pre-verbal O with* zoeng

      Nei heoi zoeng [**mui jat bun syu**] tai-saai **keoi**

      2SG go DISP every one CL book read-all 3SG

      'You go read every book.'

(70) <u>Indefinite objects, bare nouns, epistemic indefinites</u>

    a. *Post-verbal O*

      *Nei heoi daawan {**hoksaang/ saam go hoksaang/ mzi bingo** } **keoi** laa

      2SG go stun student three CL student MZI who 3SG SFP

      Int.: 'You go knock {students/ three students / some unknown person} down. '

    b. *Pre-verbal O with* zoeng

      *Nei heoi zoeng { **hoksaang/ saam go hoksaang/ mzi bingo** } daawan **keoi** laa

      2SG go DISP student three CL student MZI who stun 3SG SFP

      Int.: 'You go knock {students/ three students /some unknown person} down. '

➢   **Argument structure**: Verbs must be able to take **an object**

    ● ✓ Transitive verbs (e.g. *dawaa* 'stun' above); and **"transitive" uses** of unergative verbs

(71) <u>Unergative verb</u>

    a. ??**Paau-zo** **keoi**!   b. *Nei dou **siu-maai** **keoi**!

      run-PERF 3SG   2SG DOU laugh-ADD 3SG

      Int: 'Run!'   Int: 'you laugh (just like the others)!'

(72) <u>Transitive use of unergative verb</u>

    a. **Paau-maai** {go maalaaicung/ ni loeng bou} **keoi**!   (post-verbal O)

      run-ADD CL marathon this two step 3SG

      'Go finish the marathon/ these two steps!'

    b. Zoeng {go maalaaicung/ ni loeng bou} **paau-maai** **keoi**!   (pre-verbal O with *zoeng*)

      DISP CL marathon this two step run-ADD 3SG

      'Go finish the marathon/ these two steps!'

    ● ✗ Unaccusative verbs

(73) <u>Unaccusative verb</u>

    a. *Aaming **lai-zo** **keoi**   b. ***Sei-zo** Aaming **keoi**

      Ming come-PERF 3SG   die-PERF Ming 3SG

      Int.: 'Ming should come.'   Int.: 'Ming should go die.'

➢ **Aspect**: The event must be telic, i.e. bounded (Man 1998)
- ✓ Perfective/ resultative verbs (VR)
- ✗ Imperfective/ bare verbs

(74) <u>Telic events (e.g. VR-compound, "Achievement")</u>
    a. **Silaan** ni bun syu **keoi**!   (post-verbal O)
       rip.off this CL book 3SG
       'Rip this book off!'
    b. Zoeng [ni bun syu] **silaan keoi**!   (pre-verbal O with *zoeng*)
       DISP   this CL book rip.off 3SG
       'Rip this book off!'

(75) <u>Atelic events (e.g. bare verb, "Activity")</u>
    a. Tai ni bun syu **(*keoi)**!   (post-verbal O)
       read this CL book 3SG
       Int.: 'Read this book!'
    b. *Zoeng [ni bun syu] tai **(keoi)** !   (pre-verbal O with *zoeng*)
        DISP   this CL book read 3SG
       Int.: 'Read this book!'

➢ A note on non-asserted contexts:
- Man (1998): *keoi* as a marker for non-asserted bounded clauses[10]
- While aspectual boundedness (=telicity) is strictly required, *non-assertedness* does not seem so.
- A preference instead of a restriction

(76) Aafai tai-zo bun syu (***keoi**ᵢ)   (Man 1998:54)
    Fai read-PERF CL book 3SG
    'A-fai has read that book.'

(77) Houcoi keoi bong ngo gaaudim-saai **di** **je**ᵢ **keoi**ᵢ zaa!
    fortunately 3SG help 1SG settle-ALL   CL.PL thing 3SG   SFP
    'Fortunately, he helped me to settle all those things! (Otherwise, I'd be in a mess.)'

- *Cf.* Mandarin: highly preferred in imperatives and degraded in other contexts (Kiki Liu p.c.)

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[10] Man (1998) original generalization is that "the minimal clause containing *keoi* cannot be asserted". Strictly speaking, the generalization is true for **Error! Reference source not found.** if a "minimal clause" does not contain any SFPs and adverbials.