

# Wh-agreement across three domains in Indonesian

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## 1 Background: Wh-agreement

This talk is about morphological wh-agreement, which is broadly characterized as special morphology triggered by A' movement (or wh-movement in the sense of Chomsky 1977, 1995) or an A' dependency.

The phenomenon is observed in many languages (Chung 1982, Zaenen 1983, Georgopoulos 1985, Tuller 1986, Chung and Georgopoulos 1988, Haik 1990, Watanabe 1996, Chung 1998, Reintges et al. 2006 and others).

### 1.1 Cross-linguistic properties of wh-agreement

Properties of wh-agreement are summarized in Reintges et al. 2006:

- (A) Wh-agreement is a reflex of A' movement (may occur with constituent questions; focus constructions; relatives)
- (B) Unlike other agreement phenomena, wh-agreement does not mark  $\phi$ -features, even in languages that have rich agreement. However, wh-agreement may reflect Case, grammatical function or category of the moved argument
- (C) Wh-agreement may be realized as lack of morphology, or special morphology that occur elsewhere in the language; but without semantic content
- (D) Morphological wh-agreement is marked on verbs or C/T
- (E) Wh-agreement comes in two “flavors”: (1) recursive, occurring along the path of movement; or (2) nonrecursive, where only the highest position is marked

Note: Properties (D) and (E) to be expanded based on Indonesian data.

### 1.2 Examples of wh-agreement

- **Irish: Morphological alternations in C** (McCloskey 2001, 2002)

- (1) Deir siad gur ghoid na síogaí í.  
say they C-[past] stole the fairies her  
'They say that the fairies stole her away.'

- (2) an ghirseach **a** ghoid na síogaí  
 the girl aL stole the fairies  
 ‘the girl that the fairies stole away’
- (3) an ghirseach **ar** ghoid na síogaí í  
 the girl aN stole the fairies her  
 ‘the girl that the fairies stole away’
- (4) rud **a** gheall tú **a** dhéanfá  
 thing aL promised you aL do[COND-S2]  
 ‘something that you promised that you would do’ (McCloskey 2001:67-68)
- ↔ Finite declarative clause (marked for tense): *go* (1)  
 ↔ A-bar movement across clause boundary: **aL** (2)  
 ↔ A-bar dependency with resumptive pronoun: **aN** (3)  
 ↔ Wh-agreement morphology may occur recursively in long distance extraction (4)

- **Chamorro: Morphological marking on verbs** (Chung 1998). (Note: Chamorro also has wh-agreement on C.)

- (5) Ha-fa’gasi si Juan i kareta.  
 agr-wash Juan the car  
 ‘Juan washed the car.’
- (6) Hayi **fum**a’gasi t i kareta?  
 who? WH[nom].wash the car  
 ‘Who washed the car?’
- (7) Hafa **fi**na’gasése-nña si Henry t pära hagu?  
 what? WH[obj].wash.Prog-agr Henry for you  
 ‘What is Henry washing for you?’ (Chung 1998:236)
- ↔ No A-bar movement with verb *fa’gasi* (5)  
 ↔ A-bar movement of nominative argument: **-um-** (6)  
 ↔ A-bar movement of objective argument: **-n-** (7)

## 2 Proposal

- Wh-agreement is marked on XPs that coincide with classic phases (C/T and the verbal domain). (Chomsky 2000, 2001)
- This suggests that if other XPs are phases in a particular language, then wh-agreement may be marked in other phasal domains as well.

**Claim:** Indonesian exhibits morphological wh-agreement on C, Voice and D.

- I re-frame well-known patterns of verbal morphology and complementizer alternations, and as well as novel data (*yang, kalau* as C) that support an analysis of wh-agreement
- I also present possessor extraction patterns that show wh-agreement in DP, which implicates D as a phase head in Indonesian

### 3 Wh-agreement on C

The overt complementizer *bahwa* introduces embedded declarative clauses in Indonesian:<sup>1</sup>

- (8) Aku pikir **bahwa** Susan mem-beli se-buah tas kemarin.  
1SG think COMP Susan ACTV-buy one-CLF bag yesterday  
'I think that Susan bought a bag yesterday.'

When A' extraction crosses C, it may not occur as *bahwa*. The C immediately following the moved DP occurs as *yang*.

- (9) tas **yang**/\***bahwa** Susan beli \_\_\_\_ kemarin  
bag COMP.FOC Susan buy yesterday  
'the bag that Susan bought yesterday'
- (10) tas **yang**/\***bahwa** kamu pikir  $\emptyset$ /\***bahwa** Susan beli \_\_\_\_ kemarin  
bag COMP.FOC 2SG think COMP Susan buy yesterday  
'the bag that you think Susan bought yesterday'

Movement over C is taken to be movement through the edge of the CP phase, i.e. through the specifier of CP. In long distance extraction, the highest C crossed by movement occurs as *yang*, while intermediate C must be null.<sup>2</sup>

#### Forms of C in Indonesian

- ↔ *bahwa*: introduces declarative clauses
- ↔ *yang*: **Wh-agreement** on highest C crossed by A' movement
- ↔ null C: **Wh-agreement** on intermediate C crossed by A' movement

This pattern does not follow either the recursive or nonrecursive patterns in Reintges et al. 2006, Property (E). Rather, wh-agreement morphology is marked differently on the highest C and intermediate C.

*Yang* has previously been treated as a focus marker or relative marker (e.g. Saddy 1991). However:

- *Yang* always occurs higher than subjects
- *Yang* does not form a constituent with the moved DP. Relatives may be headless; the head DP may also appear after the relative clause (see Jeoung 2018b).

### 4 Wh-agreement on Voice

Nominal extraction over an active verb requires a null prefix in Indonesian (this is a well-known pattern; see Cole et al. 2008; Saddy 1991; Voskuil 2000; among many others).

<sup>1</sup>*Bahwa* is often optional in declarative clauses, similar to English *that*. Also see Jeoung 2018a for discussion of the informal C *kalau*, which is omitted here for clarity but does not bear on the present discussion.

<sup>2</sup>Note that some examples of long distance movement are judged degraded by many speakers; however, a 1 or 2 pronominal subject in the matrix clause renders the sentence natural.

- (11) Susan mem-beli se-buah tas kemarin.  
Susan ACTV-buy one-CLF bag yesterday  
'Susan bought a bag yesterday.'
- (12) Apa **yang** Susan  $\emptyset$ -**beli**/\*mem-beli \_\_\_\_ kemarin?  
what COMP.FOC Susan buy/ACTV-buy yesterday  
'What did Susan buy yesterday?'
- (13) Kamu pikir siapa **yang** \_\_\_\_ mem-beli se-buah tas kemarin?  
2SG think who COMP.FOC ACTV-buy one-CLF bag yesterday  
'Who do you think bought a bag yesterday?'

The active verbal prefix *meN-* may occur when there is no extraction (11). However, when the object DP undergoes extraction, crossing the verb, the prefix *meN-* may no longer occur (12). In contrast, when the subject is extracted (13), the movement does not cross the verb and *meN-* is still licit.

#### Previous analyses of the pattern in (11-13).

- “blocking” or “deletion” effect (e.g. Voskuil 2000).
- Voice “agreement” Cole et al. (2008): the morphology on the verb registers the features of the extracted argument

#### Active voice morphology on Indonesian verbs

↔ meN-: active

↔  $\emptyset$ -: **Wh-agreement** in case of A' extraction

## 5 Wh-agreement on D

In possessive DPs the definite morpheme *-nya* may optionally occur on the possessum as in (15).

- (14) buku Siti  
book Siti  
'Siti's book'
- (15) tas-(nya) Fatima / tas-(nya) siapa  
bag-DEF Fatima bag-DEF who  
'Fatima's bag' / 'whose bag'

The possessor may also occur external to its possessive DP, as shown below. The possessor is extracted from subject position in (17) and the possessor is extracted from object position in (19).<sup>3</sup>

- (16) Rumah Adi di-rata-kan kemarin.  
house Adi PASS-flat-APPL yesterday  
'Adi's house was destroyed yesterday.'
- (17) Siapa **yang** rumah-**nya** di-rata-kan kemarin?  
who COMP.FOC house-DEF PASS-flat-APPL yesterday  
'Who is it that (his) house was destroyed yesterday?'

<sup>3</sup>See Jeoung 2018b for further possessor extraction data.

- (18) Adik mem-baca buku Siti.  
 who ACTV-read book Siti  
 ‘Brother is reading Siti’s book.’
- (19) Siapa **yang** adik  $\emptyset$ -baca buku-nya \_\_\_\_ ?  
 who COMP.FOC sibling read book-DEF  
 ‘Who is it that brother is reading (her) book?’

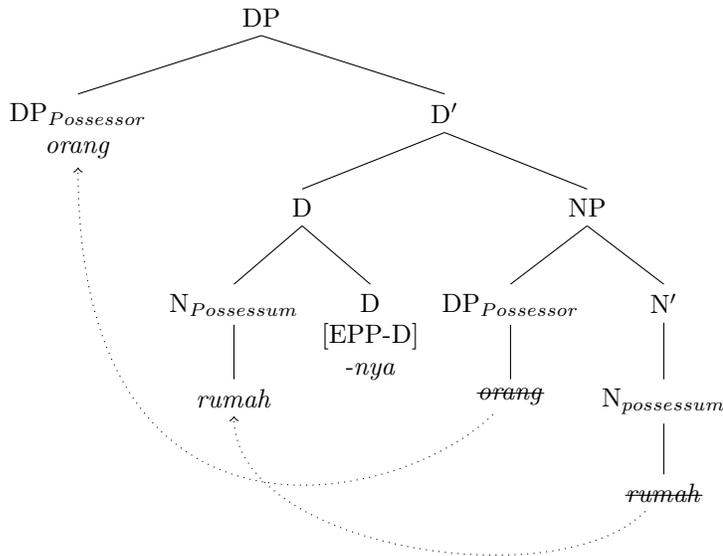
When the possessor occurs externally as in (17) and (19), the suffix *-nya* is obligatory.

Crucially, in (17) and (19), note that the required null verbal morphology (*baca* ‘read’) and the complementizer *yang* indicate that the possessor has undergone A’ extraction. (19) exhibits **three instances of wh-agreement** (on C, on the verb, and within the DP).

**A’ extraction through the edge of DP.** In possessor extraction, as in (17) and (19), the possessor escapes its DP by undergoing A’ movement through the edge of the phase.

- (20) Possessor extraction from DP

rumah orang  
 house person  
 ‘someone’s house’

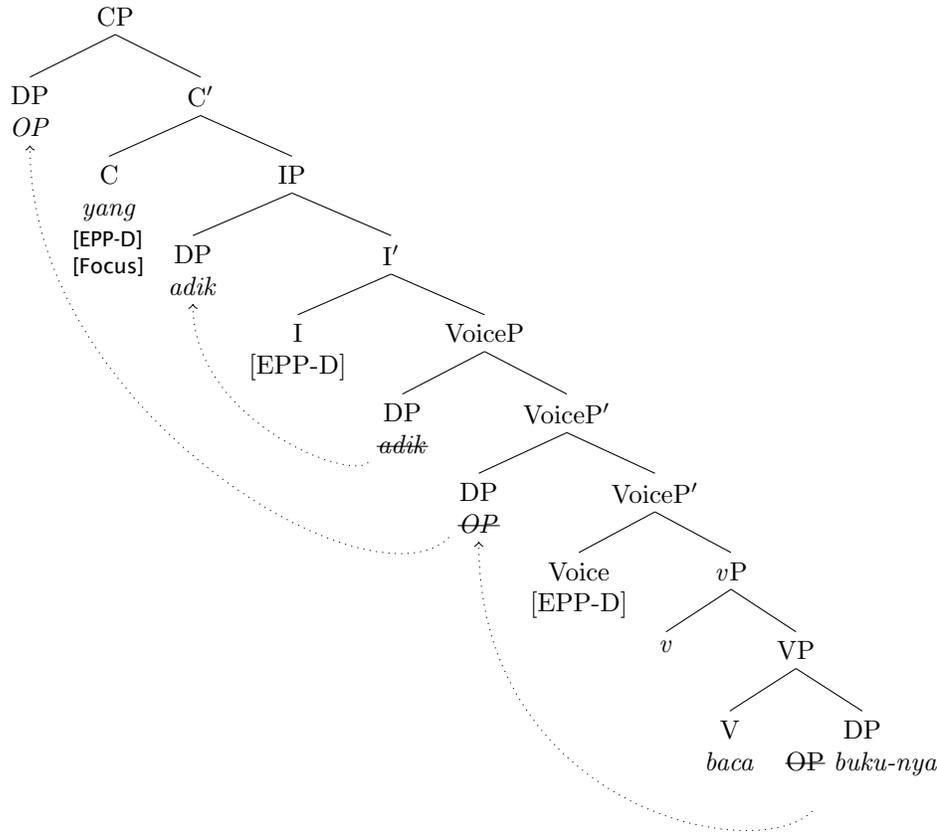


- An edge feature [EPP-D] on D must be checked by raising the possessor to SpecDP. From this position on the edge of DP, the possessor is visible for further movement.
- A’ movement of the possessor is next driven by [EPP-D] on Voice and C (see below). The movement of the possessor through the edge of VoiceP, then to its surface position in SpecCP, results in wh-agreement on each phase head (C, Voice, D).

(21) Possessor extraction to SpecCP<sup>4</sup>

Siapa **yang** adik  $\emptyset$ - **baca** buku-**nya** ---- ?  
 who COMP.FOC sibling read book-DEF

‘Who is it that brother is reading (her) book?’



### Possessive suffixes in Indonesian

↔ *-nya*: optional in possessive DPs

↔ *-nya*: obligatory **wh-agreement** in case of A' movement of possessor

**Previous analyses of -nya.** For possessive DPs, the suffix *-nya* has been called a (resumptive) 3 possessive pronoun (e.g. Voskuil 2000, Musgrave 2001). However, the following evidence argues against a resumptive analysis:

- *-nya* cannot occur resumptively in general (non-possessive) argument extraction.

<sup>4</sup>The *wh*-possessor is represented by OP, a null operator (see Jeoung 2018b for further discussion of pseudo-cleft structure and movement operations in Indonesian). The difference between *yang* and null C is derived by a [Focus] feature on the highest C crossed by movement.

- *-nya* co-occurs with lexical and pronominal possessors, which is unexplained if *-nya* is a 3 pronoun (22)
- *-nya* is not limited to 3 person, but occurs with extracted 1 and 2 person arguments (23)

(22) rumah-nya dia/mereka  
 house-DEF 3SG/3PL  
 ‘her house, their house’

(23) Aku/kamu yang rumah-nya di-rata-kan.  
 1SG/2SG COMP house-DEF PASS-flat-APPL  
 ‘It is I/you whose house was destroyed.’

## 6 Conclusion

- Indonesian complementizers, verbal morphology and possessive DPs exhibit **wh-agreement** according to properties (A-C) in Reintges et al. (2006)
- Indonesian exhibits a new pattern of wh-agreement on C, marking highest C and intermediate C differently, a third “flavor” of wh-agreement to be added to Property (E)
- Indonesian also expands the range of possible wh-agreement as described in Property (D). Previous cross-linguistic generalizations did not include morphological wh-agreement in the nominal domain (NP/DP)
- This supports the phasehood of DP in Indonesian, with D as a phase head that is marked for A’ movement

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