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PREFACE

Although the Austronesian Formal Linguistics Association (AFLA) has been holding annual meetings since 1994, until now it has had no consistent approach to the publication of its *Proceedings*. Papers from AFLA 2 and AFLA 14 were published as edited volumes; in other years the local organizers published the *Proceedings* in their Department's Working Papers series; in still other years no *Proceedings* was published. The 16th annual meeting of AFLA was held May 1-3, 2009, at the University of California, Santa Cruz. During the business meeting, the idea was floated that the *Proceedings* henceforth be published electronically, in a consistent format, at the AFLA website (<http://ling.uwo.ca/afla/>), which is generously hosted by the University of Western Ontario. The initial result is this volume, which has emerged very quickly indeed—less than six months after AFLA 16 was held. Our hope is that on-line publication of this and future volumes of the *Proceedings of AFLA* will enable research on the formal linguistics of Austronesian languages to reach as wide a readership as possible.

We want to thank UCSC's Linguistics Department and its Linguistics Research Center for hosting AFLA 16, the authors for submitting their papers so efficiently, and the University of Western Ontario for hosting the website at which this volume is posted. We also wish to acknowledge the precedent set by the *Proceedings of AFLA 12*, which was published on-line as *UCLA Working Papers in Linguistics* No. 12, and whose stylesheet heavily influenced the stylesheet we constructed for the *Proceedings of AFLA*.

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DIRECT ADJECTIVAL MODIFICATION IN JAVANESE*

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This paper proposes that direct adjectival modification is available for bare adjectives in Javanese. Building on previous research, which strongly suggested that all adjectives are indirect modifiers in this Austronesian language, this paper provides evidence from the behaviour of bare adjectives that direct modification is in fact available.

1. Introduction

In this paper, I propose that direct modification is available in Javanese, focusing in particular on bare adjectives. In other work, Vander Klok (to appear) provides strong evidence that Javanese has indirect modification based on scope island effects of the Degree Phrase in attributive comparatives. Because of this strong evidence, it is suggested that all adjectives in Javanese are indirect modifiers. This is summarized in Section 3. However, in drawing a distinction between bare vs. complex adjectives, outlined in Section 4, I demonstrate that bare adjectives may be correlated with direct modification, showing that Javanese is a language that has both types of modification. Specifically, I explore the behaviour of bare adjectives with respect to adjectival ordering restrictions (§5.1) and a language internal test, the ‘pre-possessor’ position (§5.2). The broad proposal of this paper is that complex adjectives in Javanese are correlated only with indirect modification,¹ while bare adjectives may be correlated with direct or indirect modification, depending on whether or not the relative marker is present.

Javanese is a Western Malayo-Polynesian language of the Austronesian language family, spoken by over 75 million people in Indonesia. Javanese has three registers: *ngoko* (informal), *madya* (semi-formal), and *krama* (formal). The data collected are in the *ngoko* register of the East Javanese variety.

2. Adjectival modification in Javanese

Adjectives, which are obligatorily post-nominal in Javanese (Horne 1961, Robson 1992), may be simply post-nominal, shown in (1) or introduced by the relative marker *sing* (which is also used in relative clauses introducing VP complements²), as in (2).

* I would like to thank my consultants Lathif Khuluq and Al Makin for sharing their language with me and making the study of Javanese possible. Thank you to my supervisors Junko Shimoyama, Jon Nissenbaum, as well as Bernhard Schwarz and Lisa Travis for their guidance and helpful insight. Also, many thanks to the participants at CLS 45, AFLA 16, and the McGill Bag Lunch for great questions and comments. This research reported here is partially supported by FQRSC grant (2008-NP-121129) to Junko Shimoyama. All errors are my own.

¹ Thank you to Jon Nissenbaum and Walter Pedersen for suggesting such a correlation.

² See Vander Klok (to appear) for examples.

- (1) **kayu télès** ora iso di-sulèt gèni
 wood wet the not can PASS-light.up fire
 ‘The damp firewood cannot be burned.’
- (2) **kayu sing télès** ora iso di-sulèt gèni
 wood REL wet the not can PASS-light.up fire
 ‘The damp firewood cannot be burned.’

The main question explored in this paper is: what is the structure of adjectival modifiers such as in (1)? While *sing télès* ‘REL wet’ in (2) is a clear example of an indirect modifier (i.e. having a relative clause structure) given the overt relative marker *sing*, the structure of the modifier in (1) is less clear. At face value, *télès* ‘wet’ in (1) could be an instance of direct modification (i.e. attributive), as in the parse (3), or of indirect modification, as in the parse (4).

- (3) [**Kayu** [_{AP} **télès**]] **kuwi** DIRECT MODIFICATION
 wood wet the
 ‘the damp firewood’
- (4) [**Kayu**₁ [_{CP} **sing** [_e₁ **télès**]]] **kuwi** INDIRECT MODIFICATION
 wood REL wet the
 ‘the damp firewood’

If the structure in (4) were the case, the syntax of the modifier in (1) and (2) would be the same, and there would only be a phonological difference: the relative marker *sing* is either phonologically overt or null. Vander Klok (to appear) suggests that this may be the case, as scope island effects in attributive comparatives provide strong evidence that adjectives in Javanese are indirect modifiers. However, in this paper, evidence from the ordering of bare adjectives (§5.1) and the ‘pre-possessor’ position (§5.2) provide evidence for direct modification. The argument for indirect modification is briefly summarized in the following section; please refer to Vander Klok (to appear) for details.

3. Evidence for ‘indirect modification’ in Javanese

Parallel to modifiers in (1) and (2), attributive comparative modifiers in Javanese may be introduced by the relative marker *sing*, or not.

- (5) a. Tomo nulis **makala luwih dawa** tinimbang Aminah
 Tomo write paper more long than Aminah
 ‘Tomo wrote a paper longer than Aminah.’
- b. Tomo nulis **makala sing luwih dawa** tinimbang Aminah
 Tomo write paper REL more long than Aminah
 ‘Tomo wrote a paper that is longer than Aminah.’

To understand which parse - (3) or (4) – is more appropriate for adjectival modifiers without an overt relative marker in Javanese like (5a), with more ‘material’ available in the modifier, we can now use the degree phrase in attributive comparative modifiers as a tool to probe the structure of adjectival modifiers.

That is, attributive comparatives generally have two readings (e.g. see (6)), and assuming a movement analysis of comparative constructions (Heim 1985, Heim 2001), these two different interpretations are formally represented by different scope heights of the degree phrase. Either the degree phrase may stay *in situ*, or it may extract out of the modified noun.

The diagnostic for the type of adjectival modification runs as follows. When both readings are available, this indicates the availability of direct modification, as nothing is blocking movement of the degree phrase to scope out. However, when only one reading is available (where the DegP remains *in situ*), this indicates the non-availability of direct modification. Therefore, the modifier must be indirect, as the relative clause structure of the indirect modifier blocks extraction of the degree phrase. For this diagnostic, it is crucial that relative clauses are islands in the language being tested. Consider the following data from English:

- (6) Jordan met a ***nicer* woman** than Natalie.
 a. Jordan met a woman who is nicer than Natalie is. DEGP IN SITU
 b. Jordan met a nicer woman than the woman that Natalie met. DEGP EXTRACTED
- (7) Jordan met a **woman *nicer*** than Natalie.
 a. Jordan met a woman who is nicer than Natalie is. DEGP IN SITU
 b. #Jordan met a nicer woman than the woman that Natalie met. #DEGP EXTRACTED

With a pre-nominal modifier *nicer* in (6), two interpretations are available. We can then conclude that direct modification is available for the pre-nominal modifier. In (7), however, the post-nominal modifier *nicer* gives rise to only one reading, where the degree phrase remains *in situ*. We can then conclude that direct modification is not available, and the post-nominal modifier in (7) must be an indirect modifier, with a relative clause structure. That is, because relative clauses in English are islands (Ross 1967, Chomsky 1977), I argue that the lack of ambiguity in (7) results from the islandhood of the indirect modifier.

Turning now to Javanese attributive comparatives, we can use this diagnostic to better understand the structure of adjectival modifiers that are not introduced by the relative marker *sing*, such as (5a) above. Specifically, we can ask if two interpretations are available or if only one interpretation is available. Importantly, Vander Klok (to appear) shows that relative clauses are islands in Javanese. Thus, in the case where only one reading is available, we can conclude that direct modification is not available, and modifiers in Javanese must be indirect modifiers. It turns out that (5) (repeated as (8)) only has one reading, where *Tomo wrote a paper longer than the length of Aminah’s body*; it cannot mean that *Tomo wrote a longer paper than Aminah did*.

- (8) Tomo nulis makala **luwih dawa tinimbang** [Aminah]
 Tomo write paper more long than Aminah
 ‘Tomo wrote a paper that is longer than Aminah.’
 # ‘Tomo wrote a longer paper than Aminah did.’

To express the unavailable meaning in (5), here the complement of the *timbang*-phrase must overtly spell out the information about the compared object, as in (9). (Recall that adjectives are obligatorily post-nominal in Javanese; the option of a different placement of the adjective resulting in a different type of modification is not available (cf. pre-nominal adjectival modifiers in English).)

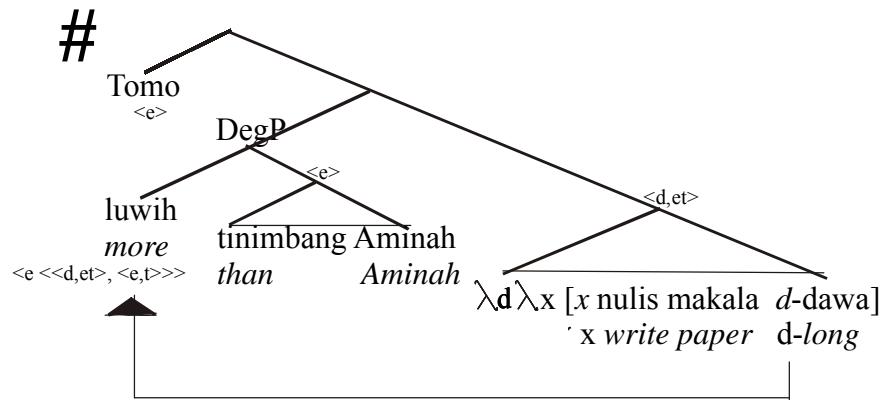
- (9) Tomo nulis makala luwih dawa tinimbang [(makala) sing di-tulis Aminah]
 Tomo write paper more long than paper REL PASS-write Aminah
 Lit: ‘Tomo wrote a paper longer than the paper that was written by Aminah.’

The following diagrams further illustrate this diagnostic by showing the two possible interpretations for (5a)/(8). I assume a Direct analysis (Bhatt & Takahashi 2007, 2008) for Javanese comparatives since the *timbang*-phrase selects only for a DP or PP complement. The 3-place comparative morpheme *luwih*, whose denotation is given in (10), takes a predicate of degrees and two individual arguments. This function relates *x* and *y* to a degree relation *P* iff there is some degree that *P* relates to *y* but not to *x*.

$$(10) \quad \|\text{-er}\| = \lambda x_{(e)}. \lambda P_{(d,et)}. \lambda y_{(e)}. \exists d[P(d)(y) = T \wedge P(d)(x) = F]$$

Diagram 1 shows how if the DegP *luwih* ‘more’ extracts out of the direct modifier *d-dawa* ‘d-long’, it would result in an unattested reading, namely that *Tomo wrote a longer paper than Aminah did*. Note that in (11), there is no syntactic structure intervening in between the modifier *dawa* ‘long’ and the noun *makala* ‘paper’. Therefore, nothing is available to block potential movement of the DegP.

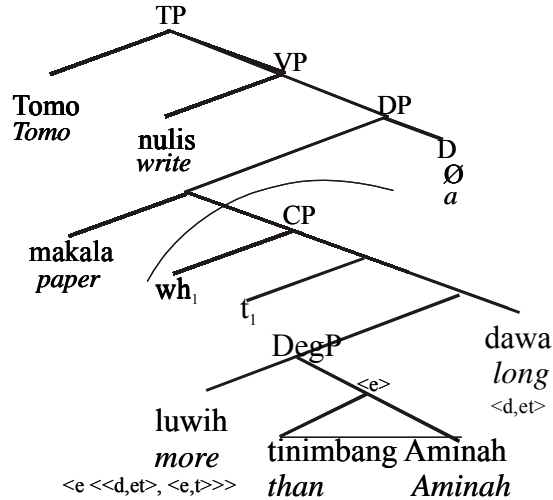
- (11) Potential reading of (5a)/(8)



To avoid the availability of direct modification generated by the structure in (11), the modifier must have a relative clause structure, as in (12). The intervening syntactic structure of the relative clause, as it is an island in Javanese, would block movement of the DegP in Javanese,

and would only allow a reading where the DegP remains *in situ*. Specifically, assuming wh-operator movement occurs in a relative clause, the string vacuous movement of the wh-operator indicates in the islandhood of the modifier in the semantics.

(12) DegP *in situ* reading of (5a)/(8)



In other words, because the reading where the DegP has extracted is unavailable in Javanese (11), it shows that direct modification is unavailable. Therefore, the adjectival modifier must be an indirect modifier, as (12) illustrates.

In sum, I argue that scope island effects of the attributive comparative data provide clear empirical support that adjectives in Javanese are indirect modifiers. Going back to our first question about adjectival modification in §2.2, it would then be reasonable to posit the parse in (4) as representative of adjectives like *télès* ‘wet’ (repeated here as (13)):

(13) [Kayu₁ [_{CP} *sing* [e₁ *télès*]]] kuwi INDIRECT MODIFICATION
 wood REL wet the
 ‘the damp firewood’

This hypothesis states that all adjectival modifiers always have a relative clause structure, regardless of the size of the modifier and regardless of whether the relative marker *sing* is phonologically overt or not. However, are all types of adjectives indirect modifiers? Moreover, what are the theoretical implications that a language would only employ one type of modification? This question is discussed in the following section (§4). In §5, I discuss different types of adjectives. In particular, I turn to the question of whether or not bare adjectives behave similarly to complex adjectives in that they are also indirect modifiers, as I have put forward for attributive comparative modifiers.

4. Theoretical implications of a ‘indirect-only’ type language

Based on the attributive comparative data which strongly suggests that adjectives in Javanese are indirect modifiers, Javanese would then fall into the camp of languages that lack direct modification such as Slave (Athabaskan) or Ika (Niger-Congo), as discussed by Baker (2003), Dixon (2004), or Edo (Niger-Congo), as suggested by Dixon (2004). The next step is to then ask what do these languages have in common that creates this typology? Baker (2003:210) suggests that these languages all must have a ‘Predicate Phrase’ to introduce any modifier. However, as he notes, this merely describes what is in common, but does not derive the common thread from any other feature of the grammar. If a language does have only indirect modification or only direct modification, it would be best to deduce this property from more basic properties of the language(s) in question.

Further, why are there so few languages that lack direct modification – is it simply because such languages are understudied? Or is it because these languages do in fact have direct modification, but this type of modification is more restricted? Shimoyama (to appear) and Yamakido (2000) show that for Japanese, a language that is traditionally analyzed as having only indirect modification, direct modification is in fact available. For example, Shimoyama (to appear) demonstrates that the comparative reading is available for superlatives in Japanese. This interpretation requires that the DegP extract out of the noun modifier, which in turn, suggests that the modifier is not actually within a finite complement island, but directly modifies the noun. In other words, that there is no scope island effect provides evidence that there is direct modification in Japanese, otherwise argued to only have indirect modification.

Section 5 addresses these questions by discussing different types of adjectives, namely bare adjectives. I propose that bare adjectives without an overt relative marker *sing* may be direct modifiers based on adjectival ordering restrictions and the ‘pre-possessor’ position. Thus, I show that Javanese is a language that has both indirect and direct modification.

5. Evidence for ‘direct modification’ in Javanese

Before jumping ahead to the conclusion that all adjectives are indirect modifiers in Javanese, this section pays closer attention to the size of the adjectival modifier. Specifically, I explore how bare adjectives such as *télès* ‘wet’ may behave differently from complex adjectives such as comparative modifiers (a distinction previously not discussed).

What do I mean by bare vs. complex adjectives? I assume that bare adjectives are nothing more than the adjective itself. Syntactically, bare adjectives involve minimally A^0 and maximally AP; they do not have any syntactic material in the specifier or complement of AP. Complex adjectives, in contrast, may come in different flavours: adjectival comparatives, adjectives with complements, intensified adjectives, etc. In terms of syntax, more syntactic structure is involved with complex adjectives than just A^0 or a plain AP. For instance, within the AP, complex adjectives may have a PP complement or a DegP specifier. Further examples of these two types of adjectives are given in (14) and (15):

(14) Bare adjectives:

a. gudèl **cilik**
buffalo-calf small
'a little buffalo-calf' (Robson 1992:111)

b. wong **enom** wis padha lungguh
person young PERF PLUR sit
'The young people have sat down.' (Robson 1992:113)

(15) Complex adjectives:

a. Comparatives
Tomo nulis makala [luwih **dawa** tinimbang Aminah]
Tomo write paper more long than Aminah
'Tomo wrote a paper that is longer than Aminah.' (repeated from(5))

b. Adjectives with complements
konco [sing **meri** karo tonggone]
friend REL jealous of neighbour-NE
'friend jealous of his/her neighbour' (21.05.2009-LK)

c. Intensified adjectives
kopiné Hasan [(sing) **pahit** banget]
coffee- DEF Hasan REL bitter very
'Hasan's very bitter coffee.' (adapted from Davies & Dresser 2005)

This paper focuses on the behaviour of bare adjectives. Aside from the discussion in §3 above on comparative modifiers, I leave a discussion on the behaviour of other types of complex adjectives for future research.

5.1. Evidence from the order of adjectives

In this section, I explore a correlation between bare adjectives and direct vs. indirect modification based on Sproat & Shih's (1991) observations on adjectival ordering. Assuming there is a universal ordering of adjectives, these authors propose that a restriction on the relative order of adjectives is correlated with direct modification, but no such restriction is observed for indirect modification. They argue that this correlation is observed in English. For example, the order of adjectives is restricted for direct modification, shown in (16), but not for indirect modification, as in (17):

SIZE > SHAPE

(16) a. small square table
 b. *square small table (Sproat & Shih 1991:565)

- (17) a. the table [that is small] [that is square]
 b. the table [that is square] [that is small]

Assuming that there is a correlation between adjectival ordering restriction and direct modification, we can use this as a test for Javanese. If bare adjectives are only indirect modifiers, one would expect that the ordering restriction would not apply when bare adjectives are not introduced by the relative marker *sing*. Broadly speaking, under an ‘only-indirect’ hypothesis, one would expect the same behaviour of the modifier with or without *sing*; this is observed with scope island effects for adjectival comparative modifiers, such as in §3.

However, the Javanese data does not show parallel behaviour with respect to adjectival ordering and the presence vs. absence of the relative marker *sing*. Specifically, adjectives in Javanese do observe restrictions on ordering without *sing*, as in (18), but not when in a *sing* relative clause, shown in (19).^{3, 4}

SHAPE < AGE

(18) Aku nemu kertas kothak tuwa // *...kertas tuwa kothak
 1SG find box square old box old square
 ‘I found an old square box.’ (16.03.2009-AM)

(19) Aku nemu kertas sing kothak tuwa // ...kertas sing tuwa kothak
 1SG find box REL square old box REL old square
 ‘I found an old square box.’ (16.03.2009-AM)

The data in (18) indicates that direct modification is available for bare adjectives. Crucially, this data illustrates that there is no covert *sing* for bare adjectives here, since they do not allow free ordering of adjectives. In other words, the difference between (18) and (19) regarding the adjectival ordering restriction show that the presence or absence of *sing* is linked to a different underlying structure for bare adjectives.

Thus, the results from the adjectival ordering test following Sproat & Shih’s (1991) generalization suggest that bare adjectives here may either be direct modifiers, *NP [AP]*, or indirect modifiers of the type *NP [sing AP]*, but not of the type *NP [sing AP]*.

Note that the relative ordering among adjectives in Javanese appears in the inverse order of the universal hierarchy, given in (20). For an account of how the order of the constituents within the DP is derived, see Ishizuka (under review).

³ It is not clear whether the adjectives following *sing*, as in (19), are both related within the same relative clause via coordination, or each adjective is indirectly modifying the noun. This question arises because *sing* can only be pronounced once; thus, *[N *sing* Adj *sing* Adj] is ill-formed. This may fall under the general PF constraint that Richards (2006) observes. Even if the structure of [NP *sing* Adj Adj] is unclear, and therefore whether the status of free ordering of the adjectives is indeed due to a relative clause structure or co-ordination, the main concern is that adjective ordering restrictions are observed without the relative marker *sing*, and this phenomenon is correlated with direct modification cross-linguistically.

⁴ Ishizuka (under review) suggests that the flexibility of the order when adjectives are in *sing* relative clauses is dependent on focus (ftnt. 13, p. 12).

- (20) Inverse order of the universal hierarchy for adjectives:
 [MATERIAL<NATIONALITY<GENDER<COLOUR<SHAPE<AGE<SIZE<SUBJECTIVE COMMENT]
 (Cinque, 2007, Sproat and Shih, 1991)

In effect, the ordering restriction appears to hold across all types of adjectives; see (Ishizuka, under review) for more examples.⁵

SIZE < SUBJECTIVE COMMENT

- (21) Aku nemu iwak cilik banter // *...iwak banter cilik
 1SG find fish small fast fish fast small
 ‘I found a fast small fish.’

COLOUR < SIZE⁶

- (22) ??Dullah dina iki nganggo klambi abang gedhe // *...klambi gedhe abang
 Dullah day this wear shirt red big shirt big red
 ‘Dullah wore a big red shirt today.’

Thus, assuming the correlation proposed by Sproat & Shih (1991) to be correct, this data shows that direct modification is available for bare adjectives, as Javanese observes restrictions on ordering without *sing*. If Javanese is a language that has only indirect modification, we would expect that the order of bare adjective would not matter.

5.1. Evidence from the ‘pre-possessor’ position

Another case where the syntactic behaviour of bare adjectives differs significantly from complex adjectives is noted by Davies & Dresser (2005), and also discussed in Ishizuka (under review). Davies & Dresser argue that only bare adjectives can occur in a pre-possessor position, but phrasal modifiers, including relative clauses, cannot. The ‘pre-possessor position’, a term taken from Davies & Dresser 2005, is the position between the noun and the suffix $-(n)é$.⁷ The linear

⁵ Ishizuka (under review) assumes that the relative ordering holds, and only presents examples according to the inverse universal hierarchy; no ungrammatical examples are presented.

⁶ Note that certain adjectives are more degraded than others, such as with *gedhe* ‘big’. In fact, another consultant does not accept stacked adjectives with *gedhe*:

(i) *gajah gedhe pinter kuwi lesu
 elephant big smart the hungry
 (‘The big smart elephant is hungry.’) (29.03.2007-LK)

Further, Ishizuka (under review:14) notes that this adjective “...needs to be in a *sing* RC when modifying an object NP but is used as a bare adjective when modifying a subject NP.” For my consultants, however, both *sing* RCs and ‘bare adjectives’ can modify either subject or object NPs. Clearly, more work is required to ascertain the individual syntactic properties of each class of adjective, but this does not take away from the main purpose of this paper.

⁷ The suffix $-(n)é$ is glossed as a definite marker in Davies & Dresser (2005), and as a ‘definite determiner’ under D^0 in Ishizuka (under review). This suffix is homophonous with the marker used in possessive constructions. My consultant (AM) consistently did not accept sentences with the $-(n)é$ suffix without an overt possessor, unless it was construed as “some one’s” object. Further fieldwork is necessary to fully understand the semantics of this marker.

order of the relevant elements inside the DP in Javanese is as follows (modified from Ishizuka, under review):

- (23) ...N – **A** – *né* – Possessor – Num – (sing) RC...
 ↑
 ‘pre-possessor position’

Examples (24)-(25) demonstrate that bare adjectives can occur in the pre-possessor position, for either subject or object position. The examples are taken from Davies & Dresser 2005.

Subject:

- (24) a. Muridé Siti **sing pinter** maca buku (D&D 2005:64)
 student-DEF Siti REL smart AV.read book
 ‘Siti’s smart student read a book.’
- b. Murid **pinteré** Siti maca buku (D&D 2005:61)
 student smart-DEF Siti AV.read book
 ‘Siti’s smart student read a book.’

Object:

- (25) Hasan toko [kucingé Atin **soklat** / ...kucing **soklaté** Atin] (D&D 2005:59)
 Hasan buy cat-DEF Atin brown / cat brown-DEF Atin
 ‘Hasan bought Atin’s brown cat.’

Bare adjectives can occur in the pre-possessor position with 1st and 2nd person possessive markers as well as with 3rd person (*-né*). Example (26) demonstrates this with the 1st person possessive marker *-ku* and adjective *gedhe* ‘big’:

- (26) a. omah**ku gedhe** kuwi ambrot
 house-MY big the collapse
 ‘My big house collapsed.’
- b. omah **gedheku** kuwi ambrot
 house big-MY the collapse
 ‘My big house collapsed.’ (16.03.2009-AM)

In contrast to bare adjectives, Davies & Dresser (2005) report that phrasal elements cannot appear in pre-possessor position. Phrasal elements include PPs, intensified adjectives, and importantly, relative clauses, as shown in the following examples from Davies & Dresser (2005:63-68).

- (27) a. Muridé Siti **saka Kamal** maca buku *PP
 student-DEF Siti from Kamal AV.read book
 ‘Siti’s student from Kamal read a book.’

b. * Murid **saka Kamalé** Siti maca buku

- (28) a. Siti ng-rasakké kopiné Hasan (sing) **pahit banget** *AP_{w/adverb}
 Siti AV-taste coffee-DEF Hasan REL bitter very
 ‘Siti tasted Hasan’s very bitter coffee.’

b. * Siti ng-rasakké kopi **pahit bangeté** Hasan

- (29) a. Muridé Siti **sing pinter** maca buku *RC
 student-DEF Siti REL smart AV.read book
 ‘Siti’s smart student read a book.’

b. * Murid **sing pinteré** Siti maca buku

Interestingly, there is variability with respect to stacked adjectives and coordinated adjectives occurring in the pre-possessor position. Davies & Dresser (2005:68) note that stacked adjectives and coordinated adjectives are possible in the pre-possessor position, although there is speaker variation. The variation reported by Davies & Dresser (2005) is speculated to be either because of the weight of the adjective or the particular adjectives chosen. However, Ishizuka (under review) reports that coordinated adjectives are not accepted in this position, but stacked adjectives are. My own fieldwork follows the trend reported by Ishizuka for coordinated adjectives, but stacked adjectives are equally unacceptable in the pre-possessor position. Table 1 below provides an overview of what is reported to be able to occur and not occur in the pre-possessor position. These differences may be due to dialectal variations, as Javanese is a language noted for its many variations.⁸

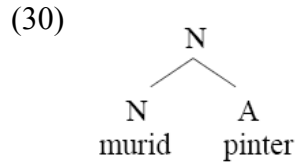
Table 1. Overview of items in ‘pre-possessor’ position

Pre-possessor Position	D&D (2005)	Ishizuka (under review)	Vander Klok (fieldwork 2008-9)
<i>Bare adjectives</i>	✓	✓	✓
<i>stacked bare adjectives</i>	✓ (no limit specified, speaker variability)	✓ (max two)	✗
<i>coordinated adjectives</i>	✓ (speaker variability)	✗	✗
<i>Intensified adjectives</i>	✗	✗	✗
<i>Adjective within sing RCs</i>	✗	✗	✗
<i>Preposition Phrases</i>	✗	✗	✗

⁸ In fact, both of my consultants and Ishizuka’s are speakers from East Java. While Davies & Dresser (2005) do not specify where their consultant(s) are from, the data suggests that they are from Central Java. This may partially explain the differing views on allowing coordinated and stacked adjectives in the pre-possessor position.

What does this data tell us about direct vs. indirect modification in Javanese? To answer this question, it will first be useful to review how Dresser & Davies (2005) and Ishizuka (under review) analyze the restrictions on the distribution of the pre-possessor position.

Davies & Dresser (2005) propose that adjectives adjoin directly to the noun they modify as A^0 , the result being a complex N^0 . Thus, *murid pinter* ‘smart student’ would have the following structure:



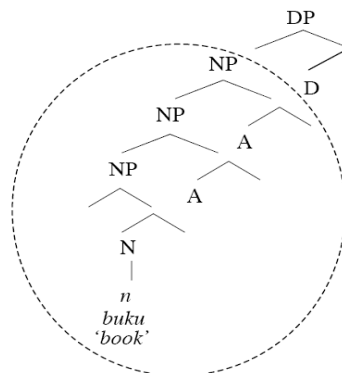
The adjective and noun combine to form a complex noun head rather than a phrasal category. The complex N^0 moves to head-adjoin to D^0 by head-movement. To account for the pre-possessor restrictions, the proposed generalization is that “ $-(n)é$ affixes to N and to no other category” (Davies and Dresser 2005:67).

Ishizuka (under review) expands on the data presented in Davies & Dresser 2005, and notes that for her consultant, there is a restriction on recursion of adjectives that may occur in the pre-possessor position. That is, a maximum of two bare adjectives can occur in the pre-possessor position. Furthermore, she observes that in the pre-possessor position, intensified adjectives as well as coordinated adjectives are not accepted.

In Ishizuka’s account, this author takes a different stance than Davies & Dresser (2005) on the general syntactic structure of the Javanese DP. Ishizuka demonstrates that the constituents in the Javanese DP are much less ‘free’ than Davies & Dresser (2005) purport it to be. To account for the fixed order, Ishizuka proposes that the word order is derived by XP roll-up movement, rather than head movement. Thus instead of a restriction on what the suffix $-(n)é$ may attach to, Ishizuka proposes that there is a restriction on the size of the phrase that can occupy Spec,DP.⁹ She states:

- (31) At the end of the derivation, Spec,DP cannot contain a constituent more complex than (a) containing a phonologically overt n . (Ishizuka, under review: 15)

(a)



⁹ This restriction is argued to be a Complexity Filter: “They are sensitive to spelled-out material only, and restrict the ‘size’, ‘shape’ or ‘internal complexity’ of constituents in their Spec position, where size is calculated in terms of the number of nodes that dominate the most deeply embedded phonological material” (Ishizuka, under review:15)

Thus, the size and shape restriction proposed by Ishizuka will allow the linear surface orders of [NP], [N-A], and [N-A-A] in the pre-possessor position. However, this restriction will disallow [N-A-A-A] because it exceeds the size limit. Ishizuka argues that it will also disallow intensified adjectives [NP [A [DEGR]]] and coordinated adjectives [NP [AP [and AP]]] in the pre-possessor position because the structure does not obey the shape allowed by the restriction.

Having reviewed how Davies & Dresser (2005) and Ishizuka (under review) syntactically represent adjectives in the pre-possessor position, we are now in a position to assess what this means in terms of the type of modification. While their analyses differ syntactically, the main point is that both proposals do not posit intervening functional structure in between the noun and the adjectival modifier. For Davies & Dresser (2005), these authors term A^0 adjunction to N^0 as ‘attributive modification’, and it forms a complex noun head. For Ishizuka (under review), the A^0 is adjoining to a maximal projection, NP, the result being an NP, and the order of adjectives for Ishizuka is obtained via XP roll-up movement. The fact that relative clauses with an overt relative marker *sing* and other phrasal elements do not occur in the pre-possessor position strongly suggests that covert *sing* is also not available. While this is not conclusive evidence, the data points to this end, and lends further support that bare adjectives occur as direct modifiers. Importantly, this refutes the hypothesis of indirect modification across-the-board.

6. Typological considerations

In closing, I would like to consider some typological issues that Javanese raises. Javanese, at the outset, appeared to have only indirect modification. Further investigations revealed that this language also has direct modification. Similarly, Japanese has traditionally been a language analyzed as only having indirect adjectival modification. Recent work by Shimoyama (to appear) and Yamakido (2000) suggest that, actually, Japanese does have direct modification as well. One interesting difference between Javanese and Japanese remains—in Javanese, a restriction on adjectival ordering was evidence that direct modification is available; in Japanese, however, there is no restriction on adjectival ordering. Perhaps this fact can be explained given that Japanese allows scrambling, but Javanese does not.

Importantly, in-depth investigation then reveals that both types of modification are employed and avoids the issue of why a language would only employ one option of modification. A call is then made to reexamine the claims by Baker (2003) and Dixon (2004) for languages such as Slave, Ika and Edo that indirect modification is truly the only option available.

7. Conclusion

To conclude, I would like to return to the question raised at the beginning of this paper concerning what structure adjectival modification would have without the presence of an overt relative marker *sing*. It appears that for complex adjectival modifiers, parse (32) would be best representative.

- (32) ...[makala [_{CP} *sing* [luwih dawa [tinimbang Aminah]]]]
paper REL more long than Aminah

That is, I suggest that all complex adjectives indirectly modify the noun whether or not the relative marker is overt, given the scope island effects shown with attributive comparatives. Thus for complex adjectives, the presence or absence of the relative marker *sing* does not change syntactic structure. Further research is required to better understand the behaviour of adjectives with complements and intensified adjectives.

For bare adjectives, however, it seems that the presence or absence of *sing* determines whether it indirectly or directly modifies the noun, as shown by word order restrictions and distributional restrictions with regard to the pre-possessor position. Thus, there is no covert *sing* for bare adjectives. Without an overt relative marker, parse (3) (repeated here as (33)) would represent bare adjectives.

- (33) [Kayu [_{AP} *télès*]] kuwi
wood wet the
'the damp firewood'

In sum, I hope to have shown in this paper the beginnings of how bare vs. complex adjectives, overt vs. covert relative marker *sing*, and direct vs. indirect modification are connected in Javanese.

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