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the syntax of 'standard' Indonesian modals

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outline

1. introduction
2. delineating the category 'modal'
3. the syntax of modals
4. Indonesian v. Malay modals
5. for future research

modality

(1) We **can/could/should/must/may/might** talk about modals.

- Palmer 1990: 2: ‘... there is no simple, clearly definable semantic category... that **modality is concerned with the “opinion and attitude of the speaker”** seems a fairly helpful preliminary definition... very different formal systems ... have much in common in the terms of the meanings that they express.’
- language-specific criteria for the category ‘modal’ are necessary, as the syntactic realization of modals varies cross-linguistically
- **research objective:**
how does ‘Standard’ Indonesian encode modality?

modality

the auxiliary verb – main verb scale (Quirk et al 1985: 137)

uniclausal ↑ ↓ biclausal	central modals	<i>can, could, may, might, shall, should, will, would, must</i>
	marginal modals	<i>dare, need, ought to, used to</i>
	modal idioms	<i>had better, would rather/sooner, BE to, HAVE got to</i>
	semi-auxiliaries	<i>HAVE to, BE about to, BE able to, BE bound to, BE going to, BE obliged to, BE supposed to, BE willing to</i>
	catenatives	<i>happen to, KEEP +-ing participle</i>
	main verb + non-finite clause	<i>HOPE + to infinitive, BEGIN + -ing participle</i>

- English modals do not yield a biclausal structure, and have specific properties distinguishing them from verbs and auxiliaries

modality

distinguishing auxiliary verbs from main verbs (Quirk et al 1985: 137); Palmer 1990

	<i>auxiliary</i>	<i>main verb</i>
a. negation	She cannot/can't sleep.	* She hopes not/hopesn't to sleep.
b. inversion	Can she sleep?	* Hopes she to sleep?
c. 'emphatic positive'	* She DOES can sleep.	She DOES hope to sleep.
d. emphatic affirmation	She CAN sleep.	# She HOPES to sleep.
e. ellipsis of complement	I can go if you can .	* I hope to go if you hope .
f. 'code'	I can go and so can you.	* I hope to go and so hope you.
g. 'independence of subject'	I can ride this bike. ~ This bike can be ridden by me.	I hope to ride this bike. ≠ This bike hopes to be ridden by me.
h. bare infinitive	I can go. * I can to go.	* I hope go. I hope to go.

distinguishing 'central modals' from other auxiliary verbs (Quirk et al 1985: 137; Palmer 1990)

	modal	auxiliary
a. non-finite forms	* I want to can go. * She is canning to sleep. * She has canned to sleep.	I want to be famous. I am being reasonable. I have been famous.
h. 3SG -s form	* She cans sleep.	She does sleep.

modality

one key distinction:

- **epistemic:** the speaker's attitude to the truth value or factual status of the proposition
- **root:** events that are not actualized, events that have not taken place but are merely potential
- in many languages, epistemic and root modality appear to not be overtly differentiated lexically or morphosyntactically
- whether one or both readings are easily accessed depends largely on context

(2) You **must** know French.

epistemic: It is a necessary assumption that you know French.

root: You are required to know French.

modality

root modality subdivides into:

- **deontic** modality: obligation or permission, determined by an external source
- **dynamic** modality: an internal capability or willingness
- languages can, but often do not, encode this distinction lexically or morphosyntactically

(3) You **can** swim across the lake.

deontic: You have permission to swim across the lake.

dynamic: You are capable of swimming across the lake.

modality

another key distinction:

- **possibility**
- **necessity**
- languages typically encode this distinction lexically and/or morphosyntactically

(4) You **must** know French.

epistemic: It is a necessary assumption that you know French.

root: You are required to know French.

(5) You **could** know French.

epistemic: It is a possibility, based on what I know, that you know French.

root: You are capable of knowing French.

current research goals

- Posit a set of syntactic criteria that define the category ‘modal’ in Indonesian
 - Not all elements that have a modalesque meaning are members of this syntactic category.
- Characterize how broad subcategories of modality are encoded in Indonesian
- Utilize a theoretical framework to better understand where Indonesian modals fit in crosslinguistically
 - Account for robust co-occurrence patterns and other defining characteristics of modals
- Contribute to the understanding of the landscape of the ‘Standard’ Indonesian IP

Indonesian modals

I will argue that the following distinctions are encoded syntactically in Indonesian:

- epistemic ~ root
- possibility ~ necessity
- these four possible combinations map onto distinct structural positions in the narrow syntax
- the dynamic ~ deontic distinction is encoded lexically
 - cooccurrences of dynamic and deontic modals are restricted

And that modals are further characterized by the following properties:

- they are phrasal
- they are nonfinite

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a proposed inventory of modals

epistemic

necessity: PASTI

possibility:
MUNGKIN, BISA

root

necessity: HARUS,
MESTI, PERLU

possibility: BOLEH;
MAMPU, SANGGUP,
SEMPAT, (DAPAT),
BISA

modals are phrasal

- all modals permit negation of the proposition (modal > NEG)
- all modals can also be directly negated (NEG > modal)
 - modals' ability to be modified suggests they are phrasal

(6) Kamu **harus** **tidak** makan kue.
2SG MUST NEG eat cake
'You must not eat cake.'

(7) Kamu **tidak** **harus** mencuci piring.
2SG NEG MUST ACT-wash dish
(Thanks for offering, but) 'You don't have to wash the dishes.'

modals are phrasal

- all modals permit negation of the proposition (modal > NEG)
- all modals can also be directly negated (NEG > modal)
 - modals' ability to be modified suggests they are phrasal

(8) Hari ini kamu **boleh tidak** pergi ke sekolah.
day this 2SG MAY NEG go to school
'Today, you're allowed to not go to school.'

(9) Kamu **tidak boleh** menonton film itu.
2SG NEG MAY ACT-watch film that
'You are not allowed to watch that film.'

modals are phrasal

- all modals permit negation of the proposition (modal > NEG)
- all modals can also be directly negated (NEG > modal)
 - modals' ability to be modified suggests they are phrasal

(10)# Hari ini, kamu **tidak boleh tidak** pergi ke sekolah.
day this 2SG NEG MAY NEG go to school
'Today, you're not allowed to not go to school.'

(11) Hari ini, kamu **harus** pergi ke sekolah.
day this 2SG MUST go to school
'Today, you have to go to school.'

modals are phrasal

- all modals permit negation of the proposition (modal > NEG)
- all modals can also be directly negated (NEG > modal)
 - modals' ability to be modified suggests they are phrasal

(12) Obama **pasti** **tidak** menang.

Obama CERTAIN NEG win

'It is certain that Obama will not win.'

'Obama must not have won.'

(13) Obama **tidak** **pasti** menang.

Obama NEG CERTAIN win

'It is not certain that Obama will win.'

'It's not certain whether Obama won.'

modals are phrasal

- all modals can occur clause-initially in *yes-no* questions, bearing the Q marker *-kah*, like markers of tense and negation

(14) **Haruskah/Akankah** kamu datang?

MUST-Q/FUT-Q 2SG come

‘Do you have to come?’/‘Will you come?’

(15) **Tidakkah** Siti membaca buku itu?

NEG-Q Siti ACT-read book that

‘Didn’t Siti read that book?’

(16) ***Sedangkah** Siti membaca buku itu?

PROG-Q Siti ACT-read book that

intended meaning: ‘Isn’t Siti reading that book?’

modals are phrasal

- all modals can occur clause-initially in *yes-no* questions, bearing the Q marker *-kah*, similar to markers of tense and negation

(17) **Tidak akankah** Siti membaca buku itu?
NEG FUT-Q Siti ACT-read book that
'Won't Siti read that book?'

(18) **Akankah** Siti tidak membaca buku itu?
FUT-Q Siti NEG ACT-read book that
'Will Siti not read that book?'
(I predicted that she wouldn't, and I'm looking for confirmation.)

modals are phrasal

- all modals can occur clause-initially in *yes-no* questions, bearing the Q marker *-kah*, similar to markers of tense and negation

(19) **Haruskah** dia **bisa** membaca?

MUST-Q 3SG CAN ACT-read

‘Ought he be able to read?’

(20)(?) **Harus** **bisakah** dia membaca?

MUST CAN-Q 3SG ACT-read

‘Ought he be able to read?’

modals are phrasal

- all modals can occur clause-initially in *yes-no* questions, bearing the Q marker *-kah*, similar to markers of tense and negation

(21) Ali **sudah mau** minum kopi.

Ali already FUT drink coffee

'Ali is about to drink coffee.'

(22) **Sudah maukah** Ali minum kopi?

already FUT-Q Ali drink coffee

'Is Ali about to drink coffee?'

(23)* **Sudahkah** Ali **mau** minum kopi?

(24)* **Maukah** Ali **sudah** minum kopi?

modals are non-finite

- modals can appear in tenseless clauses
 - the nominal complement of presentational *ada*, which Nomoto (2006) argues lacks tense

(25) Ada orang **bisa** lari cepat.
EXIST person CAN run fast
‘There is someone [who] can run fast.’

modals are non-finite

- modals can appear in tenseless clauses
 - the complement of control *mau/pengen* ‘want’, which contains PRO as subject (Polinsky and Potsdam 2008)

(26) Ali pengen [PRO **bisa** masak nasi goreng]

Ali want [PRO CAN cook rice fry]

‘Ali wants to be able to cook fried rice’ (but he doesn’t know how yet)

(27)*Ali pengen [dirinya masak nasi goreng]

Ali want [self cook rice fry]

intended meaning: ‘Ali wants to be able to cook fried rice’

modals are non-finite

- modals can appear in tenseless clauses
 - the complement of ECM *mau* 'want'

(28) Ali mau (*kalau/bahwa) ibunya **bisa** masak nasi goreng.
Ali want (COMP) mother+3SG CAN cook rice fry
'Ali wants (*for) his mom to be able to cook fried rice.'

(29) Ali suka bahwa ibunya **bisa** masak nasi goreng.
Ali likes COMP mother+3SG CAN cook rice fry
'Ali likes (the fact) that his mother can cook fried rice.'

modals are non-finite

- modals can appear in contexts that resist finite T

(30) Ali memutuskan untuk ibunya **harus** masak nasi goreng.
Ali ACT-decide for mother+3SG MUST cook rice fry
'Ali decided for his mom to have to cook fried rice.'
(‘Ali decided his mom would have to cook fried rice.’)

(31)*Ali memutuskan untuk ibunya **akan** masak nasi goreng.
Ali ACT-decide for mother+3SG FUT cook rice fry
'Ali decided for his mom to cook fried rice.'
(‘Ali decided his mom will cook fried rice.’)

modals are non-finite

- modals easily co-occur (with certain restrictions that will be discussed soon)
- modals can co-occur with finite T

(32) Ali **harus bisa** membaca untuk masuk kelas ini.
Ali MUST CAN ACT-read for enter class this
'Ali must be able to read to enter this class.'

(33) Dia **bisa akan** lulus tahun ini.
3SG CAN FUT graduate year this
'It is possible that he will graduate this year.'

a proposed inventory of modals

epistemic

necessity: PASTI

possibility:
MUNGKIN, BISA

root

necessity: HARUS,
MESTI, PERLU

possibility: BOLEH;
MAMPU, SANGGUP,
SEMPAT, (DAPAT),
BISA

epistemic necessity

- *pasti* 'certain'
- prediction and conclusion

(34) Obama **pasti** menang.

Obama CERTAIN win

'Obama is sure to win.'

'Obama must have won.'

- no root interpretation available
* 'Obama has to win.'

root necessity

- *harus, mesti (musti)* ‘must, have to’

(35) Obama **harus** menang.
Obama MUST win
‘Obama has to win.’

- no epistemic meaning available
 - * ‘Obama must win.’
 - * ‘Obama must have won.’

root necessity

- *perlu* 'need to'

(36) Saya **perlu/*memerlukan** membeli mobil.
1SG NEED/ACT-need-APP ACT-buy car
'I need to buy a car.'

(37) Saya **perlu/memerlukan** mobil.
1SG NEED/ACT-need-APP car
'I need a car.'

epistemic possibility

- *mungkin* 'might; it is possible that'

(38) Ali **mungkin** membaca buku hari ini.
Ali MIGHT ACT-read book day this
'Ali might read a book today.'

- no root interpretation available:
* 'Ali is allowed to read a book today.'

root possibility

- *boleh* 'may (is permitted/allowed to)'
- never has a dynamic reading; for that, *bisa*

(39) Ali **boleh** membaca buku hari ini.
Ali MAY ACT-read book day this
'Ali is allowed to read a book today.'
* 'Ali might read a book today.'
* 'Ali can read a book today.'

root possibility

- *mampu* ‘can afford to’; an extraordinary ability (not a skill) that involves e.g. financial capability, strength....
- *sanggup* bundles willingness (perhaps) with some sort of extraordinary ability
- *sempat* ability having to do with time
- some disagreement between speakers on the semantics and stylistics of *mampu* and *sanggup*
- never have a dynamic meaning

(40) Ali **mampu** menyelesaikan masalah itu.

Ali CAN ACT-finish problem itu

‘Ali could (is capable of) finishing that (extremely difficult) problem’

epistemic and root possibility

- *bisa* ‘can [=it is possible that]’; ‘can [=is capable of]’; ‘can [is allowed to]’
- most neutral (both semantically and stylistically) means of expressing possibility
- the two *bisa* don’t appear to co-occur

(41)epistemic *bisa*:

Siti **bisa** membaca buku itu nanti.

Siti CAN MENG-read book thatlater

‘Siti could read that book later.’ (= It is possible that she is planning to read the book during her spare time.)

(42)root *bisa*:

Siti **bisa** membaca buku itu.

Siti CAN MENG-read book that

‘Siti is able to (has the ability to) read that book.’

‘Siti is allowed to read that book.’

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cooccurrence patterns

(43) epistemic > root :

Ali **pasti** **harus** membeli susu.
Ali CERTAIN MUST buy milk
'For sure, Ali has to buy milk.'

(44)* root > epistemic:

*Obama **bisa** **pasti** menang.
Obama CAN CERTAIN win
intended meaning: 'It is possible that Obama will win for sure.'

cooccurrence patterns

(45) epistemic necessity > root necessity:

Ali **pasti** **harus** membeli susu.
Ali CERTAIN MUST ACT-buy milk
'For sure, Ali has to buy milk.'

(46) *root necessity > epistemic necessity:

* Ali **harus** **pasti** membeli susu.
Ali MUST CERTAIN ACT-buy milk
'Ali has to for sure buy milk.'

cooccurrence patterns

(47) epistemic possibility > root possibility:

Ali **mungkin** **bisa** membaca buku itu.

Ali MIGHT CAN ACT-read book that

'Ali might be able to read that book.'

= 'It is possible that Ali is able to read that book.'

(48)* root possibility > epistemic possibility

* Ali **bisa** **mungkin** membaca buku itu.

Ali CAN MIGHT ACT-read book that

intended meaning: 'Ali is able to maybe read that book.'

cooccurrence patterns

(49) epistemic necessity > epistemic possibility:

Obama **pasti** **bisa** menang.

Obama CERTAIN CAN win

'For sure, it's possible for Obama to win.'

(50)* epistemic possibility > epistemic necessity:

* Obama **bisa** **pasti** menang.

Obama CAN CERTAIN win

intended meaning: 'It's possible that Obama will win for sure.'

cooccurrence patterns

(51) root necessity > root possibility:

Ali **harus bisa** membaca untuk masuk kelas ini.
Ali MUST CAN ACT-read for enter class this
'Ali must be able to read to enter this class.'

(52)* root possibility > root necessity:

*Ali **bisa harus** membaca.
Ali CAN MUST ACT-read
intended meaning: 'Ali is capable of being required to read.'

cooccurrence patterns

(53) epistemic necessity > root possibility:

Ali **pasti** **bisa** membaca buku itu.
Ali CERTAIN CAN ACT-read book that
'Ali is certainly capable of reading that book.'

(54) root possibility > epistemic necessity

*Ali **bisa** **pasti** membaca buku itu.
Ali CAN CERTAIN ACT-read book that
'Ali is capable of certainly read that book.'

modals and tense

(55)epistemic > T :

Dia **bisa** **akan** lulus tahun ini.
3SG CAN FUT graduate year this
'It is possible that he will graduate this year.'
* 'He is capable of graduating this year.'

(56)T > root:

Dia **akan** **bisa** naik sepeda moto ke sekolah nanti.
3SG FUT CAN ride bicycle motor to school later
'He will be able to ride his motorcycle to school later.' (He is learning how.)
* 'It is possible that he will ride his motorcycle to school later.'

modals and tense

(57) epistemic > T:

Ali **mungkin** **mau** membaca buku itu,
Ali MIGHT FUT ACT-read book that
atau dia **mungkin** **mau** pergi ke mall.
but 3SG MIGHT FUT go to mall

'It's possible that Ali is going to read that book, or it is possible that he is going to go to the mall.'

(58) T > root:

Ali **mau** **bisa** membaca buku itu.
Ali want CAN ACT-read book that

'Ali wants to be able to read that book.'

* 'Ali is going to be able to read that book.'

the syntax of modals

How is the epistemic-root distinction encoded syntactically?

1. Epistemic and root modals have different lexical properties

- Ross 1969:
epistemic modals are raising verbs, like *seem* (one-place predicates)
root modals are control verbs, like *try* (two-place predicates)

(59) You must be an ambassador.

a. epistemic: **must** (you be an ambassador)

= It must be the case you are an ambassador

b. root: **must** (you, be an ambassador)

≠ It must be the case you are an ambassador

the syntax of modals

How is the epistemic-root distinction encoded in different languages?

1. Epistemic and root modals have different (?) lexical properties

- Picallo 1990 (for Catalan): epistemic modals are functional (I), and root modals are lexical (VP adjuncts)
- Wurmbrand 2003, Aelbrecht 2009, 2010 (for Dutch): both epistemic and root modals are raising verbs

2. Epistemic and root modals overtly occupy different positions

- Cinque 1999

3. Epistemic and root modals covertly occupy different positions

- Kratzer 1977, 1981, 1991: modals are quantifiers
- McDowell 1987: epistemic modals undergo quantifier raising
- Butler 2003: both epistemic and root modals undergo QR, but to different positions

the syntax of Indonesian modals

- Indonesian modals overtly occupy distinct structural positions (cf. Cinque)
- The modals are XP adjuncts licensed by the corresponding (null) head (cf. Cinque)
- The positions mirror the scopal relationships posited by Butler

C... >
Mod_{EpistemicNecessity} >
Mod_{EpistemicPossibility} >
T >
Mod_{RootNecessity} >
Mod_{RootPossibility} >
v...

the syntax of Indonesian modals

- even root modals appear to be raising categories:
actives and passives are truth-conditionally equivalent

(60) Bos Ali **bisa** memecatnya.

boss Ali CAN ACT-fire+3SG

'Ali's boss can (has the ability/power to) fire him.'

(61) Ali **bisa** dipecat oleh bosnya.

Ali CAN PASS-fire by boss+3SG

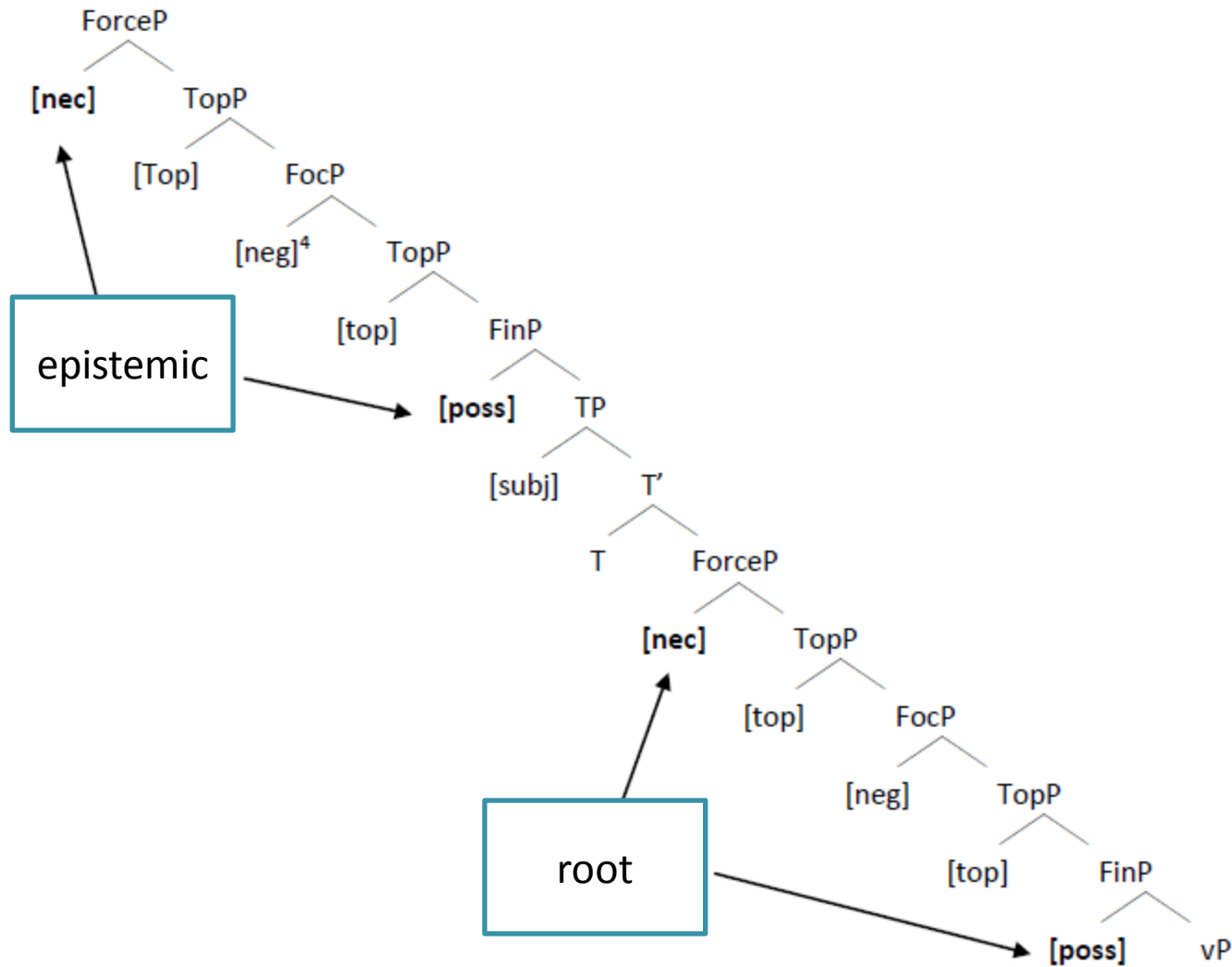
'Ali can be fired by his boss.'

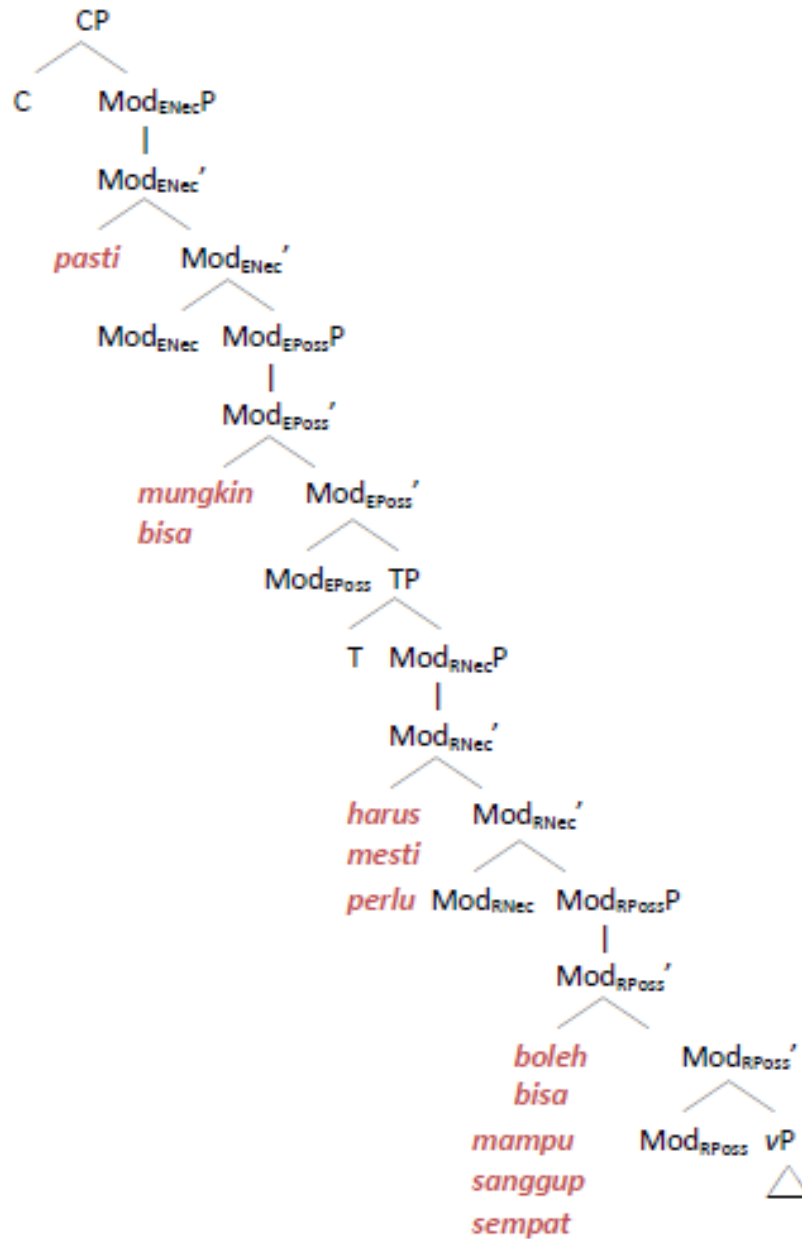
→ not a statement about Ali's capabilities, but those of his boss

Cinque 1999: the 'cartographic' approach

- a universal hierarchy of clausal functional projections:
Mod_{Epis} ... > Mod_{Nec} > Mod_{Poss} > Mod_{Vol} > Mod_{Obl} > Mod_{Abil/Perm}
(Cinque 1999: 81)
- interleaved with projections dealing with Tense, Aspect, and Mood
- doesn't carve up the modal space in the same way as Indonesian

Butler 2003: quantifier raising





summary

Indonesian modals in sum:

- Non-finite
- XPs
- syntactically encode both epistemic~root and necessity~possibility distinctions by means of four dedicated functional projections
- are licensed only by the corresponding functional projection

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SEMPAT, (DAPAT),
BISA

divergences from Sneddon et al 2010

- *dapat, bisa* ‘can, be able’
- *boleh* ‘may, have permission’
- *harus, mesti* ‘must’
- *perlu* ‘need’
- *mampu, sanggup* ‘be able, have the capacity’
- *sempat* ‘have the opportunity, have the time, be able’
- NOT *ingin, mau* ‘want’
- ‘grammars of Indonesian vary considerably as to the words they place in this category, and not all modals function in precisely the same way’ (p. 208)
- ‘a combination of two modals always includes *harus*’ (p. 211)

inventories of Malay modals

Idris 1980

epistemic:

mungkin 'possible'

boleh jadi 'may'

barangkali 'possible'

mesti 'must'

root:

boleh 'can, may'

patut 'should, ought to'

terpaksa 'have to'

mesti 'must'

Honegger 2003

- *tentu 'certain'*
- *patut 'proper, suitable'*
- *pasti 'certain'*
- *harus 'proper, fitting'*
- *mesti 'necessary'*
- *boleh 'can'*
- *dapat 'can'*

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directions for future research

- the status of words with a modal-like meaning, but a different syntax
- *seharusnya* 'should'; expresses an opinion or suggestion; weaker root obligation than *harus*

(62) Pemerintah **seharusnya** memperhatikan anak jalanan.
gov't SHOULD ACT-pay.attention child street
'The government should pay attention to kids that are on the street.'
'The government should have paid attention to kids that are on the street.'

(63) Pemerintah **harus** memperhatikan anak jalanan.
gov't MUST ACT-pay.attention child street
'The government has to pay attention to kids that are on the street (otherwise, you're not going to be reelected).'

directions for future research

- the status of words with a modal-like meaning, but a different syntax
- *seharusnya* 'should'; expresses an opinion or suggestion; weaker root obligation than *harus*

(64)* **Seharusnyakah** pemerintah memperhatikan anak jalanan.
SHOULD-Q gov't ACT-pay.attention child street
intended: 'Should the government pay attention to kids that are on the street?'

(65) **Haruskah** pemerintah memperhatikan anak jalanan.
must gov't ACT-pay.attention child street
'Should the government pay attention to kids that are on the street?'

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