

Aspect in Indonesian: free markers versus bound markers

Philippe GRANGÉ

Université de La Rochelle (France)

In Indonesian, the expression of aspect generally rests on free pre-verbal markers. Besides, some clitics or affixes that indicate voice or deverbal nominalization can additionally convey an aspectual meaning.

The free aspect markers are often loaded with modality meanings. Moreover, they may in certain contexts express modality only, not aspect. This paper describes 14 pre-verbal aspect/mood markers (*sedang, tengah, lagi, semakin, terus, masih, tetap, sempat, sudah, telah, pernah, baru, belum, akan*) and proposes a sorting of their aspectual (and modal, if applicable) features. Particular attention is paid to the marker *sudah*, which displays a wide range of modal and/or aspectual meanings.

Contemporary written Indonesian seemingly uses more and more combinations of markers: two preverbal aspect/mood free markers preposed to the verb. Using the Internet as a corpus, we found 72 different combinations of two aspect markers. The marker compounds obey three combination rules that highlight the core features of each marker.

Turning to the bound markers, I examine the aspectual features of the verbal prefix *ter-* (so called ‘accidental passive’) as opposed to the passive prefix *di-*. I also deal with a less noticed aspectual opposition between the deverbal nominalization confix *peN- -an* and enclitic *=nya*. I argue that the deverbal nominalization using *=nya* retains in fact a predicative role, embedding the indication of a perfect aspect. Moreover, the perfect aspect specified by *ter-* or *=nya* will additionally lead to the localization of the event in the past, if no other indication of time is available in the context.

The Indonesian free markers and the bound markers, although morphologically and syntactically distinct, are often associated in discourse, and should be regarded as components of a comprehensive aspectual system.

1. Introduction

The expression of aspect in Indonesian relies mainly on aspect markers like *sudah, akan, pernah, and sedang*. There are around fourteen free preverbal morphemes in Indonesian, which may indicate not only an aspect, but also a modality. Their meaning is context-sensitive: *sudah*, for instance, can express a plain perfect aspect, but in other contexts may be totally deprived of aspectual meaning, and purely indicates a modality. There are around fourteen free preverbal morphemes in Indonesian, which in some cases form compounds of two or even three markers that convey a wealth of meanings.

The lexical affixes are commonly depicted either as classifiers or in relation to other semantic features. This labelling is effective, but conceals aspectual features possibly specified by the Indonesian clitics/affixes. I will examine the aspectual features of the verbal prefix *ter-* (so called ‘accidental passive’) as opposed to the passive prefix *di-*. I will also deal with the aspectual properties of a less studied deverbal nominalisation, using the enclitic *=nya*. It appears that these morphemes should not be regarded only as deverbal nominalisation devices.

Finally, the interactions between free aspect markers and affixed or cliticized markers will be sketched. The aspect/modality free and bound markers, although morphologically very different, should be considered semantically as parts of a comprehensive system.

2. Indonesian preverbal aspect markers

I mean by ‘markers’ a category of grammatical morphemes which express aspect and/or modality, e.g. *sudah*, *akan*, *masih*. There is no final inventory of aspectual or modal markers. The semantic features prove unreliable, not only because modality and aspect are often intermingled, but also because in certain contexts a marker may be aspectual only, while in other contexts it may be modal. It may also be both in yet other contexts. The lexical approach does not help much, because most of the aspect/modality markers originate from various other grammatical classes: adverbs, verbs, and so on. Finally, I propose three syntactic criteria to define this class of markers. They must be:

- a preverbal free morpheme;
- unable to be used as a stative verb;
- and they must be able to combine with some other aspect markers, in the first or the second position in a compound of two markers.

For this reason, I left aside *habis* ‘finished, over’, *selesai* ‘completed’, *usai* ‘completed, afterward’, since they can be used as stative verbs¹ and they never occur in first position within a string of two preverbal markers, which leads to label them as auxiliary verbs. The case of *mau* ‘want/will’, *berhasil* ‘succeed, achieve’ and *mulai* ‘begin’ is less clear-cut: although they are never used as stative verbs, they cannot appear before a preverbal aspect marker. However, these auxiliaries also convey aspectual and/or modal meaning.

A tentative inventory of preverbal aspect markers includes 14 morphemes: *sedang*, *tengah*, *lagi*, *semakin*, *terus*, *masih*, *tetap*, *sempat*, *sudah*, *telah*, *pernah*, *belum*,² *akan*, *bakal*. The data was collected from web pages in Indonesian, mostly from the media. The corpus may therefore be defined as standard/formal Indonesian.

2.1 Aspect and/or modality

Some of these markers are not only aspectual, but also modal; whether they express mainly aspect or modality depends on the context. The most striking example of this flexibility is provided by the marker *sudah*.

- (1) *Pak Sutanto sudah berangkat.*
 Mister PNOUN³ sudah leave
 ‘Mr Sutanto has left / Mr Sutanto left already.’
- (2) *Mobil =ku sudah di- reparasi.*
 car =1SG.POSS sudah UV- Repair
 ‘My car has been repaired. / My car is already repaired.’

In example (1), *sudah* indicates a perfect aspect.⁴ In example, (2), as is often the case with verbs in the undergoer voice, the aspect conveyed by *sudah* is more specifically a resulting

¹ For instance, *tugas saya habis* ‘My task is over’, *rapat selesai* ‘the meeting is completed’.

² *Belum* is somewhat different from the other markers because of its negative meaning. Besides, there is only one compound of markers where *belum* appears in second position: *masih belum*.

³ Glossing : see section 6.

⁴ According to Comrie (1976: 62) there is a ‘tendency to confuse perfect and perfective. The perfect links a present state to a past situation, whether this past situation was an individual event, or a state, or a process not yet completed [...]’ while (p. 21) ‘perfectivity involves lack of explicit reference to the internal temporal constituency

state. This is what Comrie (1976: 56-58) calls the ‘perfect of result’: ‘a present state is referred to as being the result of some past situation’. This ‘perfect of result’ does not exclude verbs in the actor voice, for instance in example (1), where we could interpret that for the speaker, only the present state (‘Mr Sutanto is not there’) matters, not the process which entails the absence of Mr Sutanto. In sum, the preverbal marker *sudah* does not allow a clear cut distinction between ‘perfect’ and ‘perfect of result’.

- (3) *Aku sudah tua, tenaga _ku sudah berkurang.*
 1SG *sudah* be.old strength =1SG.POSS *sudah* lessen
 ‘I am already old, my strength has already lessened.’

When *sudah* marks a stative verb, as in example (3), the aspect can be labelled as ‘ingressive’.⁵ This feature has been described by Tadjuddin (1993: 174-175, 183) who argues that *sudah* can convey ‘keingresifan’ (ingressivity or inceptivity) or ‘kekompletifan’ (completion). In Tadjuddin’s terminology, *keingresivan* refers to a ‘situation whose beginning and continuation forms a whole, or in other words, a situation that stresses its beginning and also its further realization’ (our translation). In other words, the speaker reports an entry into a state; *sudah* in example (3) means that at some point of the time axis, an entity acquired a new property, ‘being old’, and at the moment of reference, this property is still valid. This property is of course highly subjective, as we will comment on below. However, this is still an aspectual feature,⁶ leading to an interpretation of the process span and its setting on the time axis.

Nevertheless, in many cases the marker *sudah* can be completely deprived of its aspectual meaning:

- (4) *Sudah muda, berprestasi lagi.*
sudah be.young perform more
 ‘Not only (is she) young, (but she) gets good results.’

In example (4), it is doubtful that, at an initial stage, someone was ‘not young’ then became ‘young’; no reference to the temporal constituency of the process appears through this use of *sudah*, which conveys only the speaker’s subjectivity, thus indicates a plain modality. The modality in example (4) may be labelled as a ‘valuation’: the speaker asserts that a gradable property matches a level, deemed as high on a scale.

Moreover, *sudah* in examples (1) to (3) is not purely aspectual, it expresses a modality as well: the event is expected or feared by the speaker, and/or the speaker presupposes that the addressee expects or fears this event.⁷ I propose to label this modality ‘expected’ (expected event). We will return to this modal feature of *sudah* when comparing it to *telah*.

of a situation [...] subsumed as a single whole’. In Indonesian, the perfective is generally not marked, except in the traditional literature where the *-lah* and/or the *di-nya* pattern predominates.

⁵ Comrie (1976: 20) proposes that the ingressive aspect is produced by the perfective applied to a state: ‘there is some functional value in utilising the perfective forms of stative verbs to denote the event of entry into the appropriate state, since otherwise there would be little use for the perfective forms of these verbs, but such an explanation is at present speculative.’

⁶ ‘Aspect is not concerned with relating the time of the situation to any other time-point, but rather with the internal temporal constituency of the one situation.’ Comrie (1976: 5)

⁷ Kaswanti Purwo (1984: 231) writes that *sudah* indicates the speaker’s subjectivity, and that ‘the feeling depicted by *sudah*, either positive or negative, depends on what was previously expected by the speaker’ (our translation).

This flexibility of many preverbal markers (more or less aspectual, more or less modal) will have to be kept in mind when it comes to classifying them. For instance, a rigid classification which would label *sudah* strictly as a ‘perfect aspect marker’ would prove inaccurate in many contexts. Quite often, aspectual and modality meanings are closely intermingled; this composite meaning is labelled ‘outer aspect’ by Daniel Kaufman (2011).

2.2. Inventory of preverbal markers

In this section, I propose a brief inventory of the 14 aspect and/or modality preverbal markers.

2.2.1 *sudah, telah*

The preverbal marker *telah* indicates a perfect aspect, but (as opposed to *sudah*), it does not convey modality. Furthermore, the essential feature of *telah* is an explicit neutrality of the speaker, who presents himself as objective and unconcerned by the event.⁸ Compare the following examples:

- (5) a. *Gunung Merapi me- letus kemarin.*
 Mount PNOUN AV- erupt yesterday
 ‘Mount Merapi erupted yesterday’
- b. *Gunung Merapi telah me- letus.*
 Mount PNOUN telah AV- erupt
 ‘Mount Merapi has erupted.’
- c. *Gunung Merapi sudah me- letus.*
 Mount PNOUN sudah AV- erupt
 ‘Mount Merapi has already erupted.’

In (5)b, with *telah*, the way of recounting the event is detached, uninvolved and impersonal.⁹ On the other hand, in (5)c, the marker *sudah* leads to interpret that the speaker knew this eruption would happen, or was probable, or assumed that the addressee would expect this event too. Considering these examples from a pragmatic perspective, one could imagine that (5)a is a hearsay account; (5)b is quoted from a journalist report; while (5)c could be asserted by a vulcanologist or a farmer living nearby the volcano and capable of reading some warning signs.¹⁰ For a detailed discussion of the differences between *sudah* and *telah*, see Grangé (2010).

2.2.2 *sedang, tengah, lagi*

These markers indicate imperfective aspect. They are compatible with a past reference, as in (6).

⁸ One could argue, however, that if the speaker presents himself as unconcerned by an event, he manifests linguistically an attitude towards his utterance, hence a kind of modality.

⁹ Alwi (1992: 58) noticed that ‘in the utterances that do not reflect any subjective criteria, *telah* can be employed.’ (our translation)

¹⁰ We are grateful to Bernd Nothofer (personal communication) for suggesting this example.

- (6) *Nina sedang mem- baca ketika di- panggil.*
 PNOUN IMPFV AV- read when UV- call
 ‘Nina was reading when she was called.’

Beside marking dynamic verbs, *sedang* can also mark stative verbs, a feature that would be impossible for the *be ...-ing* structure in English : **he is being sad*, as in example (7) However, the stative verbs that can be preceded by *sedang* refer to non-permanent or reversible states. Additionally, *sedang* is compatible with the iterative aspect as in example (8).

- (7) *Nina sedang / lagi / tengah sedih.*
 PNOUN IMPFV / IPFV / IPFV / be.sad
 ‘Nina is sad.’

- (8) *Iwan sedang men- cium cium Nina.*
 PNOUN IMPFV AV kiss kiss PNOUN
 ‘Iwan is/was kissing again and again Nina.’

Sedang originates from a stative verb meaning ‘mid, middling, passable, lukewarm’, *tengah* originally means ‘center, middle’ and *lagi* is also an adverb meaning ‘still, again’. This illustrates the fact that almost all aspect markers in Indonesian derive from various morpheme classes. Two other imperfective aspect markers can be heard in Indonesia : *pada* in colloquial Indonesian and *ada* in Malay dialects of Eastern Indonesia.

2.2.3. *semakin, terus, masih, tetap*

These markers indicate an imperfective aspect too, along with additional information on the processes’ internal structure. *Semakin* (and its cognates *kian, makin*) conveys a gradual aspect to stative verbs, as in example (9), but also dynamic verbs (10). When *semakin* precedes a dynamic verb, it leads to an iterative interpretation too: the event is repeated with a growing intensity.

- (9) *Bensin semakin mahal.*
 gasoline GRAD be.expensive
 ‘Gasoline is more and more expensive.’

- (10) *Semakin pergi ke luar negeri, semakin cinta negeri ini.*
 GRAD go to out country GRAD love country DET
 ‘The more (I) go abroad, the more (I) like this country.’

The preverbal markers *terus, masih, tetap* broadly express a continuative aspect: an event is presented as lasting longer than expected. In other words, the speaker asserts that there is a gap between the ‘pre-build’ span of the event (its expected duration), and its actual span which proves longer. However, there are syntactic differences in their use: *terus* marks dynamic processes, *masih* is normally applied to states, or series of processes described as a state of affairs, while *tetap* can be used with any kind of process.

- (11) *Dia terus meng- ejek -ku.*
 3SG CONT AV- mock -1SG
 ‘He/She keeps on laughing at me.’

- (12) *Iwan masih capek. Iwan masih bekerja di Bandung.*
 PNOUN CONT be.tired PNOUN CONT work DET PNOUN
 ‘Iwan is still tired.’ ‘Iwan still works in Bandung.’

Like *sudah*, the marker *masih* can express a pure and plain modality. In that sense, these two markers are perfectly symmetrical. Let us figure that a boundary delineates either a time span or a property (for instance ‘being tired’). The speaker distinguishes the ‘prebuild’ boundary (what was expected) and the actual boundary (what happened, or what property was reached in effect). *Sudah* indicates that the ‘prebuild’ boundary corresponds to the actual boundary, while *masih* means that the ‘prebuild’ boundary is overstepped and the actual boundary is not reached. For this reason, there is a slight nuance between the following two examples.

- (13) a. *Sudah untung Iwan me- raih juara ketiga.*
 already profit PNOUN AV obtain prize third
 ‘It is already a chance that Iwan won the third prize.’
- b. *Masih untung Iwan me- raih juara ketiga.*
 still profit PNOUN AV obtain prize third
 ‘Still glad that Iwan won the third prize.’

In (13)a, the subject has reached a satisfactory level of performance, in the opinion of the speaker; in this context, *sudah* indicates a modal meaning ‘expected’. Sentence (13)b is less complimentary: the result could have been worse, considering that Iwan was expected to perform poorly. His performance is beyond expectations, in other words *masih* means that the prebuild boundary is overstepped. This modality can be labelled ‘unexpected’. The examples (13) display valuation: a subjective viewpoint of the speaker on the state of affairs.

2.2.4. *pernah, sempat*

The preverbal marker *pernah* indicates a perfect aspect, more precisely the semelfactive aspect. It means that a completed event happened once only for the subject. A modal meaning is combined with this aspect, because the speaker highlights the experience gained by the subject more than the event itself.

- (14) *Kami pernah singgah di Larantuka.*
 2PL SEMF stop.over PREP PNOUN
 ‘We have stopped over (once) in Larantuka.’

Two syntactic features of *pernah* are noticeable. When *pernah* marks a transitive verb, the object is almost always indefinite (if it is not a proper noun). In effect, only the experience matters, thus any occurrence of the event would provide the subject with this experience. If the subject recounts that he saw a tiger once, there is no need to define which tiger it was.¹¹ In example (14), one could comment on that the date and the circumstances of the stop over in Larantuka are not relevant, as only the fact that it happened once (or a very few times) is of interest. Thus *pernah* may be compatible with an adverbial phrase indicating an interval of time (e.g. *selama dua tahun* ‘during two years’), but not with fixed references on the time line (dates).

¹¹ A sentence like *Saya pernah melihat harimau ini*. ‘I saw this tiger once’ is of course possible. It could be an account by a nature reserve’s ranger who is used to spotting tigers. In this case, the indefiniteness pertains to the (many) occurrences of spotting tigers, not to the spotting of this particular tiger.

Besides, *pernah* is compatible with non-permanent states, indicating their reversion: *Agus pernah kaya/marah*. ‘Agus was (once) rich/angry’ implies that he is not rich/angry any more at the moment of reference. *Pernah* is obviously incompatible with permanent or non-reversible states like *tua* ‘be old’.

In addition to its perfect, semelfactive aspect, *pernah* signals the speaker’s subjectivity, expressing an ‘Experiential’ modality. ‘The experiential perfect indicates that a given situation has held at least once during some time in the past leading up to the present.’ (Comrie 1976 : 58). Comrie adds a convincing example that clearly corresponds to the difference between *sudah* and *pernah*.

the distinction between the experiential perfect and the perfect of result. Bill has gone to America is a perfect of result, and implies that Bill is now in America, or is on his way there [...] In Bill has been to America, however, there is no such implication; this sentence says that on at least one occasion (though possibly more than one) Bill did in fact go to America. (Comrie 1976: 59)

The modal meaning of *sempat* is close to that of *pernah*, but it signals that the speaker does not focus on the property gained by the subject, but instead on the low probability that such an event happened. In sum, in addition to a semelfactive aspect, *sempat* indicates a modality that we could label ‘unexpected’, as opposed to *sudah*’s ‘expected’ modality. This marker can be used either in the Actor Voice, see example (15) or in the Undergoer Voice, see example (16).

(15) *Saya sempat ber- pikir untuk men- (t)inggal -kan agama.*
 I SG SEMF IPFV- think PREP AV- leave -CAUS religion
 ‘I happened to think about leaving the religion.’

(16) *Di Dahran, saya sempat mau di- perkosa anak majikan.*
 PREP PNOUN I SG SEMF will UV- rape child boss
 ‘In Dahran, I happened to be almost raped by the boss’ son.’

2.2.5. *belum, akan, bakal*

Gonda (1954/1975: 248-249) remarked that ‘the oft-recurring statement is that, in a particular [Indonesian] idiom, the ‘future tense’ is also used to express wishes, intentions, requests, obligations.’ It is true that the markers *belum*, *akan*, and *bakal* should not be labelled as future tense morphemes, but as aspect and modality markers. Indeed, *akan* can be used in narrative speeches located in the past. The marker *bakal* is far less frequent.

(17) *Mobil Proton akan di- Rakit di Indonesia.*
 car PNOUN will UV- Assemble PREP PNOUN

‘The car Proton will be assembled in Indonesia.’

2.2.6. Summary

Kridalaksana (1986) considers that *belum* is a ‘penanda modalitas’ (‘modality marker’). Sneddon (1996: 202) classifies *belum* among the ‘modals’ as well: ‘*Belum* ‘not yet’ combines the meaning of *bukan / tidak* [negation] plus temporal marker *sudah*.’ *Belum* means that the expected event is not completed at the moment of reference, or that the aimed property is not reached. Moreover, *belum*, *sudah* and *masih* seem complementary to each other. They have in common the expression of the speakers’ expectation, but they differentiate the points of view over an event (or property). The figure below illustrates these different points of view; | represents an ‘expected boundary’, and] stands for ‘actual/asserted boundary’.

— *sudah* → ||
 | — *masih* →
 — *belum* → |

These three markers indicate an ‘outer aspect’ according to Daniel Kaufman’s (2011) definition. Outer aspect relates an event’s time of occurrence with an expected reference time, expressing the ‘background expectation’ of the speaker. For instance, paraphrasing Kaufman (2011), with *sudah* the onset of the event time precedes the expected reference point, and *masih* indicates that the termination of the event is deferred beyond the expected reference point. Kaufman’s ‘outer aspect’ is an elegant concept which merges two features: aspect and modality. Further differentiating these two features may prove useful, because the meaning of the markers is ‘context-sensitive’, sometimes leading to an ‘aspect-only’ interpretation, to a ‘modality-only’ interpretation, or both, as summarised in table one below.

Markers	Aspect	Modality
<i>sudah</i>	With dynamic verbs: perfect / perfect of result	expected
	With stative verbs (and series of events): ingressive	
<i>telah</i>	With stative verbs in certain contexts: Ø	valuation
	With dynamic verbs: perfect / perfect of result With stative verbs: ingressive	Ø
<i>sedang, tengah, lagi</i>	Imperfective	Ø
<i>semakin</i>	imperfective, gradual	Ø
<i>terus</i>	imperfective, continuative	Ø
<i>tetap</i>	imperfective, continuative	expected
	imperfective, continuative	unexpected
<i>masih</i>	With stative verbs in certain contexts: Ø	valuation
	perfect, semelfactive	experiential
<i>pernah</i>	perfect, semelfactive	unexpected
<i>sempat</i>	perfect, semelfactive	uncertain
<i>akan, bakal</i>	Ø	expected
	Ø	valuation
<i>belum</i>	Ø	expected
	With stative verbs in certain contexts: Ø	valuation

Table 1. Summary of the preverbal markers’ aspect and modality meanings

3. Compounds of preverbal aspect markers

Contemporary written Indonesian seemingly uses more and more compounds of free markers (two preverbal aspect/mood free markers preposed to the verb, sometimes up to three markers). The rules of markers combination highlight the core features of each marker. Generally, switching the position of the two markers will evince another meaning, in other terms $x y$ is not synonymous with $y x$. The most frequent compounds of preverbal aspect markers associates

sudah (perfect) and *pernah* (perfect, semelfactive + experiential modality), hence *sudah pernah* ‘has already the experience of’.

- (18) *Saya sudah pernah ke- tipu.*
 1SG PFCT SEMF DETR- lie
 ‘I have had the experience of being cheated.’

Of course, not all the concatenations of two markers (within the 14 markers inventory above) can form acceptable marker compounds. Using the internet as a corpus, we collected many instances of such compounds. After filtering our corpus,¹² we arbitrarily considered that a compound of markers appearing at least 100 times is grammatical. Yet, it does not prove that all native speakers would agree on its grammaticality and meaning, or that more compounds could not be created. The compounds that we identified are displayed in table 2.

We found 72 different compounds of two aspect markers. Some are quite unusual and some others, like *sudah pernah* are very frequent: more than 4.480.000 occurrences can be collected on the internet.¹³ Nevertheless, this approach cannot claim statistical validity; I only wish to find out under what conditions these markers can combine.

We can learn much from the agrammatical combinations of markers; unsurprisingly, the imperfective markers (*sedang, tengah, lagi*) are not compatible with the perfect ones (*sudah, telah, pernah, sempat*). A perfect marker can stand in the first position when combined with a semelfactive marker (*pernah, sempat*), but the reverse is not true. More generally, switching the position of the markers in a compound will evince another meaning, i.e. xy is in principle¹⁴ not synonymous with yx . The negation morpheme affects the whole verb phrase; the typical order of the elements is {negation, marker 1, marker 2, marker 3, modal auxiliary, verb}, while they are unlikely to occur all together. ‘In general the first to occur modifies the meaning of everything which follows within the predicate’ noticed Sneddon (1996:201).

This remark leads to observe a ‘hierarchy rule’. When combined, the first marker indicates the general aspect of the compound as a whole, while the second aspect brings a more specific aspect and/or modality. In other words, the second marker is ruled by the first. The last marker of the compound interacts with the inherent aspect of the verb. This can be represented as in (19).

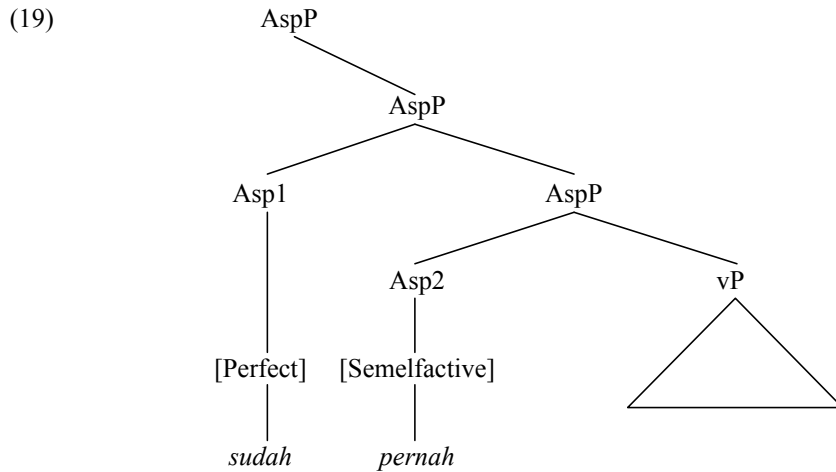
¹² It was helpful to apply automatic filters to this huge corpus (for instance, in order to erase the sentences containing *seakan-akan sedang* ‘as if be V-ing’ gathered by a query of the character string *akan sedang* ‘will be V-ing’). But still, the collected sentences had to be checked through a careful reading.

¹³ Through the web browser Google, accessed 17-01-2011.

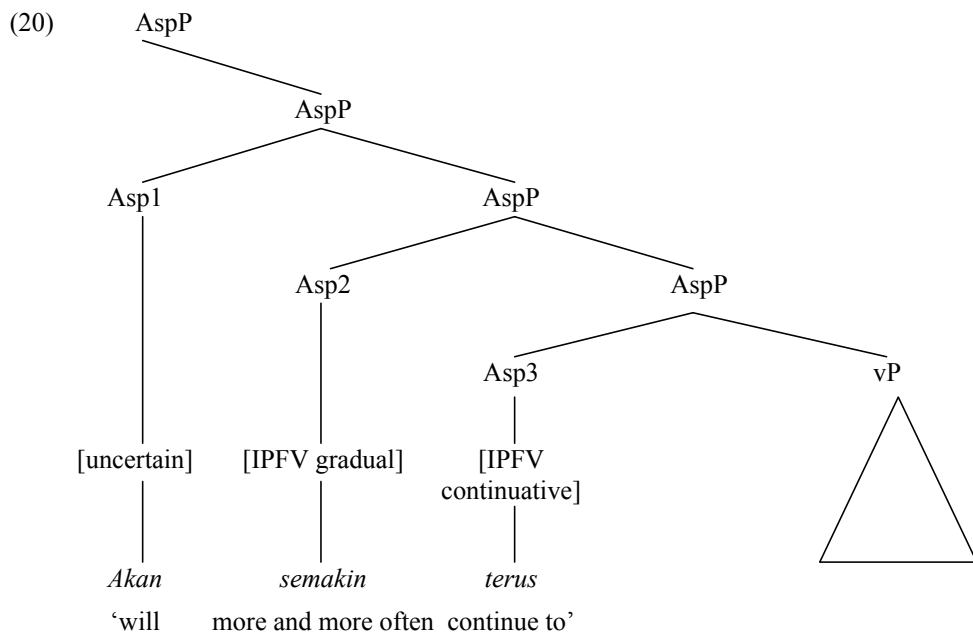
¹⁴ The main exception to this principle is *akan sudah* ‘will have V-ed’ that most speakers consider a synonym of *sudah akan*, while this second compound could mean ‘be (yet) about to V’. It also seems that *pernah sempat* ‘had once the opportunity of’ and *sempat pernah* are synonyms.

Marker 2 \ Marker 1		imperfective			imperf. gradual	imperfect continuative			perfect or ingressive		perfect, semelfactive		uncertain		
		sedang	tengah	lagi	semakin	terus	masih	tetap	sudah	telah	pernah	sempat	belum	akan	bakal
imperfective	sedang					sedang	sedang						sedang	sedang	
	tengah					terus	masih						akan	bakal	
	lagi	lagi	lagi												
imperfective gradual	semakin				semakin								semakin	akan	
imperfective continuative	terus				terus			terus					terus	akan	
	masih	masih	masih			masih		masih		masih	sempat	masih	masih	masih	
	tetap				tetap	tetap	tetap	terus	masih			tetap	tetap	tetap	
perfect or ingressive	sudah	sudah		sudah	sudah	sudah				sudah	sudah		sudah	sudah	
	telah	sedang		lagi	semakin	terus				pernah	sempat		akan	bakal	
perfect, semelfactive	pernah										pernah		pernah	pernah	
	sempat					sempat		sempat		sempat	pernah		sempat	sempat	
uncertain	belum										belum	belum		belum	belum
	akan	akan	akan		akan	akan	akan	akan	akan	akan	akan	akan	akan	akan	akan
	bakal	sedang	tengah		semakin	terus	masih	tetap	sudah	telah	pernah	sempat	belum	bakal	bakal

Table 2. Inventory of the compounds of two preverbal aspect markers in Indonesian



The hierarchy rule also applies to the compounds of three aspect markers as illustrated in (20).



Beside the 'hierarchy rule', it appears that an aspect is expressed only once in a compound. This 'concision rule' simply consists in avoiding redundancy. For instance **sudah baru*, **sudah telah* cannot appear, because the same aspect would be expressed, i.e. [perfect [perfect]]. If a marker indicates a specific aspect, for instance *pernah* [perfect, semelfactive], it can be adjacent to a general aspect marker like *sudah* [perfect], for this will not be considered redundant. However, according to the hierarchy

rule, the most general meaning must precede the most specific, therefore *sudah pernah* [perfect [perfect, semelfactive]] is a frequent combination, while **pernah sudah* *[perfect, semelfactive [perfect]] is agrammatical.

The third rule is quite obvious: within a compound, the aspects of the markers cannot be contradictory. This rule can be labelled ‘consistency rule’. For instance, perfect and imperfective markers cannot occur within the same compound, thus **telah masih* [PFCT [IPFV]],¹⁵ **pernah sedang* [PFCT [IPFV]], **tetap telah* [IPFV, CONT [PFCT]] are not grammatical. Yet, some compounds seem to break this rule, for instance *masih sempat* [IPFV, CONT [PFCT, SEMF]]: but when this compound occurs, *masih* plainly indicates a modality (valuation), not an aspect, thus no contradiction is involved.

In sum, we propose that the compounds of markers obey the following construction rules:

- Hierarchy rule: the first marker of the compound has scope over the second item (general meaning preceding specific meaning)
- Concision rule: an aspect and/or a modality is indicated only once in the compound; there is no redundancy.
- Consistency rule: the aspects of the two markers cannot be contradictory (e.g. perfect and imperfective cannot be combined).

4. Voice morphemes and aspect: the prefix *ter-*

Most Indonesian verbal affixes are described according to their features in terms of transitivity or diathesis. The lexical affixes are commonly depicted either as classifiers or in relation to other semantic features. This labelling is effective, but conceals aspectual features possibly specified by the Indonesian affixes. Such is the case of the imperfective *ber-* and of the third person narrative pattern *di-* *-nya*, but space lacks here to analyse these affixes, of which a description has been proposed by Grangé (2006). In this section, I examine the aspectual features of the verbal prefix *ter-* (so called ‘accidental passive’) as opposed to the passive prefix *di-*.

The verbal prefix *ter-* is traditionally classified as a ‘passive voice’ morpheme, more accurately the Undergoer Voice.¹⁶ As noticed by Verhaar (1984: 60), ‘Because the *ter-* construction is low in transitivity, an Agentive is often absent because there is no apparent Agent. However, if there *is* an Agentive, the Agent is typically not in control of the event signified by the *ter-* verb.’ Under the alternative Undergoer Voice morphology (verbal prefix *di-*), mentioning the Agent is optional as well. The main difference between these two Undergoer Voices does not lay in their valency, but is of a semantic nature: with *ter-*, both Agent and Patient (the grammatical subject) are shown as absolutely deprived of volition, even if animate. Compare the following examples:

- (21) a. *Jari _nya ter- potong (oleh) gergaji*
 finger =3SG.POSS UV- cut (by) saw
 ‘His finger has been cut with a saw.’

¹⁵ PFCT: perfect; IPFV: imperfective; CONT: continuative; SEMF: semelfactive. Other glossing abbreviations are at the end of this paper, section 6.

¹⁶ See the definitions of Actor Voice and Undergoer Voice by Himmelmann (2002 ; 2005)

- b. **Jari =nya di- potong (oleh) gergaji*
 finger =3SG.POSS UV- cut (by) saw
 ‘His finger has been cut by a saw.’

- (22) a. ? *Rambut =ku ter- potong (oleh) ibu =ku.*
 hair =1SG.POSS UV- cut (by) mother =1SG.POSS
 ‘My hair have been (accidentally) cut by my mother.’

- b. *Rambut =ku di- potong (oleh) ibu =ku.*
 hair =1SG.POSS UV- cut (by) mother =1SG.POSS
 ‘My hair has been cut by my mother.’

Example (21)b is rejected by native speakers because it seems absurd to affirm that a tool intentionally wounds someone.¹⁷ Besides, through a query on internet,¹⁸ I could not find any example of the string *terpotong oleh* ‘involuntarily cut by’, where the actor is human as in (22)a, but rather than a logical impossibility, this may indicate that this kind of accident is very unlikely to happen or to be reported. The Undergoer Voice indicated by *ter-* is often labelled as ‘accidental passive’.

Describing sketchily *ter-*, Winstedt (1916: 17) begins with a concise remark: this prefix denotes ‘the accomplished act or realized experience and state’.¹⁹ Since then, this aspectual feature of *ter-* has attracted far less attention than its syntactical and semantic particularities.²⁰ But in effect, beside its role in diathesis, the prefix *ter-* expresses aspect: the perfect of result, defined by Comrie (1976 : 56-58) as ‘a present state is referred to as being the result of some past situation’.

The contrast between the undergoer voice prefixes *di-* and *ter-* regarding aspectuality is clear when we examine dynamic verbs:

- (23) a. *Buku ini ter- tulis dalam bahasa Indonesia.*
 book DET UV- write into language PNOUN
 ‘This book has been written in Indonesian.’

- b. *Buku ini di- tulis dalam bahasa Indonesia.*
 book DET UV- write into language PNOUN
 ‘This book is written in Indonesian (currently being written or has been written)’

The prefix *di-*, as in (23)a, does not convey any aspectual information: the process may, or may not, be completed. On the other hand, the prefix *ter-* entails a perfect aspect (perfect of result) : the process of writing is regarded as completed. It is always the case

¹⁷ Nevertheless, some other verbs at the *di-* Undergoer Voice may be followed by a prepositional phrase (optionally introduced by *oleh*), where the head-noun refers to an inanimate. For instance: *Tanah kami terpotong / dipotong oleh jalan yang baru.* ‘Our land happened to be cut / has been cut by a new road’. *Mereka tertangkap / ditangkap oleh kamera / polisi.* ‘They have been caught (by chance) / have been caught on a camera / by the police.’ *Rumah itu dirusak (oleh) angin.* ‘This house has been damaged by the wind.’

¹⁸ Using Google, query restricted to Indonesian. Accessed 01-01-2011.

¹⁹ See also Winstedt (1913: 86) about the prefix *ter-* which ‘denotes the perfected act. [...] it emphasizes not a process in which an agent takes part but a result – absolutely complete, sometimes sudden and due not to conscious activity on the part of the subject but to external compulsion or accident’.

²⁰ A detailed analysis of *ter-* in Malay by Chung (2011: 809) ‘rehabilitates’ somehow its aspectual role.

independently of the agent (human, inanimate, etc.), even if no agent is mentioned or envisioned. In the following example, only *dibuka* ‘UV-open’ may be still in progress at the moment of reference.

- (24) *Tiba-tiba, jendela ter- buka / di- buka.*
 suddenly window UV- open / UV- open

‘Suddenly, the window opens / is (intentionally) open.’

Logically, an imperfective marker like *sedang* is compatible with *di-*, but not with *ter-*. The few example of *sedang ter-V* that I found do not concern the process itself, but the state of affairs that results from this process, as in the following example.

- (25) *Di- banding Jerman, industri Prancis sedang ter- tinggal jauh.*
 UV- compare PNOUN industry PNOUN IPFV UV- leave be.far
 ‘Compared to Germany, the French industry is left far behind.’

When the reduplication of the verb stem means iterativity, for instance *tergoyang-goyang* ‘stirred and moved’, the process is still viewed as completed. The same remark is relevant for Kupang Malay, in which Steinhauer (1983: 46) notices that *ta-* (a reflex of *ter-*) can be reduplicated along with the stem, for instance *ta-robek – ta-robek* ‘torn here and there’.²¹

With the abilitative *ter-*, the perfect aspect seems less obvious. Yet, when we assert that an action could be done, we usually assume it has been done. For instance, stating that *he was able to climb the mountain* means not only that he was capable of doing this, but that he did. And, more logically indeed, the sentence *he could not climb the mountain* implies that he did not climb. For this reason, when the verbal prefix *ter-* has an abilitative meaning, see (26) and (27), this prefix also conveys a perfect aspect.

- (26) *Titik api diam ter- lihat di sisi gunung Merapi.*
 point fire still UV- see PREP side mount PNOUN
 ‘Static fire spots can be seen on the side of the volcano Merapi.’

- (27) *Tetapi nyawa =nya tidak ter- tolong.*
 But soul =3SG.POSS NEG UV- help
 ‘but his soul could not be saved.’

At first view, the superlative *ter-*, as in *tertinggi* ‘the tallest’ does not seem to owe anything to aspect. The process that has lead to a property (for instance ‘be tall’) is not mentioned, but its completion has reached the essence of the property, hence the superlative meaning. Here, the perfect of result fades away, leaving place to a more stative process. This has been recently underlined by Chung (2011:809): ‘The most significant change from perfected to imperfected is seen when the stative status of the superlative is reached, referring to the adjectival attribute of a noun (e.g., *Budak yang ter-tinggi itu* ‘That tallest child.’).’

5. Aspectual features of the =*nya* nominalisation

Some of the Indonesian lexical affixes convey an aspectual information, for instance the suffix *-lah*, see Grangé (2006) or the deverbal nominaliser *=nya*. The *=nya*

²¹ The example given by Steinhauer (1983:46) is: *Su ta-robek – ta-robek dia pung sisi*. ‘its side is already torn in various places’.

nominalisation pattern occurs increasingly in written contemporary Indonesian.²² In the present volume, as well as in Arka (2011), Arka convincingly describes the ‘structural and semantic complexities of *=nya* nominalisation in Indonesian’, and there is no need to duplicate his findings in this article. I will therefore concentrate on the aspectual features of this nominaliser, which appear clearer when compared to the deverbal nominalization confix *peN- –an*.

The *=nya* deverbal nominalisation pattern consists generally in the fronting (a position at the beginning of the sentence) of a verb, nominalised by the enclitic *=nya*. This deverbal noun becomes the head of a subject Noun Phrase. Nevertheless, this nominalisation occurs also in object Noun Phrases and in Prepositional Phrases.

The fact that *=nya* is labelled as an enclitic, not a suffix, is justified by the compulsory possessive/genitive link between the cliticised head noun and its complements. In other words, a noun formed with *=nya* must be the head noun within a NP or a PP, necessarily accompanied by complement(s). Thus, the nominaliser *=nya* shows no morphological difference with the third person possessive enclitic. The deverbal noun formation with *di- =nya* should not be confused with the Undergoer Voice pattern *di- =nya* where *=nya* is a 3SG pronoun referring to the Agent, e.g. *Surat itu di-baca-nya* ‘He/she read the letter’.

5.1. Nominalisation of intransitive verbs with *=nya*

The nominalisation of stative verbs is restricted to gradable verbs,²³ as pointed out by Steinhauer (2008). We found no examples of deverbal nominalisations like **betulnya*, **berkeluarganya* or **baharinya* formed respectively on the non-gradable stative verbs *betul* ‘be exact’, *berkeluarga* ‘be married’ and *bahari* ‘be maritime’. The deverbal nouns derived from a gradable stative verb suffixed with *=nya* generally appear as the head of a subject Noun Phrase.²⁴

(28) *Mahal =nya pendidikan me- rupa -kan dampak dari pasar bebas.*
 be.expensive_{NML} education AV- form -CAUS impact PREP market free
 ‘The expensiveness of education results (is an impact) from the free market’

These deverbal nouns retain the stative feature of the verbal stem. In other words, they refer to a ‘state of affairs’, that can be paraphrased, for example (28) above, as ‘the fact that the education is expensive’.

The intransitive dynamic verbs that usually appear as bare verbs (unaffixed stems) can be nominalised directly from their stem:

²² As noticed by Kaswanti Purwo (2008), deverbal nominalisation with *=nya* is one of the salient innovations in standard Indonesian nowadays. Englebretson (2003) is, to our knowledge, the first linguist to propose a detailed analysis of ‘*nya*’, highly frequent in his colloquial Indonesian corpus. He deals mainly with the ‘epistemic *=nya* constructions’, and the deverbal nominalizations are evoked in a few lines (op.cit:168), letting room for the present work.

²³ In the traditional Indonesian grammar terminology, the stative verbs are labelled *adjektiva*.

²⁴ This is probably because ‘In terms of the information structure, the *=nya* unit is analysed as bearing FOCUS’ (see Arka 2011). Other syntactic contexts where a deverbal noun cliticized with *=nya* can appear are head of an object Noun Phrase or head of a Prepositional Phrase.

(29) <i>turun</i> ‘to descend’	> <i>turun-nya</i> ‘the decrease’
<i>bangun</i> ‘to raise, to build’	> <i>bangun-nya</i> ‘the raise’
<i>masuk</i> ‘to go in’	> <i>masuk-nya</i> ‘the entry (the fact that X came in)’
<i>jatuh</i> ‘to fall’	> <i>jatuh-nya</i> ‘the fall, the drop’
<i>datang</i> ‘to come’	> <i>datang-nya</i> ‘the arrival’
<i>mati</i> ‘to die, to be died’	> <i>mati-nya</i> ‘the death (the fact that X is dead)’
<i>lahir</i> ‘to be born, to appear’	> <i>lahir-nya</i> ‘the birth (the fact that X was born)’
<i>timbul</i> ‘to appear, to arise’	> <i>timbul-nya</i> ‘the apparition, the emergence’
<i>padam</i> ‘to switch off, to extinct’	> <i>padam-nya</i> ‘the extinction (of fire, lights...)’

The nominalisation of an intransitive dynamic verb occurs mostly with verbs whose inherent aspect is bounded or punctual.²⁵ In other words, with verbs that are generally seen as a whole, not encompassing other processes, unless additional aspect morphemes contradict this assumption.

There are very few examples of intransitive dynamic verbs whose inherent aspect is durative and which can undergo nominalisation with *=nya*.²⁶ This may be because of the *=nya* ‘finiteness constraint’ (after Arka 2011), which hardly accords with processes that are generally seen as durative or unbounded.

All the deverbal nouns in the table above can be interpreted as referring to completed or stabilized processes (entailing a resulting state). At first sight, one could believe that the nominalisation morpheme *=nya* implies that the process which is referred to bears a perfect aspect.

- (30) *Warga Larantuka keluh -kan padam =nya listrik.*
 people PNOUN complain -APPL switch.off =NML electricity
 ‘The people of Larantuka complain (about) the power cut.’

Example (30) can be interpreted as ‘they complain that the power has been cut off’, reflecting default a perfect aspect of the original process (*padam* ‘switch off’). However, this is the case only by default, if no other aspectual information is available. An additional preverbal aspect marker will lead to an imperfective interpretation: *sering padamnya listrik* ‘frequent power cuts’ or *masih padamnya listrik* ‘still ongoing power cuts’.

Dynamic intransitive verbs that can be nominalised not (or not only) from their bare form, but from an affixed form, also retain aspectual features throughout the *=nya* nominalisation. Let us compare various ‘competing’ nominalization patterns, from the intransitive verb *turun* ‘to descend, to decrease’:

- *turun=nya* ‘the decrease’ (something has decreased, and is seen as stable now)
- *men-(t)urun=nya* ‘the decrease’ (something has decreased, and may be still decreasing)²⁷

²⁵ In Vendler’s (1967) terminology, ‘accomplishments’ or ‘achievements’.

²⁶ One of these rare examples is the nominalisation of *tidur* ‘to sleep’, for instance *Tidurnya orang yang berpuasa adalah ibadah* ‘The sleep of people who are fasting is worship.’

²⁷ We found no example of intransitive verb stems suffixed by the causative *-kan* (therefore transitivised) and further undergoing a nominalisation. For instance, from *menurunkan* ‘send down, bring downstairs’, *menurunkannya* does not signify ‘the fact of having sent down’, but means ‘send it down’, because in this case the *=nya* is inevitably a third person object pronoun. As an intransitive verb, *turun* cannot be in the

- *pen-(t)urun-an* ‘the decrease’ (something has decreased, is decreasing or may decrease)

All these deverbal nouns²⁸ can be translated as ‘the fall, the drop, the descent, the decrease’; their difference in meaning reflects the aspect of the process they refer to, as we tried to illustrate by the paraphrases.

If the stem is an intransitive dynamic verb, the \emptyset -*=nya* pattern refers to a completed process, for instance *turun* > *turun=nya* ‘the decrease [stabilised]’. The completed process leads to a resulting state (because the process of decreasing is over), similarly to the nouns formed on a stative verb stem, for which the \emptyset -*=nya* pattern indicates a state as in *tinggi-nya* ‘the height (of)’.

However, *=nya* by itself does not impose a perfect aspect, for it is compatible with *meN-* prefixing an intransitive verb, a morpheme that indicates imperfectivity, or more precisely a progressive process:

- (31) *Men- (t)urun =nya ekspor akan mem- per- buruk*
 AV- decrease =NML exports will AV- FACT- be.bad

neraca perdagangan
 balance commerce

‘The decrease in exports will worsen the commercial balance.’

In example (31), the decrease is seen as uncompleted, still in progress, as opposed to *turun=nya* that I have commented on above. Moreover, the intransitive verb stems that can form *meN-=nya* nouns are compatible with the aspect marker *semakin* (imperfective, gradual).²⁹ On the other hand, *penurunan* ‘fall, decrease’, derived from *turun* using the *peN- -an* nominalisation confix, does not convey aspectual information.³⁰

The *meN-=nya* (AV- =NML) nominalisation pattern is restricted to the intransitive verb stems. This is probably because the object position must remain empty with an intransitive verb; *=nya* cannot stand for an object third person pronoun, therefore it must be interpreted as a nominaliser morpheme, beside its role of linker between the head noun and its complement. Other examples of *meN-=nya* nominalisation are as follows:

undergoer voice; a query on Internet shows that *diturunnya* frequently means ‘revelation’ in a religious register. Nevertheless, this seems to be the nominalization of a transitive **turun* ‘send (something) down’, which in fact should take the form *turunkan* (causative *-kan*), and be nominalised as *diturunkannya* ‘the fact that (something) was sent down’. This correct form is hopefully far more frequent.

²⁸ Some other nouns can be formed on this stem verbs, but are not relevant for our present analysis: *turunan* ‘descent, downward slope’, *keturunan* ‘descendants, lineage, heredity’

²⁹ The aspect marker, as will be discussed further below, remains at its preverbal position, to the left of the nominalised stem. For instance *Semakin menurunnya ekspor...* ‘the accelerating decrease of exportation...’.

³⁰ Moreover, it may indicate a nuance of progressivity, e.g. *pendidikan* ‘education, activity of educating’ whenever it is possible to oppose it to \emptyset -*-an*, e.g. *didikan* ‘education, acquired knowledge’.

(32) <i>besar</i> ‘big, tall’	> <i>membesar</i> ‘to grow’	> <i>membesarnya</i> ‘the growth’
<i>tinggi</i> ‘tall, high’	> <i>meninggi</i> ‘to increase’	> <i>meningginya</i> ‘the increase’
<i>panas</i> ‘hot, warm’	> <i>memanas</i> ‘to warm up’	> <i>memanasnya</i> ‘the warming’
<i>buruk</i> ‘bad’	> <i>memburuk</i> ‘to worsen’	> <i>memburuknya</i> ‘the worsening’
<i>luas</i> ‘wide’	> <i>meluas</i> ‘to widen’	> <i>meluasnya</i> ‘the extension’
<i>kuat</i> ‘strong’	> <i>menguat</i> ‘to strengthen’	> <i>menguatnya</i> ‘the strengthening’
<i>lemah</i> ‘weak’	> <i>melemah</i> ‘to weaken’	> <i>melemahnya</i> ‘the weakening’
<i>tua</i> ‘old’	> <i>menua</i> ‘to get/grow old’	> <i>menuanya</i> ‘the ageing’

A few verbs prefixed by the stative prefix *ber-* can be nominalised as well, for instance from *kurang* ‘be few, be less’, one can form *ber-kurang=nya* ‘the lack of’.

5.2. Nominalisation of transitive verbs with =*nya*

The nominalisation of transitive verbs with the =*nya* enclitic follows a different morphological rule. First of all, this nominalisation pattern cannot apply to transitive verbs at the Actor Voice, for instance *tolak* ‘to refuse, to reject’ cannot form a deverbal noun **tolaknya* or **menolaknya*.³¹ This nominalisation pattern is restricted to the Undergoer Voice *di-* and to the ‘accidental’ Undergoer Voice *ter-*. For instance, *ditolak* in (33)a will be nominalised as *ditolaknya* in (33)b, becoming the head of a Noun Phrase (this kind of deverbal nouns must be the head of a NP or PP). The grammatical subject (the Patient) becomes the expansion of the deverbal noun.

(33) a. *Pertanian di- pukul karena cabai Indonesia di- tolak.*
 agriculture UV- hit because chilli PNOUN UV- reject
 ‘The agriculture is hit because Indonesian chilli is rejected.’

b. *Di- tolak -nya cabai Indonesia mem- (p)ukul pertanian.*
 UV- refuse -NML chilli PNNOUN AV- hit agriculture
 ‘The fact that the Indonesian chilli has been rejected hits the agriculture.’

The vast majority of these nominalisations occur in causative sentences, it is thus unsurprising that they are common in written Indonesian, especially the media, science and other explicative registers. Let us return to the aspectual issues. There is a clear-cut aspectual opposition between the nominalisation patterns *di-/ter- =nya* and *peN- -an*. Compare (33)b with the following sentence:

(33) c. *Pen- (t)olak -an cabai Indonesia mem- (p)ukul pertanian.*
 NML- refuse -NML chilli PNOUN AV- hit agriculture
 ‘The rejection of the Indonesian chilli hits the agriculture.’

Our translations aim at showing that with the nominalisation pattern *di- -nya*, in (33)b the process is presented as completed. On the other hand, with *peN- -an* in (33)c we have no indications about the completion of the process ; in other words it is ‘aspect neutral’. Note that the Undergoer Voice *di-* itself, for instance *ditolak* ‘is rejected’ in (33)a, provides no indication about the completion of this event: it could be still ongoing. Therefore, the *di- =nya* nominalisation explicitly conveys particular aspectual information, i.e. the perfect aspect, even for unbounded or so-called ‘durative’ verbs.

³¹ Nevertheless, *menolaknya* is a perfectly correct form, which means ‘reject it’. At the Actor Voice, =*nya* is necessarily interpreted as a third person object pronoun, as mentioned above.

The same aspectual opposition appears between the nominalisation patterns *ter-*–*nya* (*ter-*: accidental Undergoer Voice) and *peN-*–*an*:

- (34) a. *Ter- dampar-nya paus di pantai Trisik meng- heran kan ...*
 UV- strand -NML whale PREP beach PNOUN AV- amaze -APPL
 ‘The fact that a whale is/was aground at the Trisik beach amazes ...’
- b. *Pen- dampar-an paus di pantai Trisik meng- heran kan ...*
 NML- strand -NML whale PREP beach PNOUN AV- amaze -APPL
 ‘The stranding of a whale / of whales at the Trisik beach amazes ...’

I have argued above that beside its role in diathesis, the prefix *ter-* expresses the ‘perfect of result’. This aspect meaning is not modified by a further nominalisation. On the other hand, the Undergoer Voice prefix *di-* does not indicate by itself the aspect of a process. Hence, I assume that the nominalisation with *=nya* introduces a perfect aspect meaning, as in (34)a. This is also the case for the intransitive dynamic verbs, e.g. *turun* ‘to decrease’ > *turun-nya* ‘the decrease’.

Beside the aspectual outcomes of the *=nya* nominalisation pattern, the perfect aspect that remains or originates from this kind of derivation will also lead to the localization of the event in the past, if no other indication of time is available in the context. Considering for instance the stem *mati* ‘be dead’, (35)a will be interpreted ‘the corals are dead because of this past condition’ and (35)b ‘the corals usually die in this condition’.

- (35) a. *Perubahan iklim meny- (s)ebab -kan mati =nya terumbu karang.*
 change climate AV- cause -APPL be.dead =NML coral reef
 ‘Climate change entailed that corals died / are dead.’
- b. *Perubahan iklim meny- (s)ebab -kan ke-mati -an*
 change climate AV- cause -APPL NML-be.dead-NML
- . *terumbu karang*
 coral reef
 ‘Climate change entails the death of corals.’

Yet, these aspect meanings can be further modified by the adjunction of time adverbs and aspect markers. To sum up, I propose the following classification of the nominalisation patterns mentioned above, according to the aspect which may be retained through the nominalisation:

- *peN-*–*an* : aspect neutral
- \emptyset –*nya* : states / resulting states
- *meN-*–*nya* : imperfective (progressive) aspect
- *di-*–*nya*, *ter-*–*nya* : perfect aspect

5.3. Aspect markers and the *=nya* nominalisation

The nominalisation by *=nya* retains many predicative features of the stem verb, including its adverbs of degree. Thus in the transformation of (36) into (37), the fronting of the nominalised predicate will maintain the adverb *terlalu* ‘too much’ left to the deverbal noun.

- (36) *Harga kayu terlalu mahal.*
 price wood too be.expensive
 ‘The price of wood is excessively expensive.’
- (37) *Terlalu mahal =nya harga kayu mem- buat orang*
 too be.expensive =NML price wood AV- make person

me- lirik bahan lain untuk atap rumah.
 AV- look.at material other PREP roof house
 ‘The excessive price of wood makes people consider other materials for the roof of the house.’

Another feature showing that deverbal nouns remain highly predicative lays in the fact that the predicate may retain some aspect or mood markers. The continuative aspect marker *masih* remains left to the deverbal noun in (39).

- (38) *Harga suku cadang masih tinggi.*
 price piece reserve CONT be.high
 ‘The price of spare parts is still high.’
- (39) *Masih tinggi =nya harga suku cadang men- jadi alasan untuk...*
 CONT be.high =NML price piece reserve AV- become pretext PREP
 ‘[The fact that] the price of spare parts is still high becomes the pretext for...’

The perfect aspect markers *sudah* and *telah* can precede a deverbal noun cliticised by *=nya*, although it could seem rather pleonastic. Unsurprisingly, the markers *sedang* (aspect ‘imperfective’), *akan* (modality ‘uncertain’), and *belum* (modality ‘expected’) are not compatible with most of the deverbal nouns, because they would contradict the perfect / perfect of result aspect retained or conveyed by *=nya*.

- (40) **sedang tingginya harga...* ‘the present height of the price’
 **akan dibunuhnya orang ini...* ‘the fact that this person will be killed’
 **belum terpilihnya kades...* ‘the fact that the village head is still not elected’

As could be predicted, the deverbal nouns formed on a prefixed (AV) intransitive verb retain the imperfective aspect, thus are compatible with the imperfective aspect markers, and the ‘uncertain’ or ‘expected’ modalities.

- (41) *Sedang menurunnya kurs Euro...* ‘the present decreasing of the Euro’
Akan memanasnya iklim... ‘the forthcoming climate warming’
Belum meluasnya kota ini... ‘the fact that this city has still not expand’

However, the perfect aspect markers *sudah* and *telah* can occur as well, to ‘stabilize’ or ‘freeze’ an ongoing process.

- (42) *Sudah menurunnya kurs Euro...* ‘the fact that the Euro has decreased’

The perfect aspect specified by *ter-* or *=nya* will additionally lead to the localization of the event in the past, if no other indication of time is available in the context.

In sum, the preverbal morphemes that can remain left to the *=nya* deverbal noun are mainly adverbs of high-degree (e.g. *terlalu* ‘too much’) and aspect markers. Space is lacking here to give a detailed account of their morpho-syntactic constraints. They do not share several features of nouns in Indonesian:

- these deverbal nouns must be the head of a Noun Phrase or a Prepositional Phrase (in other words, they cannot appear alone or be ruled by another noun);
- they embed the predicative negation³² *tidak* only, not the nominal negation *bukan*;
- they cannot be defined by a determiner like *ini* ‘this’, *tiga* ‘three’;
- they cannot be expanded by a relative clause;
- when coordinated, a single clitic is applied to the whole coordination: (*di-tolak* atau *di-terima*)=*nya* ‘the fact that it was rejected or accepted’
- when nominalised from a *di-* or *ter-* undergoer voice, i.e. *di-* *=nya* or *ter-* *=nya*, they can retain the agent complementation introduced by *oleh* ‘by’
- they retain preverbal adverbs and aspect markers (under condition of aspect consistency).

On the other hand, throughout nominalisation, they lose only a few verbal syntactic features. For instance, they become incompatible with the interrogative form (open questions). In sum, these *=nya* deverbal nouns remain highly predicative.

Considering that nominalisation with *=nya* retains so many verbal features, either syntactic or aspectual, an alternative syntactic analysis could be proposed: *=nya* is the trace of the extracting (and often fronting) of a verb, accompanied by its attributive complement. This working hypothesis would require a deeper syntactic analysis, which is outside the scope of this paper.

6. Conclusion

The aspectual and modal features of 14 Indonesian preverbal aspectual markers have been examined. For most of the markers, aspect and modality are intermingled. Some markers are quite complex, because their meaning can range from plain aspect to pure modality. From this set of markers, at least 72 compounds of two markers can be formed, complying with rules of hierarchy, concision and consistency.

The prefix *ter-* may express, beside an Undergoer Voice, a ‘perfect of result’ aspect e.g. *Buku ini tertulis dalam bahasa Indonesia* ‘this book has been written Indonesian’. It implies the completion of an event, while *di-* does not indicate whether the event is completed or not, e.g. *Buku ini ditulis dalam bahasa Indonesia* ‘this book is written in Indonesian (is currently being written or was written)’.

A clear-cut opposition appears between nominalisations of dynamic verbs by *-nya* and by *peN-* *-an*, e.g. *dibunuhnya Munir* ‘the murder of Munir, the fact that Munir has been killed’ versus *pembunuhan Munir* ‘the murder of Munir’, regardless of whether the event is completed or not. The deverbal nominalization with *=nya* embeds many predicative features, and additionally conveys a perfect aspect. Moreover, the aspect specified by *ter-* or *=nya* will additionally lead to the localization of the event in the past, if no other indication of time is available in the context. This aspect meaning may be further modified and specified by an additional aspect marker.

This overall system of free markers, of affixed and cliticised markers, and their interactions, provide the Indonesian language with a wealth of aspectual and modal means of expression.

³² Except for nominalisations of prefixed stative verbs like *besar* ‘be big, tall’ > (*tidak*) *membesar* ‘(does not) grow’ > *membesarnya* ‘the growth, upsurge’ but **tidak membesarnya* ‘the non-growth’

Abbreviations

APPL: applicative	PNOUN: proper noun
AspP: aspect phrase	NML: nominaliser
AV: Actor Voice	NP: noun phrase
CAUS: causative	PP: prepositional phrase
CONT: continuative	PREP: preposition
DET: determiner	PFCT: perfect
DETR: detrimental	SEMF: semelfactive
GRAD: gradual	UV: Undergoer Voice
IPFV: imperfective	

References

- Alwi, Hasan (1992) *Modalitas dalam Bahasa Indonesia*, Jakarta: Kanisius.
- Arka, I Wayan (2011) 'On modality and finiteness in Indonesian: complexities of =*nya* nominalisation', Workshop on TAM markers and evidentiality in Indonesian Languages, Tokyo University of Foreign Studies, 17-18 February 2011, <http://lingdy.aacore.jp/en/contact/index.html>.
- Chung, Siaw-Fong (2011) 'Uses of *ter-* in Malay: A corpus-based study', *Journal of Pragmatics*, Vol. 43: 799-813.
- Comrie, Bernard (1976) *Aspect*, Cambridge: Cambridge University Press.
- Englebretson, Robert (2003) *Searching for structure - the problem of complementation in colloquial Indonesian conversation*, Amsterdam: John Benjamins Publishing Company.
- Gonda, J. (1954/1975) 'Tense in Indonesian languages'. In *Selected studies presented to the author by the staff of the Oriental Institute, Utrecht University, on the occasion of his 70th birthday* Leiden: E.J. Brill, pp. 240-262.
- Grangé, Philippe (2006) *Temps et aspect en indonésien*, PhD thesis, Poitiers: Université de Poitiers.
- Grangé, Philippe (2010) 'Aspect and Modality in Indonesian: the case of *sudah, telah, pernah, sempat*', *Wacana*, Vol. 12(2).
- Himmelman, Nikolaus P. (2002) 'Voice in western Austronesian: an update'. In Fay Wouk and Malcolm Ross, eds. *The history and typology of Western Austronesian voice systems, 7-16*. Canberra: Pacific Linguistics.
- Himmelman, Nikolaus P. (2005) 'The Austronesian languages of Asia and Madagascar: typological characteristics'. In Alexander K. Adelaar, A. & Nikolaus P. Himmelman, eds. *The Austronesian languages of Asia and Madagascar*, 110-181. New York: Routledge..
- Kaswanti Purwo, Bambang (1984) *Deiksis dalam Bahasa Indonesia*, Jakarta: Balai Pustaka.
- Kaswanti Purwo, Bambang (2008) 'Contemporary Indonesian Syntax : some Evidence of Innovations and Language Change', Twelfth International Symposium on Malay/Indonesian Linguistics (ISMIL 12), Leiden, 25-27 June 2008.

- Kaufman, Daniel (2011) 'Interpreting the Geography of TAM Marking across Indonesia', International Workshop on TAM and Evidentiality in Indonesian Languages, Tokyo.
- Kridalaksana, Harimurti (1986) *Kelas kata dalam Bahasa Indonesia*, Jakarta: Gramedia.
- Sneddon, James Neil (1996) *Indonesian, a comprehensive grammar*, London: Routledge.
- Steinhauer, Hein (1983) 'Notes on the Malay of Kupang (Timor)', *NUSA, Linguistic Studies of Indonesian and other Languages in Indonesia*, Vol. 17. Studies in Malay Dialects part I, 42-64.
- Steinhauer, Hein (2008) 'Does Indonesian have adjectives?', Twelfth International Symposium on Malay/Indonesian Linguistics (ISMIL 12), Leiden, 26-27 June 2008.
- Tadjuddin, Mohammad (1993) *Pengungkapan makna aspektualitas Bahasa Rusia dalam Bahasa Indonesia : suatu telaah tentang aspek dan aksionalitas*, Jakarta: Pusat Pembinaan dan Pengembangan Bahasa.
- Vendler, Zeno (1967) *Linguistics in philosophy*, Ithaca: Cornell University Press.
- Verhaar, John W.M. (1984) 'The categorial system in contemporary Indonesian', *NUSA, Linguistic Studies of Indonesian and other Languages in Indonesia*, Vol. 18 Towards a description of contemporary Indonesian: preliminary studies, part 1, 27-64.
- Winstedt, Richard Olof (1913) *Malay Grammar*, Oxford: Clarendon Press.
- Winstedt, Richard Olof (1916) *Colloquial Malay - a simple Grammar with Conversations*, Singapore: Kelly & Walsh Ltd.