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* * *

THEMATIZATION AND INFORMATION STRUCTURE IN JAVANESE¹

Gloria Poedjosoedarmo

Introduction

In a recent article, Unlenbeck (1975) presents some very interesting data with regard to the division of Javanese sentences into intonation marked segments. He points out that sentences can consist of as many as four such segments and that their order with reference to each other is flexible, different orders emphasizing different elements. However, although he stresses the importance of intonation in marking these segments, he does not describe the intonation contours involved. He also mentions the importance of topicalization in Javanese, but does not describe the mechanisms for identifying topics.

I think, too, that the division of Javanese sentences into what are generally called topic and comment on the one hand and into intonation marked sentence segments on the other are both important. I also think, however, that the interaction between these two kinds of structures needs to be described and that is what I propose to do here. The phenomena in question lend themselves to description in terms established by Halliday (1967-68). Since his terminology is not yet in universal use among linguists, it perhaps needs to be reviewed first.

In place of "topic" and "comment" which he says tend to be used ambiguously, Halliday proposes theme and rheme. The theme is what we are talking about. The rheme is what we are saying about it. In English theme always comes first, rheme follows. In the neutral instance the theme is equivalent to the subject, and the rheme is the same as the predicate. Thus in the sentence

Tom lives in Middleburg.

Tom is the theme (as well as the subject), and lives in

Middleburg is the rheme (as well as the predicate). The theme, however, can be some other element, such as a locative or time reference:

On Saturdays, Mary goes to town.
In America, people don't eat bread every day.

On Saturdays is the theme of the first sentence, while Mary goes to town is the rheme. In America is the theme of the second sentence while people don't eat bread every day is the rheme. In English, rarely, a verb can be theme as in the second clause below:

(He said he would run, and) run he did.

In this clause run is theme, he did rheme. In colloquial speech we sometimes find as theme a noun whose only syntactic relation to the rest of the sentence is a genitive one to the subject:

(Now) Tom, his house is in Middleburg.

Here Tom is theme, his house is in Middleburg is rheme.

In addition to thematic structure, speech has an information structure. Information structure has to do with the way segments of language function as components of a message. Halliday notes that when we speak in English we break our speech into information units, marked by intonation contours. One information unit may correspond to one sentence:

Mary goes to town on Saturdays.
Tom lives in Middleburg.

Or a sentence may be broken into two or more information

units. In this case the end of each unit is marked by a slight pause:

Tom / lives in Middleburg.
Mary / goes to town on Saturdays.
Mary / goes to town / on Saturdays.

An information unit may consist of two clauses:

Tom lives in Middleburg and likes it there.

Or it may consist of more than one but less than two clauses:

Tom / lives in Middleburg and likes it there.

Here Tom is a single information unit while lives in Middleburg and likes it there is also a single information unit.

Semantic elements in utterances can be classified as old information or new information. Old information is something we were talking about before, something given. New information is new relative to the old information. Each information unit contains an information focus, that is the element of new information which the speaker considers most informative. This in English is marked by a combination of stress and raised pitch. Thus in the sentences

Mary goes to town on Saturdays.
Mary goes to town on Saturdays.
Mary goes to town on Saturdays.

to town has information focus in the first, on Saturdays does in the second, and Mary does in the third. If a sentence consists of more than one information unit, each will have an element of information focus:

Mary / goes to town on Saturdays.
Mary / goes to town on Saturdays.
Mary goes to town / on Saturdays.
Mary / goes to town / on Saturdays.

The first of these sentences consists of two information units with Mary receiving information focus in the first and to town receiving information focus in the second. The second sentence also consists of two information units with Mary receiving information focus in the first and on Saturdays receiving information focus in the second. The third sentence consists of two information units with to town receiving information focus in the first and on Saturdays receiving information focus in the second. The fourth sentence consists of three information units with Mary receiving information focus in the first, to town receiving information focus in the second, and on Saturdays receiving information focus in the last.

Finally a word should be said about the relationship between thematic and information structures. Thematic structure applies to clauses. Information focus applies to an information unit. In the neutral instance an information unit corresponds to a clause and information focus fall in the theme, as in

Mary goes to town on Saturdays.

The theme, however, may receive information focus, as in

statements meaning that not X by Y is the individual or entity with reference to which something is true:

Mary goes to town on Saturdays, (not Betty).

The theme may also receive information focus in a narrative when a new character enters the scene:

(Suddenly) / a witch appeared.

Halliday was talking about English, but Grimes (1972)² maintains that every language must have means of distinguishing these semantic categories. Here I will attempt to describe how they are expressed in Javanese.

Word classes and verb classes in Javanese

Before I begin to discuss the major topic of this paper, I should say a word about Javanese word classes in general and verb classes in particular. Whereas English content words in isolation may be ambiguous as to their identity as nouns or verbs, as for example sleep, drink, talk, Javanese content words belong to one or the other of two large classes. They are either substantives or predicate words.³ Predicate words can be further classified. Again, a given English verb in isolation may be ambiguous as to how many participants it implies, what their semantic roles are and which one is subject. Open and break, for example, can occur in several quite different syntactic frames:

The door opened.
The boy opened the door (with a key).
The key opened the door.
The wind opened the door.

The vase broke.
Tom broke the vase (with a rock).
The rock broke the vase.
The earthquake broke the vase.

The verbs open and break in isolation are completely ambiguous as to which syntactic frame they imply. This is not the case with Javanese predicate words. A given Javanese verb, or adjective, by which I mean a word and not a root,⁴ implies, usually unambiguously, one or more semantic roles and identifies one as subject.

There are three classes of predicate words in Javanese, defined according to whether they require the identification of, or assume the identity of one, two, or three entities. For predicate words which imply only one participant, that participant is subject. For verbs which imply two or three participants, verbal inflection identifies the semantic role of the subject. Other required noun phrases are either complements, which directly follow the verb in the neutral instance and are not marked by prepositions, or adjuncts which are usually marked by prepositions.⁵ These one, two, or three nominals and a verb form the propositional core of verbal sentences. This is not to say that other nominals cannot be added. Time and locative phrases, which are external adjuncts, as well as optional internal adjuncts, such as some instrumental phrases, occur, but unlike the nominals in the propositional core, they are not implied if they are not explicitly stated.

Thematization

The identity of theme and rheme in Javanese is not a matter of position in most cases. The function of the two major word classes is to define the potential of a word as theme or rheme. Predicate words, unless nominalized, can only be rhemes. Nominals are potentially either rhemes or themes. In a simple verbal sentence with no external locative or time adjunct, the subject of the verb is the theme. Although in the neutral instance the subject precedes the verb, this placement is not the means of identifying it as subject. It is identified by the facts that (1) it is not marked by any preceding particle and (2) its semantic features correspond with the requirements of the role of the subject as indicated by the verb. Thus in the sentence

Tono mecah jendhéla nganggo watu.
name break window use = rock
agent = with
subject

'Tono broke the window with a rock.'

mecah, being a verb, must be in the rheme. Tono is subject of the verb mecah and thus theme of the clause, not because of its initial position, but because the verb includes in its meaning that the subject is an agent, and Tono, being the only animate entity mentioned, must be that agent. Thus Tono is the theme and mecah jendhéla nganggo watu is the rheme.

The neutral or unmarked order of verbal sentences in Javanese is subject + verb (+ complement (+ adjunct)). This sequencing of elements appears to be like English, but the similarity in structure is only superficial. In marked sentences the theme may follow the rheme:

(Dumadakan) keprungu swarané macan.
suddenly hear, voice tiger
source=of [+def]
noise =
subject

'Suddenly a tiger's voice was heard.'

Here keprungu, a verb, must be in the rheme. Swarané macan is the theme, despite the fact that it follows the verb. It is identified as subject by the fact that the verb includes in its meaning that its subject is the source of the noise heard. Since the semantic features of swarané macan correspond to this role requirement it is interpreted as subject. It should be noted that the fact that swarané macan is the only noun phrase made explicit in the clause does not necessitate it being interpreted as subject. Unmarked themes in Javanese narratives are often not mentioned explicitly. Thus in the sentence

(Tono mau mbengok-mbengok nganti) keprungu wong akèh.
name shout and shout hear people
earlier agent = until source of many
(today) subject noise =
subject

'Tono shouted and shouted so that he was heard by many people.'

Tono is theme throughout. That is Tono is subject of both verbs mbengok-mbengok and keprungu. The clause

keprungu wong akèh looks superficially like keprungu swarané macan. That is the verb keprungu in both instances is followed by a single noun phrase. In the sentence about Tono, however, the element which agrees with the semantic requirements for the subject of keprungu, that is that it be the source of a noise, is Tono, who shouted.

Even in instances where it would seem that there might be potential ambiguity, the position of nominal elements is not fixed. In a sentence like

Kucingé dioyak asu.
cat chase dog
[+def] patient =
subject

'The cat was chased by a dog.'

it might be thought that changing the position of the nominal elements would raise a question as to who was chasing whom. But as long as asu 'dog' immediately follows the verb without a break in the intonation contour it must be interpreted as the agent and the verb form dioyak identifies the subject as the thing chased. Thus

Dioyak asu kucingé.
chase dog cat
patient = [+def]
subject

'The cat was chased by a dog.'

is also possible. In both sentences kucingé is the theme, dioyak asu is the rheme. It is even possible to change the position of asu, if it is definite, without altering the meaning, but in this case it would have to be marked by a particle indicating that it is agent. In formal speech this particle would be déning, but in colloquial speech, in which this particular sentence is most likely to occur, the particle would be karo:

Karo asuné Bu Tutoyo dioyak kucingé.
by dog Mrs. name chase cat
[+def] patient = [+def]
subject

'The cat was chased by Mrs. Tutoyo's dog.'

Here kucingé is still theme, since being the only unmarked noun, it is the only element that can be interpreted as subject of the verb dioyak. Karo asuné Bu Tutoyo dioyak is the rheme. The order in this sentence is highly marked, but given the right extra-linguistic situation it could occur in children's speech, at least.

Nominals, as I said earlier, are potentially either theme or rheme. In equational sentences where one element is definite and the other is not, the definite element is interpreted as theme, the indefinite one as rheme. Thus in the two sentences

Bapakku guru.
father- teacher
my

Guru bapakku.
teacher father-
my

both meaning 'My father is a teacher,' bapakku 'my father' which is definite is theme, guru 'teacher' which is indefinite is rheme.

It is only in equational sentences where both elements are definite, which would otherwise be ambiguous, that word order is important in defining thematic elements. In such sentences the theme is always first, the rheme second. Thus in the sentence

Bapakku guruné Tono.
 father- teacher
 my [+def] name
 'My father is Tono's teacher.'

Bapakku is the theme, guruné Tono the rheme. But in

Guruné Tono Bapakku.
 teacher father-
 [+def] name my
 'Tono's teacher is my father.'

Guruné Tono is the theme, Bapakku is the rheme.

Verbs can be nominalized and then function as themes about which something is stated.⁶ To indicate a participant in an event, sing is placed before the form of the verb that agrees with the participant in question when it is subject. Thus the verb meaning 'give' can be nominalized to identify each of three participants in an event:

Sing maringi Bapak.
 the give father
 one agent=
 who subject
 'The one who gave (it to someone) was Father.'

Sing diparingi aku.
 the give first
 one goal= person
 who subject pronoun
 'The one (he) gave (it) to was me.'

Sing diparingaké duwit seka bank mau.
 the give money from earlier
 one object= bank
 which subject
 'What was given was the money from the bank.'

In all of these sentences, since both elements are definite, the theme is first, the rheme second. The order can be reversed, but if this is done, the nominalized verb becomes the rheme:

Bapak sing maringi.
 father the give
 one agent=
 who subject
 'Father is the one who gave (it to someone).'

Aku sing diparingi.
 I the give
 one goal=
 who subject
 'I'm the one (he) gave (it) to.'

Duwit seka bank mau sing diparingaké.
 money from earlier the give
 bank one object= subject
 which
 'The money from the bank is what was given.'

Verbs can be nominalized with olèhé (colloquial lé) or anggoné to refer to the event rather than some participant in it. These constructions are normally used in Javanese where English uses subject + verb + adverb-of-manner constructions, as in

Lé mlayu cepat.
 nom- run fast
 inal-
 izer
 '(He) ran fast.'

In the Javanese sentence, lé mlayu is the theme, cepat the rheme. The order of theme + rheme can be reversed here, since cepat is a predicate word and the identity of the thematic elements is thus not affected by changes in order:

Cepat lé mlayu.
 fast nom- run
 inal-
 izer
 '(He) ran fast.'

Theme-rheme combinations which may themselves serve as sentences may also serve as rheme of larger sentences, as in

theme	rheme	
	theme	rheme
<u>Pak Kerta</u> Mr. name	<u>anaké</u> child- [+def]	<u>telu</u> three
'Mr. Kerta has three children.'		

where Pak Kerta is theme, anaké telu rheme of the larger sentence, with anaké telu itself being divided into anaké, the theme and telu, the rheme. The order here can be reversed without changing the identity of the elements. The internal clause is always interpreted as rheme:

rheme		theme
theme	rheme	
<u>Anaké</u> child [+def]	<u>telu</u> three	<u>Pak Kerta</u> Mr. name
'Mr. Kerta has three children.'		

External locative or temporal phrases also behave as themes of a rheme sentence which itself contains a theme and rheme:

theme			rheme	
			theme	rheme
<u>Nèng</u>	<u>sekolahan</u>	<u>mau</u>	<u>aku</u>	<u>wis nggarap P. R.</u>
in	school	earlier	I	already (=pekerjaan
		today		work, do rumah,
				Indonesian)
				homework

'In school earlier today, I already did my homework.'

The locative or temporal phrase can also be placed at the end of the Javanese sentence:

Aku wis nggarap P. R. nèng sekolahan mau.
 I already in school earlier
 work, do today
 homework

But I think this does not really mean the same thing as putting such a phrase at the end of an English sentence. In English this would make the locative or temporal phrase rheme or part of the rheme. In Javanese, in order to make the locative or temporal phrase rheme and rest of the sentence theme, the verb must be nominalized:

Lèhku nggarap P. R. nèng sekolahan mau.
 verb do home- in school earlier
 nominal- work today
 izer=
 act-my
 'I did my homework in school today.'

Locative phrases are intermediate between predicate words and other nominals in their thematic status. In combination with a phrase or clause containing an unnominalized verb, they are always interpreted as theme, but in combination with another nominal the locative phrase is interpreted as rheme. Thus the order of the phrases in the preceding sentence can be reversed without changing their thematic status:

Nèng sekolahan mau lèhku nggarap P. R.
 in school earlier do homework
 today verb
 nominalizer
 = act-my
 'I did my homework in school today.'

Nèng sekolahan mau here is still rheme, lèhku nggarap P. R. theme. The same is true of sentences consisting of a simple nominal (not a nominalized verb) and a locative phrase. The locative phrase is always interpreted as rheme. Thus in both of the two sentences

Omahku nèng Yoja.
 house- in
 my
 'My house is in Yogya.'

Nèng Yoja omahku.
 in house-
 my
 'My house is in Yogya.'

omahku is theme, nèng Yoja rheme.

To summarize what I have said about thematic structure, thematic elements, in Javanese in most cases are not overtly marked. Their identity is interpreted by deduction. Predicate words must be rhemes. Part of the meaning of a Javanese predicate word includes the semantic role of its subject. That subject is the theme. For equational sentences, when a locative is connected with another nominal, the locative phrase is always interpreted as rheme. When an indefinite nominal is connected with a definite nominal, the indefinite nominal is always interpreted as rheme. Only in the case of an equational sentence consisting of two definite nominals, is order significant. In such a sentence, theme is first, rheme is second. When an external noun phrase is attached to a complete clause, the external noun phrase is theme, the clause rheme. Predicate words can be nominalized and as such function as themes.

Information structure

In Javanese, as in English, a sentence may consist of one or more information units. I have not, however, found any instances of information units crossing sentence boundaries. Short sentences often consist of a single information unit:

Ora ana.
 neg- exist,
 ative be present
 'There isn't any.'
 'It isn't here.'

Longer sentences may also consist of a single information unit:

Tono mecah jendhéla nganggo watu.
 name break window use= rock
 agent= with
 subject
 'Tono broke a window with a rock.'

Or such a sentence can maximally be divided into as many information units as there are words:

Tono / mecah / jendhéla / nganggo / watu.

This sentence might be uttered in this way when repeating something, perhaps for the third or fourth time to a person who appeared to be deaf or exceptionally obtuse. These two ways of treating a longer sentence, as a single unit or by breaking it into as many units as there are words, are the extremes. Usually, such a Javanese sentence would be broken into two or three units.⁸ The possibilities are as follows:

Tono / mecah jendhéla nganggo watu.
Tono mecah jendhéla / nganggo watu.
Tono / mecah jendhéla / nganggo watu.

Within an information unit the focus is always on the last element.

What I have said so far about information structure in Javanese corresponds exactly to the categories described by Halliday. This does not account for all of the Javanese data, however. In order to account for the remaining data I must introduce some additional concepts. In Javanese, information has a superstructure, that is, the information

units have a structure relative to each other. At this point I would like to propose using the word utterance with a specialized sense. An utterance is one or more information units which form a complete whole in terms of information structure. That is, after completing an utterance, the speaker can stop talking without creating the impression that he 'hasn't finished his sentence.' It should be pointed out that what is a complete utterance in Javanese does not necessarily translate into a complete utterance in English. As I mentioned earlier, Javanese verbs in isolation imply a certain number of participants with certain semantic roles, and identify one as subject. Thus, given a linguistic or non-linguistic environment in which the identity of these participants can be deduced, a verb in isolation can be a complete utterance. For example, if two children are watching a dog chasing a cat, one might say to the other

Wah, dioyak.
excla- chase,
mation patient=
subject

This is a complete utterance. The listener understands perfectly what the speaker means. There is no question as to who is chasing and who is being chased. A nominal in isolation, too, can be a complete utterance, given a linguistic or non-linguistic environment in which its syntactic relations can be deduced. For example, if the family is sitting at the table and my fourteen year old daughter says to me

Bu, segané.
Mother rice
[+def]

that is a complete utterance. She means 'Could you pass the rice please, Mom?' If she hands me a letter which the mailman has just brought and says

Layang, Bu.
letter Mother

that is a complete utterance meaning 'There's a letter, Mom.'⁹

An utterance may consist of one or more information units. Each information unit is marked by an intonation contour. The three possible intonation contours are rising ↗, rising-falling ↘, and flat →.¹⁰ Each of these intonation contours indicates a particular kind of information unit. A unit with rising intonation is anticipatory. It suggests that something else will follow. A unit with rising-falling intonation is focal. It contains the information which the speaker feels is most informative within the utterance. A unit with flat intonation is supplementary. It contains information which the speaker feels might optionally be deleted, either because it can probably be deduced from context, or because it is not important. Each utterance contains one and only one focal unit. Anticipatory units always precede the focal unit. Supplementary units always follow it.

It is possible for an utterance to consist of a focal information unit only:

Ora ana.
neg- exist,
ative be present
'There isn't any.'
'It isn't here.'

An utterance may consist of one anticipatory and one focal unit:

Kèn Angrok | ngungun banget.
name amazed very
'Kèn Angrok was very amazed.'

It is also possible to have two, three, or four, or perhaps more anticipatory units:

Ndelalah | kersaning Jawata | nalika iku | ana lésus
it so wish- god(s) when that exist
happened genitive
tornado

tanpa sangkan.
with- source
out

'It so happened at that time, by the wish of the gods, there was a whirlwind from nowhere.'

An utterance may contain one focal and one supplementary unit, as in:

Guru | bapakku.
teacher father-
my
'My father is a teacher.'

An utterance may contain one focal unit and two or possibly three supplementary units:

Guru | kok | bapakku.
teacher con- father-my
trary
to what you seem to imply
'My father is a teacher.'

Guru | kok | Nik | bapakku.
teacher con- name father-my
trary
to what you seem to imply
'My father is a teacher, Nik.'

I think more than three supplementary units is unlikely. An utterance may consist of a focal unit with one or more each of anticipatory and supplementary units:

Pak Kerta | telu | anake.
Mr. name three child
[+def]
'Mr. Kerta has three children.'

Pak Kerta | sing dhuwur kaé | telu | kok | anake.
Mr. name the tall that three con- child
one who trary [+def]
to what you seem to imply
'Mr. Kerta, the tall one, has three children.'

In most cases an utterance is identical to a sentence, defined in terms of syntactic relationships, but occasionally a sentence may occur which contains two utterances. The example in Uhlenbeck (1975)

<u>Ndeloki,</u> look at agent = subject	<u>Met,</u> name	<u>sabakmu.</u> slate-your
--	---------------------	-------------------------------

'Let me see it, Met, your slate.'

may be interpreted as a single sentence since sabakmu identifies the complement of the verb ndeloki, but with the vocative following the verb, the sentence must contain two focal units and is thus two utterances. This means that potentially Met, the addressee, could insert a question between the vocative and complement:

Apa?
What
'What (is it that you want to see)?'

without effecting the intonation contours.

Before I proceed to a discussion of the interplay between thematic and information structures, the nature of supplementary units requires special attention. As I said earlier, supplementary units contain information which the speaker feels might optionally be deleted. They rarely occur in well thought out texts, either oral or written. But they abound in colloquial conversation. The kinds of information which can occur in supplementary units are also limited. Although I have not yet analyzed these limitations exhaustively, it appears at this point that the following kinds of elements can occur in supplementary units:

1. Certain definite nominals, including nominalized verbs and vocatives, can be supplementary:

<u>Wis teka</u> already arrive, agent or thing which arrives = subject	<u>korane.</u> newspaper [+def]
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'The newspaper already came.'

<u>Bapakku</u> father- my	<u>sing maringi.</u> the give one agent = who subject
---------------------------------	--

'My father is the one who gave (something to someone).'

<u>Ndeloki,</u> look at agent = subject	<u>Met.</u> name
--	---------------------

'Let me see (it), Met.'

2. A certain class of particles which define the speaker's attitude toward what he is saying, for example, contradicting the addressee (kok), changing his mind or remembering something which he had forgotten (ding), are always supplementary:

mentary:

<u>Aku</u> I	<u>wis mangan</u> already eat agent = subject	<u>kok.</u> con- trary to what you seem to imply
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'I've already eaten!'

<u>(O, ya,</u> oh yes	<u>lali</u> forget	<u>ding.</u> I just realized, just remembered
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'Oh, yes, I forgot. (Now I remember.)'

3. Another class of particles which delimit a verb in some way and normally precede the verb can be suffixed with -an and treated as supplementary:

<u>Sigit</u> name	<u>туру</u> sleep	<u>wisan.</u> already
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'Sigit is asleep already.'

<u>Giman</u> name	<u>umbah-umbah</u> wash agent = subject	<u>iya-an.</u> ¹¹ also
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'Giman is doing laundry also.'

Neutral order for these same statements would be:

<u>Sigit</u> name	<u>wis</u> already	<u>туру.</u> sleep
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'Sigit is already asleep.'

<u>Giman</u> name	<u>iya</u> also	<u>umbah-umbah.</u> wash agent = subject
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'Giman is also doing laundry.'

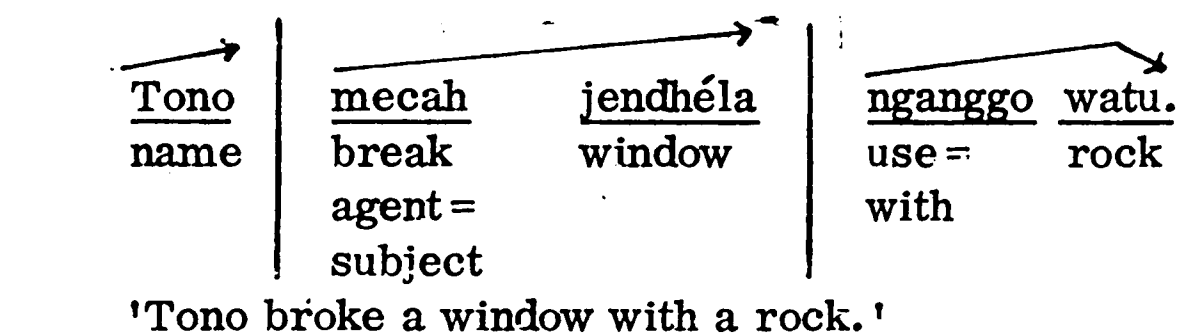
The following kinds of elements cannot be supplementary:

1. Verbal complements or adjuncts belonging to the propositional core.
2. Non-nominalized predicate words.
3. Indefinite nouns.

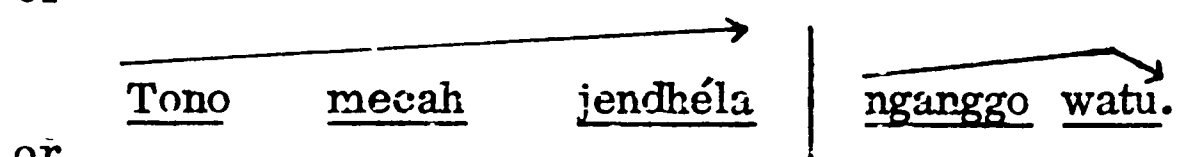
Interplay between thematic and information structures

Neutral or unmarked word order is theme + rheme. For sentences with transitive verbs the unmarked order of syntactic elements is subject + verb + complement (+ adjunct). Any content element, regardless of its thematic or syntactic role, can receive information focus. But given the restrictions on sequencing of information units (anticipatory + focal + supplementary), and restrictions on the kinds of elements which can be treated as supplementary, the placement of information focus on certain elements may require marked word order and/or nominalization of predicate words.

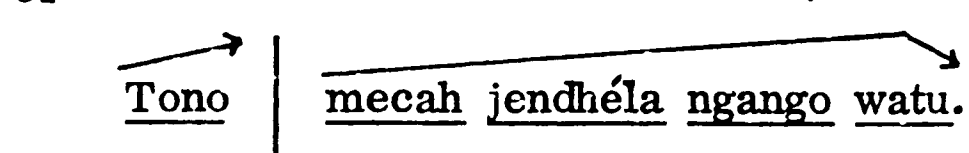
In utterances containing transitive verbs, since complements and internal adjuncts cannot be treated as supplementary, when the word order is neutral, information focus falls on the last of these noun phrases:



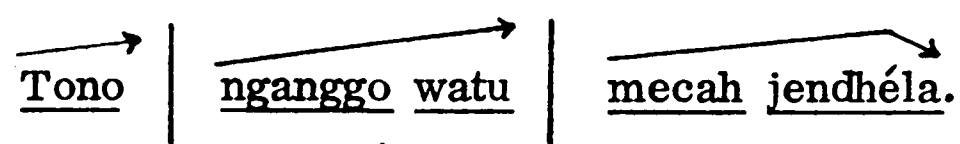
or



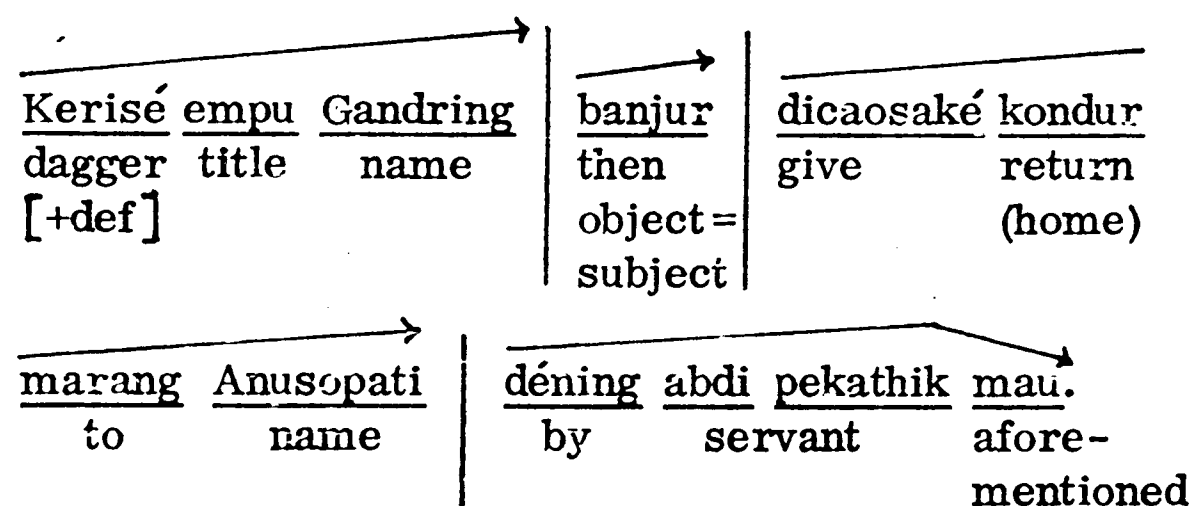
or



In order to place information focus on a preceding element in the rheme, the phrase nganggo watu must be moved to pre-verbal position:

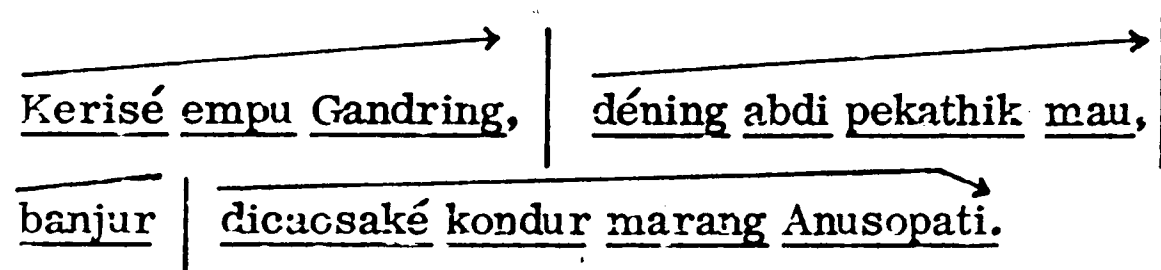


This rule is not restricted to active verbs, and the semantic roles of the post-verbal noun phrases involved is not relevant. The following utterance is in neutral order:

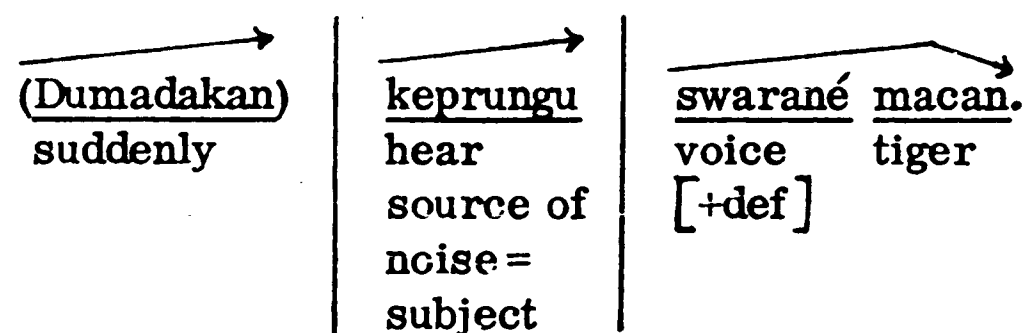


'The empu Gandring Keris was then given back to Anusopati by the aforementioned servant.'

But in a narrative, when the speaker wished to treat the phrase dicaosaké kondur marang Anusopati as focal, he uttered the following:



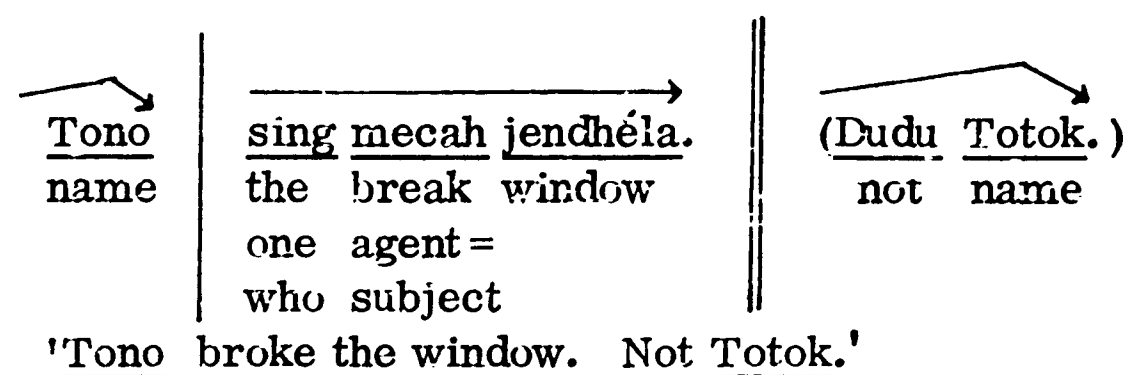
There are two ways of placing information focus on the theme of a verbal utterance, with different implications. In a narrative, when a new character, and thus a new theme, is introduced, the theme is moved to final position:



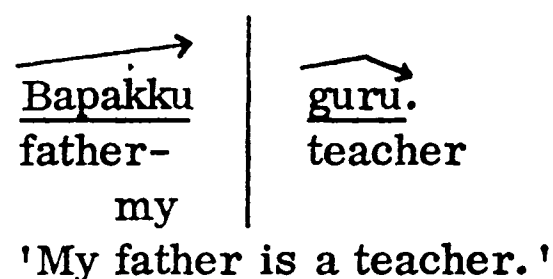
'Suddenly a tiger's voice was heard.'



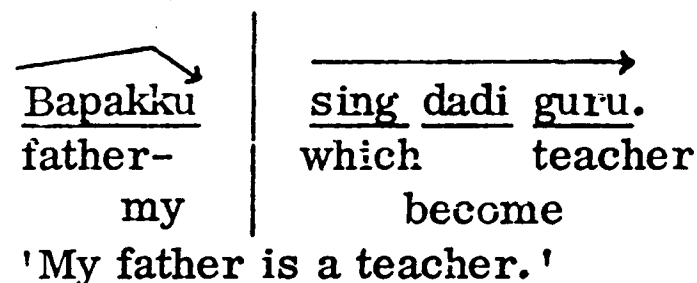
In conversation when the speaker wants to correct the addressee with a statement meaning 'Not X but Y is the one I'm talking about,' the theme remains in initial position, but the verb phrase is nominalized and treated as supplementary:



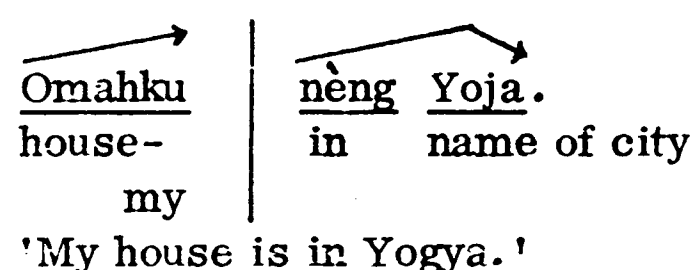
For equational sentences in which one element is definite, the other indefinite, the neutral utterance involves placing information focus on the indefinite element, which is the rheme:



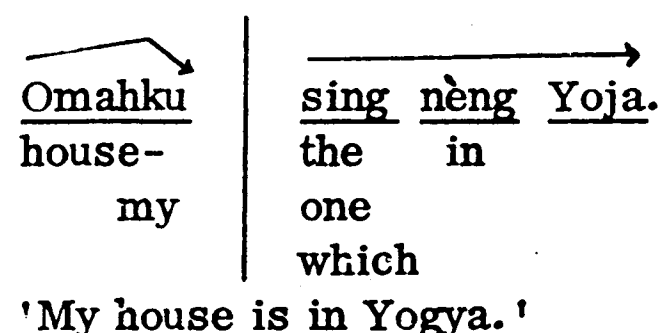
In order to place information focus on the theme, the indefinite noun must be made into a definite noun phrase meaning 'the one who is a (teacher)':



The same is true of sentences consisting of a simple nominal plus a locative phrase. That is, the neutral utterance involves placing information focus on the locative phrase, which is the rheme:

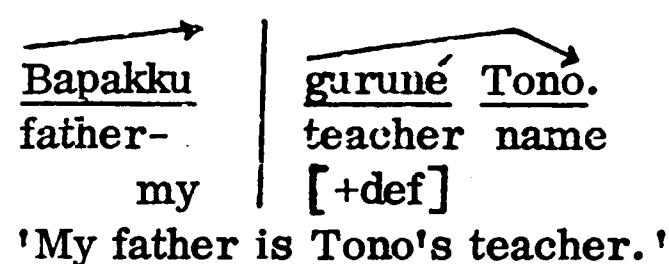


In order to place information focus on the theme, the locative phrase must be made into a definite noun phrase meaning, 'the one which is in (Yogya)':

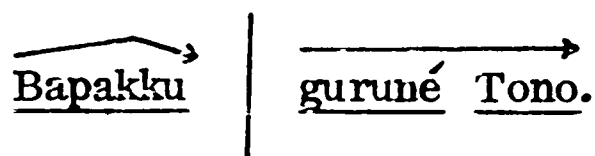


For equational sentences in which both elements are

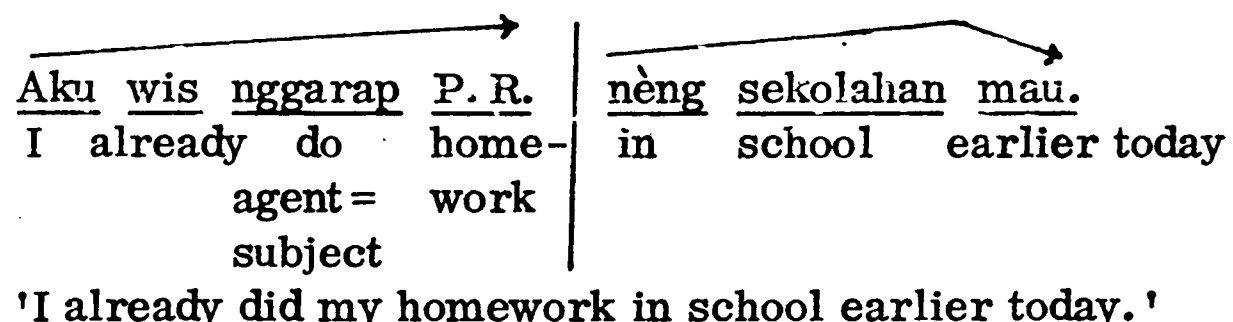
definite, the neutral utterance also of course involves placing information focus on the rheme:



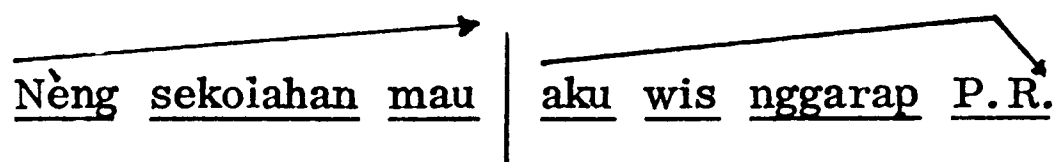
To place information focus on the theme it is simply given focal intonation, and the rheme, being a definite noun already, is treated as supplementary:



External locative or temporal phrases receive information focus in final position:



In initial position they are anticipatory:



Conclusion

To summarize the main points of this paper, thematic structure consists of dividing a sentence into theme, what is being talked about, and rheme, what is being said about it. Javanese content words belong to one of two large classes, nominals and predicate words. Predicate words cannot be themes unless nominalized. Included in the meaning of verbs in isolation is that the event or condition described contains a set number of participants with fixed semantic roles. Included also in the meaning of the verb is the identification of the semantic role of its subject. The subject of a verb is always a theme, but the entire clause in which it occurs may itself be a rheme which has as its theme a locative or time phrase or a noun which has a genitive relationship to the subject. Neutral order in Javanese is theme + rheme, but this order may be changed in marked conditions of information focus. Thematic elements are not overtly marked. Recognition of their identity by the listener depends largely on deduction. In a verbal clause, the unmarked nominal whose features agree with the role of the subject as indicated by the verb must be the subject.

Information structure is indicated by intonation. One sentence may be equal to one information unit but more often in Javanese a sentence is divided into two or three or sometimes more information units. Each unit is marked by an intonation contour. There are three such contours: anticipatory, marked by rising intonation; focal, marked by rising-falling intonation; and supplementary, marked by flat intonation. They must occur in this order. Within an information unit focus falls on the last element. But information units in Javanese have a superstructure as well. An utterance is a sentence-like unit, but defined in terms of information

structure rather than syntax. An utterance must have one and only one focal unit. It may also have one or more anticipatory units and/or one or more supplementary units. There are restrictions on the kinds of elements which can occur in supplementary units. As a result of these restrictions and the fixed sequencing of kinds of information units, marked information focus may require marked word order and/or nominalization of a predicate word.

FOOTNOTES

1. I would like to thank Joseph E. Grimes and John U. Wolff for their many helpful comments on a preliminary draft of the paper. Any errors in the present paper, however, are of course my own responsibility.

2. *The Thread of Discourse* has since been revised and published, but the only edition which I have access to at present is the pre-publication one.

3. Berg (1937) made a similar distinction to which Uhlenbeck (1953) objected. Uhlenbeck pointed out that adjectives have a number of features which must distinguish them as a separate word class. Without disagreeing with Uhlenbeck, I would like to maintain that adjectives and verbs taken together from a super-class which must be distinguished from nominals

4. Uhlenbeck (1953) points out the importance of this distinction.

5. This is a somewhat simplified description, but is sufficient for the present purpose. For a more detailed description of Javanese verb classes see Poedjosoedarmo, G. (1974), to appear in revised form in a subsequent volume of NUSA.

6. Verbs may also function as something other than a theme when nominalized. Being nominalized simply converts verbs to nominals. Thus in

<u>Dhik Kris</u>	<u>mriksani</u>	<u>lé masak</u>	<u>Ibu.</u>
young-	watch	nom-	cook Mother
er name	agent =	inal-	agent =
	subject	izer	subject

'Kris watched Mother cooking.'

Dhik Kris is the theme and lé masak Ibu, a nominalized verb meaning 'Mother's act of cooking' functions as the complement of the verb mriksani.

7. Lakoff (1971) discusses the role of deduction in connection with presuppositions. It appears that the process of deduction may have an even wider application in the interpretation of linguistic forms. As Grimes (1972) points out, all languages must be able to express such meanings as identifying events, participants in those events, the semantic roles of participants, thematic structure, and information structure. Most languages make some of these kinds of meaning explicit, but in many languages, some of these kinds of meaning are not marked overtly. Where they are not, they must be interpreted by deduction.

8. I believe these information units are identical to 'sentence segments' in Uhlenbeck (1975).

9. The concepts of restricted and elaborated codes proposed by Bernstein (1972) are relevant here. Colloquial Javanese Ngoko, the unmarked code, in particular, but also colloquial Madyo, which is polite but informal, are generally restricted codes. They abound in utterances consisting of single predicate words or single nominals whose syntactic relations must be deduced from the environment, either

linguistic or nonlinguistic. The formal and polite code, Krama, on the other hand, and formal Ngoko are highly elaborated codes. Soepomo P. (1977) discusses this in detail.

10. These are the contours for statements uncolored by features of what Fillmore (1968) calls modality. In questions and modality-colored statements the shape of the rising-falling contour in particular varies, but the meaning categories remain unchanged.

11. It is interesting that these forms do not conform to the usual morphophonemic rules. Normally when a suffix with the shape -an is added to a root ending in a (pronounced [ɔ]) the two a's are contracted, as in lunga, 'go', lelungan 'go on a trip', teka 'arrive (from point of view of goal)', tekan 'arrive (from point of view of agent or object)'. Other suffixes beginning in an a may be added to roots ending in an a without causing contraction, but a glottal stop is inserted and the pronunciation of the final a of the root is changed to [a], as in teka 'arrive', nekakake 'cause to arrive' (təkɔ, nəkaʔaké). In words like iya-an (iyɔan), the final a of the root is not contracted, no glottal stop is inserted, and the a of the root is still pronounced [ɔ].

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