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Javanese Applicative Construction

Ika Nurhayani
Cornell University
in43@cornell.edu

Abstract

Javanese has an applicative suffix *–ake*, which serves to license a benefactive, instrumental or theme suffix as a core object. Each of them has a thematic paraphrase in which the applicative argument is contained in a PP. The multiplicity of *–ake* poses problems for Marantz (1993) with his single applicative head. First, the uses of the applicative morpheme *–ake* must be lumped together in a single applicative head. Second, there is no attempt at all to account for the relation between the applicative constructions and their thematic paraphrases. I argue that Bowers's (2010) framework can solve the problems with multiple argument heads merged in accordance with a fixed Universal Order of Merge (UOM). There are three primary argument-types, Ag(ent), Th(eme) and Aff(ectee) and secondary argument-types of various kinds, including Instr(ument), Ben(eficiary), Source, Goal, and others. Any head can potentially host an applicative morpheme. In Javanese, the morpheme *-ake* can be associated with an Aff-head, an Inst-head or a Th-head. Furthermore, in each case, applicative construction and its thematic paraphrase are derived from virtually identical structures because the argument head may have more than one selectional possibility for a DP with unvalued case feature or a PP[1].

[1] I would like to express my sincere appreciation to my advisor, Dr. John Bowers and my committee members, Dr. Abby Cohn and Dr. Wayne Herbert for their encouragement, support and guidance throughout the writing

1 Introduction

Many world languages exhibit applicative constructions. An applicative morpheme introduces an argument as the core object of the sentence. The construction is signaled by an overt verbal morphology (Peterson, 2007: 1). Generally, an applicative object displays the characteristic of a direct object of a mono-transitive verb.

In Javanese, for example, a goal argument is added with suffix *–i* as shown in (1a). (1b-c) show that only the applicative object, like the direct object of a mono-transitive verb, can become the subject of a passive sentence.

(1) Javanese Applicative Suffix -i

a.	*Ani*	*n-ulis-**i***	*Tono*	*layang*
	Ani	active-write-Appl	Tono	letter
	'Ani wrote Tono a letter'			
b.	*Tono*	*di-tulis-**i***	*Ani*	*layang*
	Tono	passive-write-Appl	Ani	letter
	'Tono was written a letter by Ani'			
c.	**Layang*	*di-tulis-**i***	*Ani*	*Tono*
	Letter	passive-write-Appl	Ani	Tono
	'A letter was written by Ani to Tono'			

In (1a), the goal of the action *nulis layang* 'write a letter', *Tono*, is introduced to the sentence with the addition of suffix *-i* to the verb. *Tono* becomes the core object of the sentence as seen by its ability to be the surface subject of the passive sentence in (1b) while the theme *layang* 'letter' is ungrammatical in the same position in (1c).

An applicative with *-i* also has another form, a thematic paraphrase, in (2) in which the applicative object is contained in a prepositional phrase (PP). When passivized, the theme argument becomes the subject and the applicative object remains in a PP as seen in (2b).

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of this paper.

(2) The Thematic Paraphrase of Suffix -i

a.	*Ani*	*n-(t)ulis*	*layang*	***marang***	*Tono*
	Ani	active-write	letter	to	Tono
	'Ani wrote a letter to Tono'				
b.	*Layang*	*di-tulis*	*Ani*	***marang***	*Tono*
	Layang	passive-write	Ani	to	Tono
	'The letter was written by Ani to Tono'				

It can be observed that (1) and (2) have different forms with the goal object *Tono* located at different positions in the sentence, yet they have the same argument structures: *Ani* is the Agent, *Tono* is the Affectee Argument, and *layang* is the Theme Argument. Thus we need a framework that can account for the relation between Javanese applicative construction and its thematic paraphrase.

2 The Suffix -ake

Unlike suffix *-i*, which solely functions as a goal morpheme, the suffix *-ake* has three different functions to introduce three different objects, benefactive, instrumental and theme arguments. Each of these applicatives also has a corresponding thematic paraphrase.

(3) Applicative Suffix for Benefactive Argument

a.	*Ani*	*n-ulis*	*layang*	*kanggo*	*Tono*
	Ani	active-write	letter	for	Tono
	'Ani wrote a letter for Tono'				
b.	*Layang*	*di-tulis*	*Ani*	*kanggo*	*Tono*
	Layang	passive-write	Ani	for	Tono
	'The letter was written by Ani for Tono'				
c.	*Ani*	*n-ulis-**ake***	*Tono*	*layang*	
	Ani	active-write-Appl	Tono	letter	
	'Ani wrote Tono a letter'				

d. *Tono* *di-tulis-**ake*** *Ani* *layang*
Tono active-write-Appl Ani letter
'Tono was written a letter by Ani'

e. **Layang* *di-tulis-**ake*** *Ani* *Tono*
Letter passive-write-Appl Ani Tono
'The letter was written by Ani for Tono'

In (3a), *Tono* is a benefactive argument, which benefits from the action *nulis layang* 'write a letter' performed by the subject *Ani*. The benefactive argument is in a prepositional phrase (PP) headed by preposition *kanggo* 'for' and it is not the core object of the sentence. The core object is *layang* 'letter' as indicated by its ability to be the surface subject of the passive as seen in (3b).

However, in (3c) the benefactive argument *Tono* becomes the core object when the verb takes suffix *–ake* and acquires the characteristics of a core object such as the ability to be a surface subject in a passive sentence as seen in (3d). As a consequence, the theme argument *layang* 'letter' loses the core object trait and cannot serve as the surface subject of the passive as seen in (3e).

The second function of *-ake* is to introduce an instrumental argument.

(4) Applicative Suffix For Instrumental Argument

a. *Ani* *n-(t)uthuk* *tembok* *nganggo* *palu.*
Ani active-hit wall with hammer
'Ani hit the wall with hammer'

b. *Tembok* *di-thuthuk* *Ani* *nganggo* *palu.*
Wall passive-hit Ani with hammer
'The wall was hit by Ani with a hammer'

c. *Ani* *n-(t)uthuk-**ake*** *palu* *neng* *tembok.*
Ani active-hit-Appl hammer on wall
'Ani hit a hammer to the wall'

d. *Palu* *di-thutuk-**ake*** *Ani* *neng* *tembok.*
Hammer passive-hit-Appl Ani to wall
'The hammer was hit to the wall by Ani'

e. **Tembok di-thutuk-**ake** Ani nganggo palu*
Wall passive-hit-Appl Ani with hammer
'The wall was hit by Ani with a hammer'

In (4a), the core object is the theme argument *tembok* 'wall' and it can serve as the surface subject of the passive as seen in (4b). The instrumental argument *palu* 'hammer' is used as an instrument to perform the action *nuthuk tembok* 'hit the wall' and is contained in a PP headed by *nganggo* 'with/using'. However, in (4c), the addition of suffix *-ake* to the verb licenses the instrumental argument, *palu* as the core object of the sentence and the theme argument *tembok* 'wall' must be merged in a PP headed by preposition *neng* 'on'. As a result, the instrumental argument *palu* 'hammer' exhibits the characteristic of a core object to be a surface subject of a passive sentence in (4d), while the theme argument *tembok* 'wall' is ungrammatical for the same function in (4e).

The last function of *-ake* is to introduce a theme argument.

(5) Theme Argument Marker

a. *Dheweke m(w)-eneh-i aku gawean kuwi.*
He active-give-Appl me job that
'He gave me that job'

b. *Aku di-weneh-i dheweke gawean kuwi*
I passive-give-Appl him job that
'I was given that job by him'

c. *Dheweke m-(w)eneh-**ake** gawean kuwi marang aku*
He active-give-Appl job that to me
'He gave that job to me'

d. ** Dheweke m-(w)eneh gawean kuwi marang aku.*
He active-give job that to me
'He gave that job to me'

e. *Gawean kuwi di-weneh-**ake** dheweke marang aku.*
Job that passive-give-Appl him to me
'The job was given to me by him'

f.	**Aku*	*di-weneh-**ake***	*dheweke*	*gawean*	*kuwi.*
	I	passive-give-Appl	him	job	that
	'I was given that job by him'				

In example (5a), the applicative goal suffix *–i* attached to the verb *weneh* 'give' licenses the *Affectee* argument *aku* 'me' as the core object of the sentence as proven by its ability to be the surface subject of the passive in (5b).

On the contrary, in (5c), the Affectee argument is in a PP while the theme argument becomes the core object marked by *-ake*. The presence of suffix *–ake* in (5c) is obligatory as shown by the fact that example (5d) without *-ake* is ungrammatical. As a core argument, the theme argument can be passivized in (5e) which is not the case for the Affectee argument, which has lost its trait as the core object in (5f).

Cross-linguistically, theme arguments tend to be morphologically unmarked and the theme-*ake* is a marked construction with limited distribution in Javanese. Nevertheless, it is quite regular for certain verbs to exhibit the pattern.

(6) Verbs with Theme-*ake*

utang 'to have a debt', *tawa* 'to market', *undhak* 'to raise', *pakan* 'to feed', *uncal* 'to throw', *crita* 'to tell a story', *ijol* 'to reimburse'.

I will argue in this paper that the three different uses of *–ake* arise from the fact that *-ake* is classified in the lexicon as belonging to three distinct argument categories rather than trying to derive all three constructions from a single applicative head. Though some might object to assuming the homophonous of the suffixes *–ake* in the lexicon, the advantage of this approach, as I will show, is that the close relationship between each of these constructions and its thematic paraphrase can be explicitly represented. In general, it is not particularly surprising to find closely related but distinct uses of the same morpheme. In fact, there is still another use of *–ake* as a causative as follows.

(7) Causative Suffix

a. *Murid-murid ng-arah ngulon.*
Students active-head west
'The students headed to the west'

b. *Pak Guru ng-arah-**ake** murid-murid ngulon*
Teacher active-head-Causative students west
'The teacher caused the students to head to the west'

In (7), the suffix *–ake* is used to render the verb *arah* 'head' into causative. In this case, it will not be preferable to try to derive causative *–ake* from the same source as the three other uses discussed.

Hence the goal of this paper is (1) to account for the three different uses of the suffix *-ake* by assuming that they consist of three different morphemes in the lexicon and (2) to account for the relation between the applicative construction and the thematic paraphrase in a systematic and explicit way.

3 Problems with Previous Frameworks

In this section, I discuss the treatment of applicative constructions in previous frameworks. From section 1 and 2, we have tentatively concluded that an account on Javanese applicative constructions should provide (1) an explicit account of the relation between applicative construction and its thematic paraphrase, (2) an explanation for the multiple uses of *-ake*. The available frameworks in applicative construction have difficulties to satisfy both of the requirements.

I discuss first the framework of Baker (1988). Baker (1998) treats applicative by means of incorporation. Incorporation is the adjunction of an X^O category to an X^O governor such as verb. The applicative morpheme is generated as an independent lexical item in underlying syntactic structure and then moves from its base position to combine with the verb (Baker, 1998: 19). A verbal applicative morpheme results when a preposition moves from PP and adjoins to the verb. The diagram below shows in schematic form Baker's (1988) analysis of Chichewa.

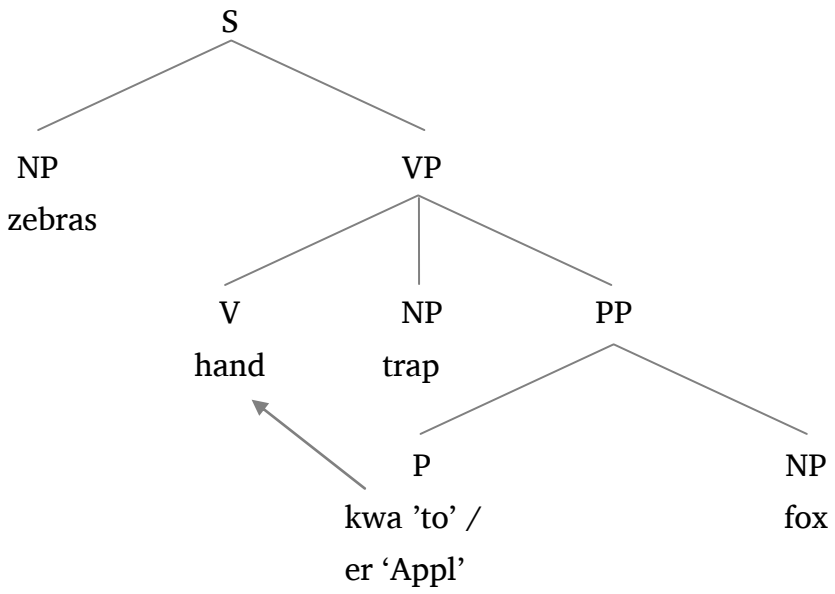

Figure 1. Preposition Incorporation in Chichewa: The zebras handed the trap to the fox.

One problem with Baker's (1988) theory is that in most languages including Javanese, the applicative morpheme is morphologically unrelated to the preposition that occurs in its thematic paraphrase. If applicative morphemes are really an instance of preposition incorporated to the verb, the normal situation would be for the preposition and the affix to be homophonous or at least closely related. Second, it is apparently accidental fact that applicative morpheme is always adjoined to a verb rather than to any other X^{O} category such as N and A. Third, the preposition must adjoin to the right of the verb, contrary to Kayne's (1999) claim that the head movement is always on the left.

Next, I discuss the framework of Marantz (1993). Marantz (1993) proposes a structure of 'complex predicates' to account for the applicative constructions as seen in figure 2. He proposes that the APPL affix behaves as a verb that takes an event argument semantically in the form of a VP complement. The first or higher object (the applicative object) is the semantic argument of the predicate results from combining the APPL verb and lower VP. The lower VP includes the second or lower object (the theme or patient), which appears in a direct object position of this VP (Marantz, 1993: 114). The APPL affix may or may not have

overt phonological realization. A V-rising or adjunction or merger will put the applied affix and the verb together in the course of the derivation.

Marantz's (1993) theory is an improvement over Baker's (1988) theory because the applicative suffix is a verbal suffix and not a preposition. The V head is also correctly merged to the left of the applied affix in the APPL, in line with a regular head movement.

This theory with one applicative head works very well with the Javanese suffix *–i*, which only has once function as a locative applicative suffix. However, it is difficult to account for the multiple functions of *-ake*.

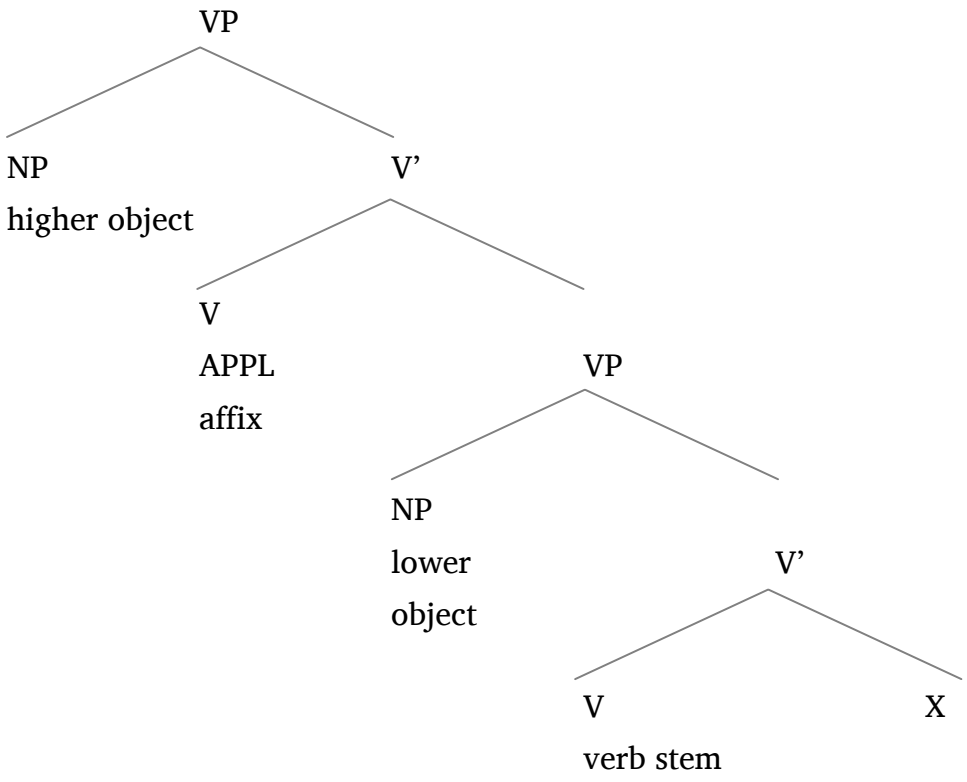

Figure 2. Marantz's (1993) Applicative Construction

Second, Marantz's (1993) theory proposes different structures for each of these applicative constructions and its thematic paraphrases. The applicative object is merged in

another VP of its own while the same argument when contained in a PP is merged as a complement of the verb and does not project an additional VP, as shown in figure 3.

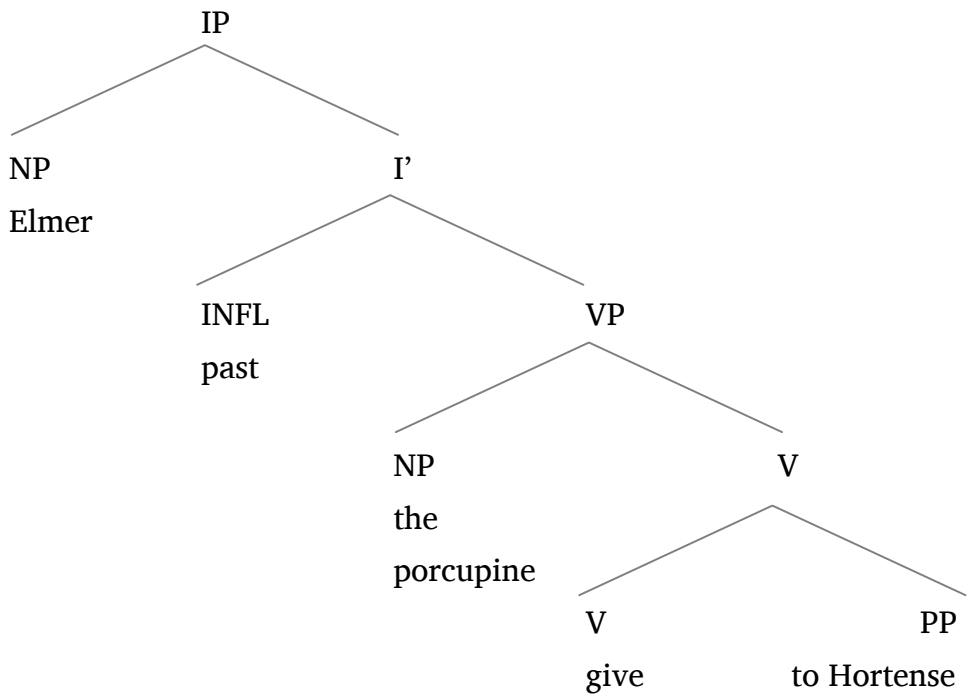

Figure 3. Marantz's (1993) Thematic Paraphrase: Elmer gave the porcupine to Hortense.

The applicative object and the PP in the thematic paraphrase seem to bear the same argument relations to the verb, and yet they are generated in different structures, one with a single VP and the others with two VPs.

(8) Argument Relations in Applicative Construction and its Thematic Paraphrase

a.	*Elmer*	*gave*	*Hortense*	*the porcupine*.
	Agent		Benefactive	Theme
b.	*Elmer*	*gave*	*the porcupine to*	*Hortense*.
	Agent		Theme	Benefactive

In discussing argument relations, I adopt the view that syntactic representations are lexical representations and therefore do not need any linking rule. The Agent, the Benefactive and the Theme arguments are syntactic categories which each bears some core of meaning. As example, Agent refers to the entity that causes a given event, the Benefactive refers to the entity benefited by the action described by the verb, whereas the Theme refers to the entity affected by the event.

It can be observed that (8a) and (8b) are truth-functionally equivalent in terms of argument relations. In both examples, *Elmer*, *Hortense*, and *the porcupine* hold the same argument relations. *Elmer* is an agent argument, *Hortense* is a benefactive argument and *the porcupine* is a theme argument. If the applicative construction and its applicative are underlyingly equivalent, why should they be generated in different structures?

The last framework from Pylkkanen (2002) is basically similar to Marantz's (1993) except that she adds a second applicative head. She proposes that there are two different syntactic positions for the applicative head, the high position above VP and low position inside VP. Pylkkanen's (2002) high applicative head is similar to Marantz's (1993) in that it takes predicate of an event as their arguments and introduces an individual, which is thematically related to the event described by the verb (Pylkkanen, 2002: 18). However, she explicitly recognizes that the heads in this position must be of different kinds, e.g. Instrumental, Benefactive, Malefactive and so forth (Pylkkanen, 2002: 21).

The low applicative on the other hand, denotes a relation between two individuals and is merged below the verb (Pylkkanen, 2002: 19). The low applicative takes three arguments: the object, the indirect object, and the verb (Pylkkanen, 2002: 22). It relates a recipient or a source to an individual, which is the internal argument of the verb. The applied arguments bear no relation to the event described by the verb. She argues that low applicatives come in

two varieties, one describing a recipient-relation between the indirect and direct objects, the other a source relation (Pylkkanen, 2002: 16).

Note, however, that the addition of another low applicative head still fails to account for the multiple uses of *-ake* since the suffix must be lumped in a single applicative and there is no attempt to account for the relation between the applicative constructions and their thematic paraphrases.

In addition, the low applicative is also semantically problematic. Pylkkanen (2002) claims that low applied arguments bear no semantic relation to the verb and they bear only a transfer of possession relation to the direct object.

(9) Pylkkanen's (2002) Low Applicative

a. John wrote Mary that letter.

b. ∃e [writing (e) & Agent (e, John) & Theme (e, that_letter) & to-the-possesion-of (that_letter, Mary)]

Larson (2010) points out that in (9), the referent *Mary* is not directly related to the event quantifications by means of any binary thematic relation, but is directly related to the referent of the theme argument by means *to-the-possesion-of (x,y)*. Larson (2010) further specifies that the separation between the indirect object argument from the event structure of the verb results in the weak conjunctive connection between the writing and the possession. Therefore Mary is free to reassociate with the event giving. As a consequence, the conjunction in (9a) does not entail (9b) since Mary is related (as a Goal) to the giving event and not to the writing event.

(10) Larson's (2002) Observation on Low Applicative

a. John wrote that letter and Bill gave Mary that letter
   ∃e [writing (e) & Agent (e, John) & Theme (e, that_letter)] & ∃é [giving] (é) & Agent (é, Bill) & Theme (é, that_letter) & Goal (é, Mary)]

b. John wrote Mary that letter
   ∃e [writing (e) & Agent (e, John) & Theme (e, that_letter) & Goal (e, Mary)

4 A New Approach

It can be seen from the previous sections that a single applicative head is not sufficient to host the multiple functions of suffix *-ake*. While such a theory writes well in a language with a single applicative function like Chichewa, it does not write so well for Javanese *-ake,* which has three separate applicative functions. The functions have to be lumped together in one unified head although they are syntactically and semantically different. The result is particularly problematic with the Theme-*ake* as seen in figure 4.

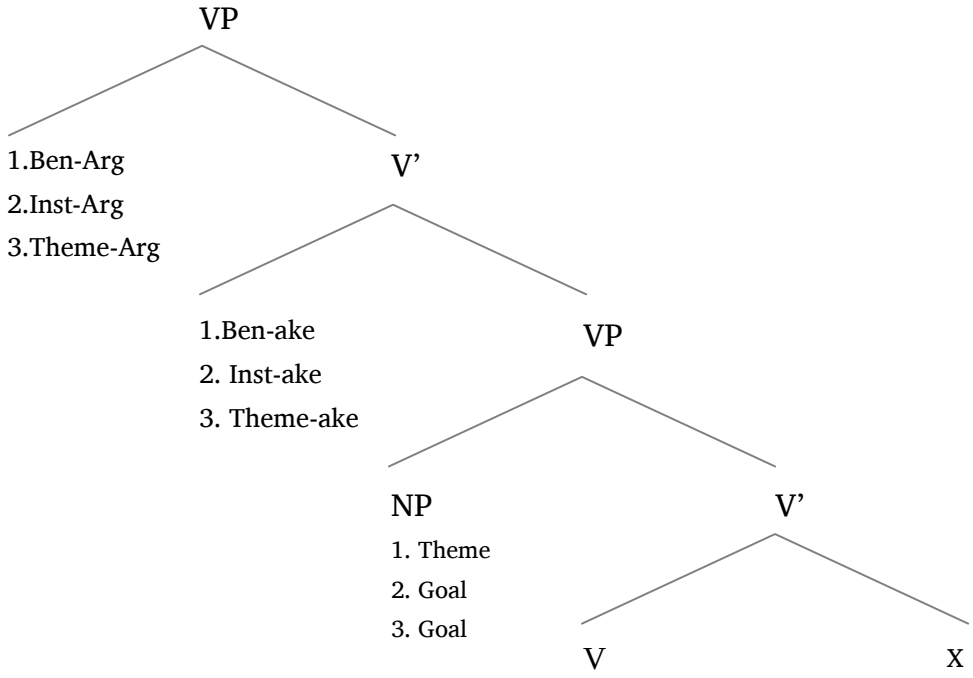

Figure 4. The Derivation of *-ake* with a Single Applicative Head

Applying Marantz' (1993) derivation to Javanese *–ake* in figure 4, we have three classes of arguments and applicative morphemes according to the type of the merged applicative. In the first subset, when the Benefactive *-ake* is merged at the Applicative Head, the benefactive argument is merged at the Spec of the higher VP and the Theme *-ake* at the Spec of the lower VP. Meanwhile, when an Instrumental *-ake* is merged at the Applicative Head, the instrumental argument is merged at the Spec of the higher VP while the goal

argument is at the Spec of the lower VP. Note that the merger of the Theme-*ake* is particularly problematic since the theme argument will be merged at the Spec of Higher VP in type 3, while the goal argument occupies the Spec of the lower VP. However, in type 1, the theme is in the lower VP, contrary to the Uniformity of ɵ-Assignment Hypothesis (UTAH) which states that identical thematical relationship between predicates and their arguments are represented syntactically by identical structural relationships.

The UTAH would rule out the fact that the Theme can be merged in two different positions, at the Spec of Higher VP in type 3 and as the complement of the lower VP in type 1. The same result applies to Marantz's (1993) thematic paraphrase.

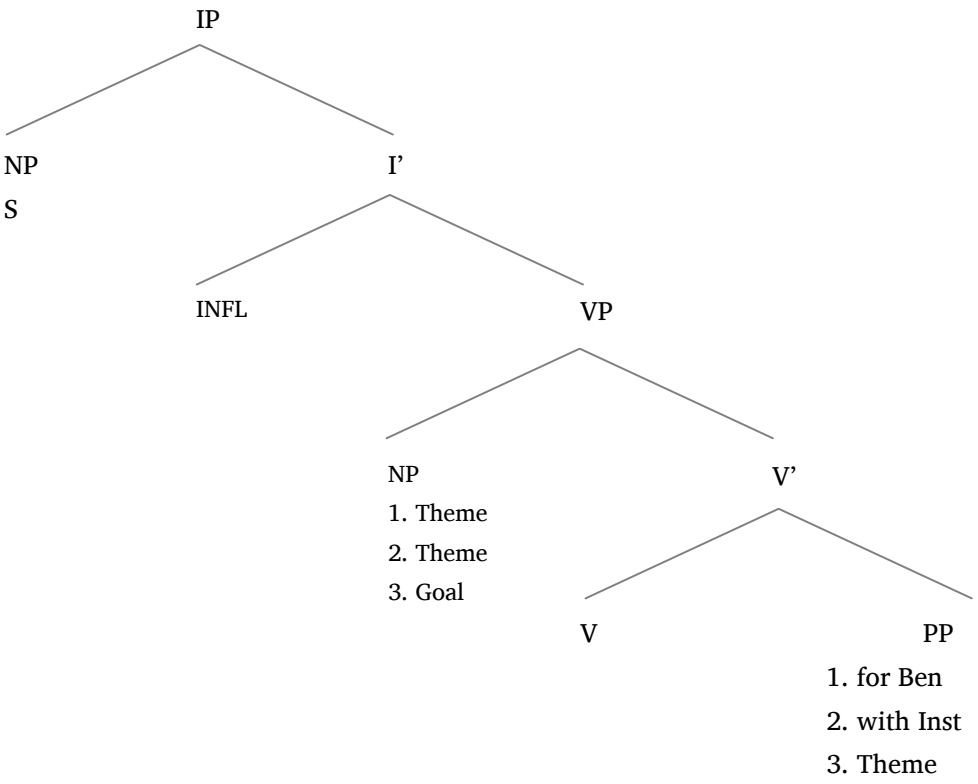

Figure 5. The Derivation of *-ake* with Marantz's (1993) Thematic Paraphrase

As can be seen in figure 5, the theme argument can be merged both at the PP and at the Spec of VP. Marantz (1993) would analyze type 3 as an ordinary applicative with the

Theme argument in the lower VP but the problem still remains that the theme is generated at two different positions against the UTAH.

To solve this problem, we need to rethink the notion of applicative construction. Applicative morpheme should not be associated only to one single applicative head. On the contrary, the applicative morpheme can be generated at different argument heads. For this, we need multiple argument heads.

In Bowers (2010), the multiple argument head is made possible with the introduction of each argument at a specific argument head, merged from bottom to top in accordance with a fixed Universal Order of Merge (UOM): (Ag(ent)[2] <Instr(ument) <Ben(eficiary) <Goal < Source < Th(eme) < Aff(ectee)).

The primary arguments are Affectee and Theme merged at Spec, Aff and Spec, Theme between VoiP and ThP while the secondary arguments are Inst, Ben, Source, and Goal, and they are merged in their respective head between Th-P and Ag-P. Each applicative morpheme can be attached to a specific argument head according to its lexical categories.

Next, it is necessary to turn to the basic definition of applicative construction. Bowers (2010) defines applicative construction as a construction in which an argument head: (i) selects a DP with an unvalued case feature, (ii) is realized by a non-null verbal morpheme. With this definition, it is possible to generate applicative morphemes at different argument heads while at the same time accounts for the thematic paraphrase. If the argument head c-selects DP with unvalued case feature, the Voi head assigns accusative Case (Acc) to it and the EPP feature in Voi prompts the applicative object to move to [Spec, Voi]. If a PP is chosen, the Theme will receive Acc case and the applicative object contained in the PP will receive inherent case from the preposition.

Before we begin with an example from Javanese, let us now turn to the structure of the double object construction in English using Bowers' (2010) framework in figure 6, *John wrote Mary a letter*.

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[2] Another feature of Bowers's (2010) theory which will not be of concern here, is that the agent of a transitive verb is merged very low in the specifier of an Agent head. If Ag selects DP, it is raised to Spec, Pr to satisfy the pure EPP feature of Pr, where it can be valued NOM by T and then raised to [Spec, T]. If Ag selects PP, then a passive sentence results.

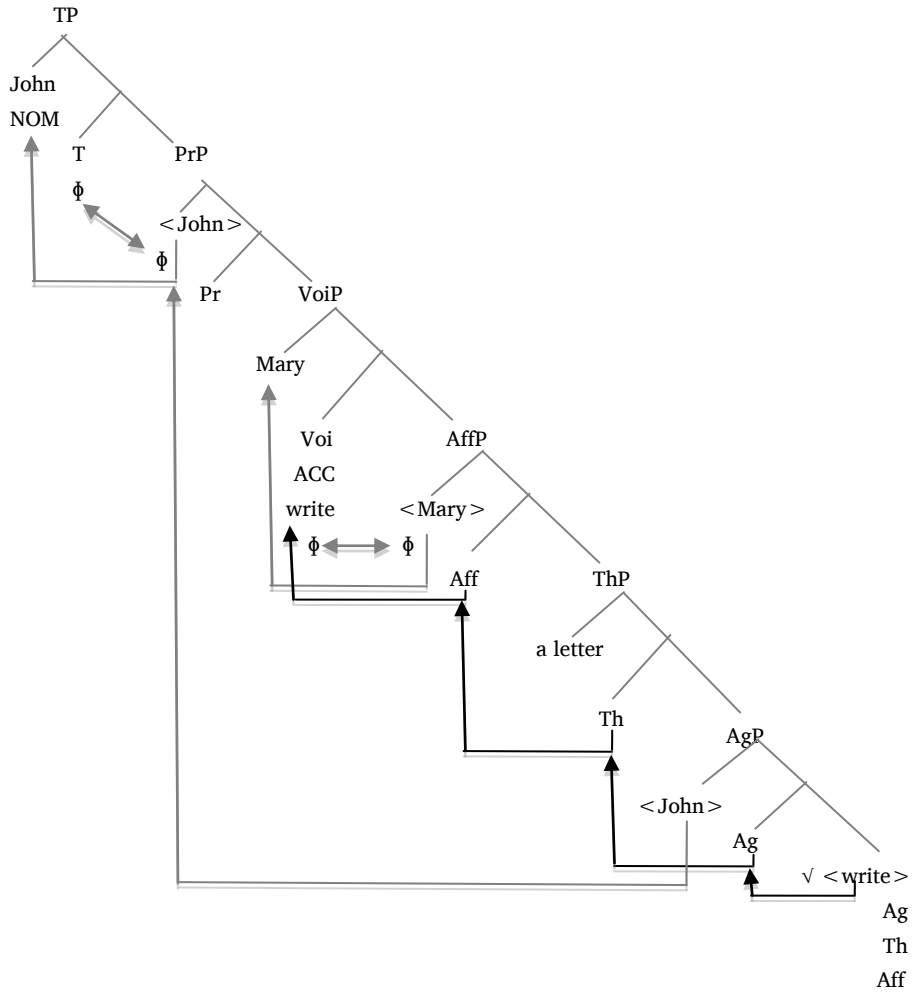

Figure 6. English Applicative Construction

The derivation in figure 6 works as follows. The root has an a-selection that must be checked with the correct arguments heads. The root *write* contains the a-selection feature [Ag], [Th] and [Aff] that can be satisfied by adjoining it to Ag-head, Th-head and Aff-head. On the other hands, the arguments are merged at the Spec of its head. The argument category also has a c-selection feature. If the category Aff c-selects the DP *Mary*, the Aff-DP is case marked by the probe in Voi. The probe in Voi assigns Acc case to Aff-DP *Mary* and moving it to Spec, Voi. On the other hand, the probe in T assigns nominative case to Ag-DP *John* and moves it to Spec, T.

Example (1a) of Javanese applicative construction would be derived in virtually identical fashion, apart from the fact that the Aff-head in Javanese contains the suffix *-i*. Bowers's (2010) framework is universal, thus the structure of English applicative is similar with that of Javanese. However, English applicative head is phonologically null, while in Javanese it is always realized with an applicative morpheme. Hence the suffix *–i* can be merged at the Aff-head between VoiP and the ThP.

The suffix *-ake* is derived in a similar fashion with suffix *-i* in the Affectee Head. Here, however, the Affectee argument is interpreted as a Benefactive rather than as a Goal as seen in figure 7.

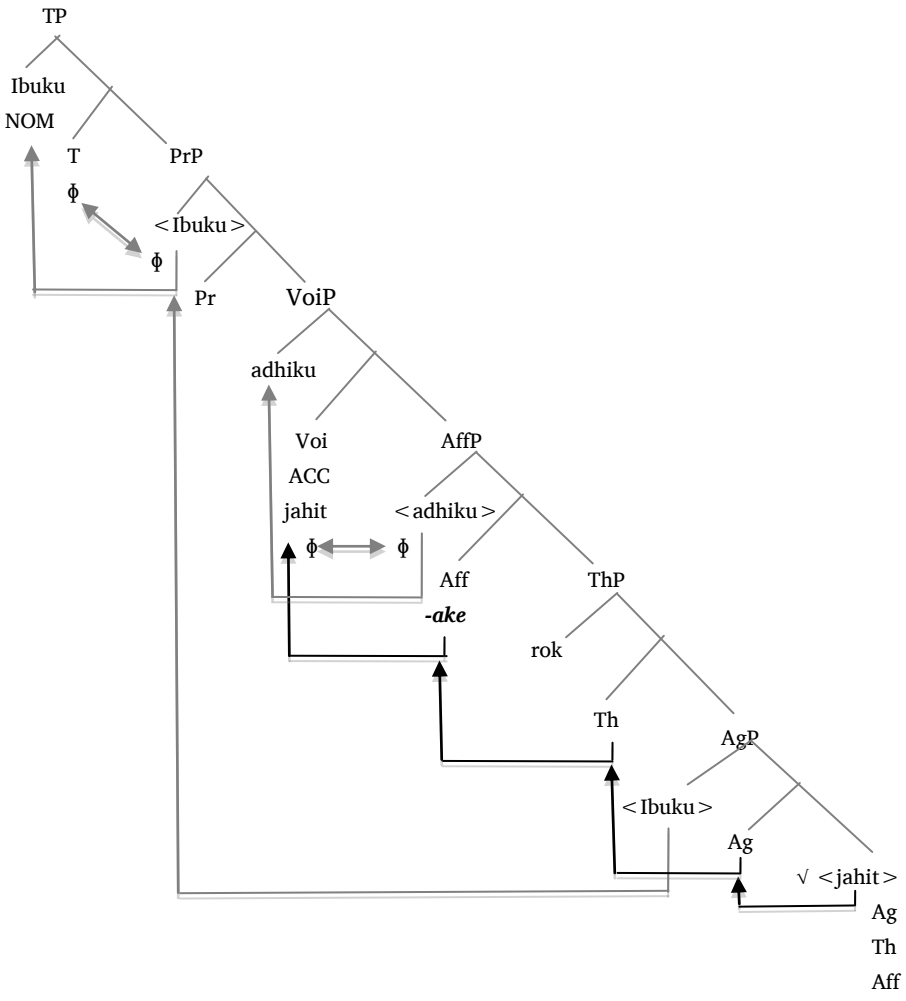

Figure 7. The Merger of the Benefactive -ake at the Affectee Head

Figure 7 illustrates the derivation of the following benefactive construction.

(11) *Ibu-ku* *n-jahit-**ake*** *adhi-ku* *rok*
Mother-my active-sew-Appl younger sibling-my dress
‘ My mother sewed for my younger sibling a dress’

The derivation in figure 7 goes as follows: the root verb *jahit* ‘sew’ has a- selection features, Ag, Th and Aff, which can be satisfied by adjoining it to a light head with matching categorial features. Thus, the root first adjoins to the Ag, and then to Th, and the last to the Aff-head, where it is adjoined to the benefactive morpheme *-ake* at the Affectee head.

On the other hand, the Aff-head c-selects a DP with unvalued case, *adhiku* ‘my younger sibling’. Voi is [+act] and therefore can assign Acc case to the Aff-DP *adhiku* ‘my younger sibling’ and move it to the Spec, Voi. Similarly, the Ag-DP *ibuku* ‘my mother’ is merged at [Spec, Ag], and the Th-DP *rok* ‘dress’ is at [Spec, Th]. Ag-DP *ibuku* ‘my mother’ is then raised by the pure EPP feature at Spec, Pr and is assigned a nominative case by T and then raised to Spec, T.

Now I discuss the Instrumental *-ake*. The Instrumental *–ake* can be contained in the Inst- head between the ThP and the AgP as seen in figure 8.

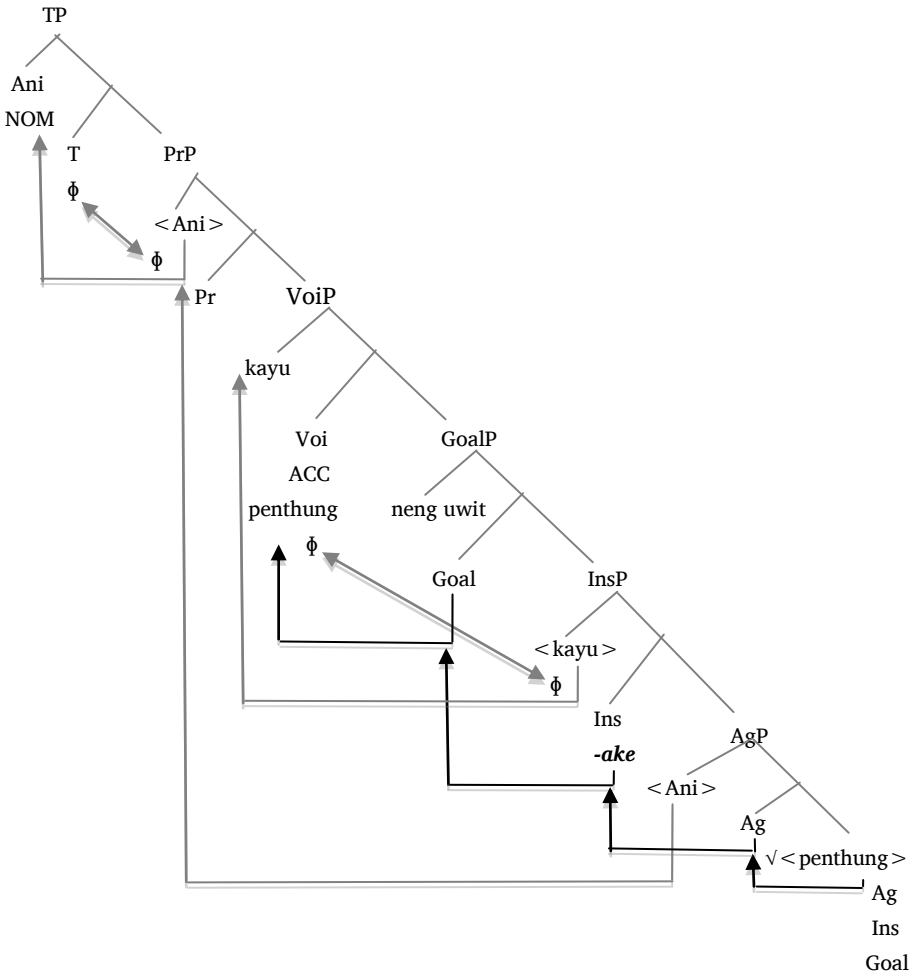

Figure 8. The Merger of Instrumental *-ake*

Figure 8 describes the derivation of the following instrumental construction.

(12)	*Ani*	*m-(p)enthung-**ake***	*kayu*	*nang*	*uwit.*
	Ani	active-hit-Appl	wood	to	tree
	'Ani hit a wood to the tree'				

In figure 8, the root *penthung* 'hit' merged as a sister of the Ag head has a-selection Ag, Inst and Goal that must be satisfied by adjoining the root to the Ag head, Inst head and Goal head. At the Inst head, the root merges with the suffix *-ake*. When the Instrumental Head is

occupied by *-ake*, it must select a DP such as *kayu* 'wood' which has an unvalued case feature.

The arguments, including the instrumental arguments, are merged through the c-selection feature of the argument categories. The c-selection of Ag category is satisfied by merging the Ag-DP *Ani* in the [Spec, Ag], whereas the c-selection of the Inst category is satisfied with the merger of *wood* 'kayu' at [Spec, Instr]. Note however, that the Goal-DP c-selects a PP *neng uwit* 'to the tree'. The Voi head then assigns Acc case to the Instrumental argument *kayu* 'wood' and the EPP feature in Voi raises the argument to [Spec, Voi].

The last use of *-ake* is as a theme marker in figure 9.

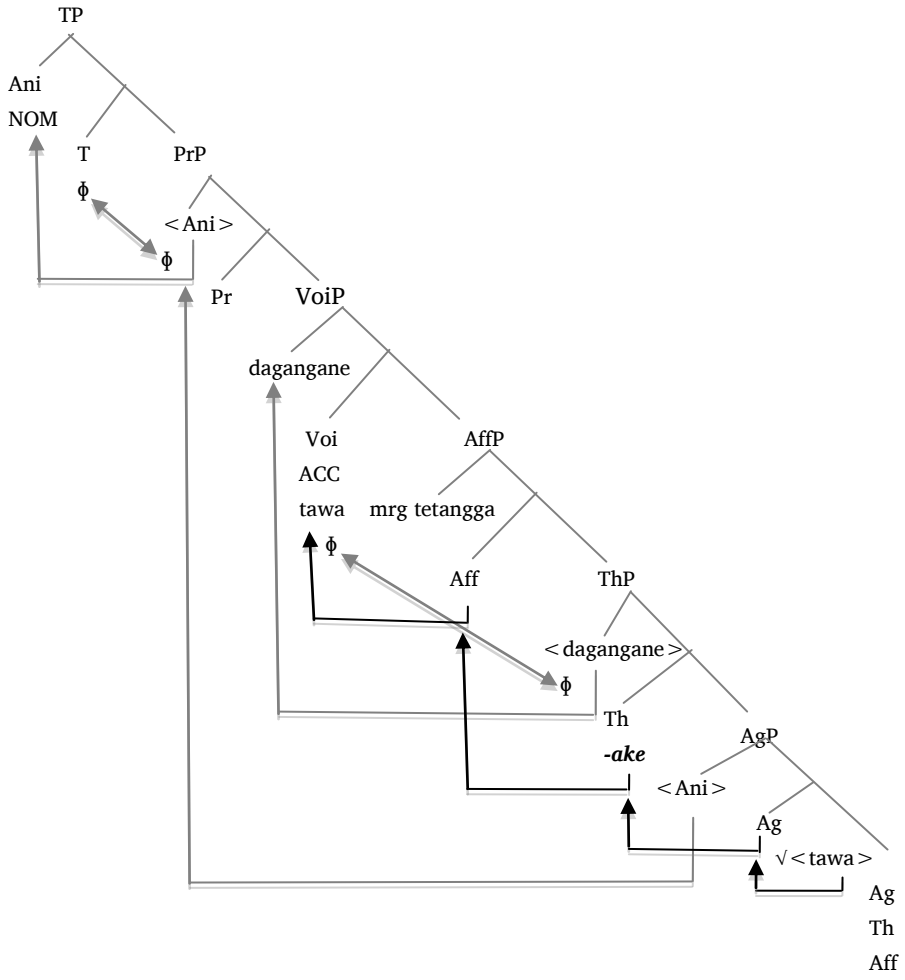

Figure 9. The Merger of Theme *-ake*

Figure 9 represents the following theme construction.

(13) *Ani n-(t)awa(k)-**ake** dagangan-e marang tetangga*
Ani active-market-Appl merchandise-his to neighbors
'He marketed his merchandise to the neighbors'

In figure 9, the Theme-*ake* is merged at Theme Head. On the other hand, the Aff-DP c-selects a PP *marang tetangga* 'to the neighbors'.

The thematic paraphrases are derived from virtually identical structures because argument heads may often select either a DP with unvalued case feature or a PP. First I discuss the thematic paraphrase for the benefactive argument.

(14) *Ibu-ku* *n-jahit* *rok* *kanggo* *adhi-ku*
Mother-my Act-sew dress for younger sibling-my
'My mother sewed a dress for my younger sibling'

In (14), the benefactive argument *adhiku* 'my younger sibling' must be contained in a PP headed by *kanggo* 'for' and receives inherent case from the preposition because the Aff head is empty. The Th-DP *rok* 'dress' is then assigned Acc by the probe in Voi and raised to [Spec, Voi] accounting for the correct order of the Theme and the Affectee argument. The derivation can be seen in figure 10.

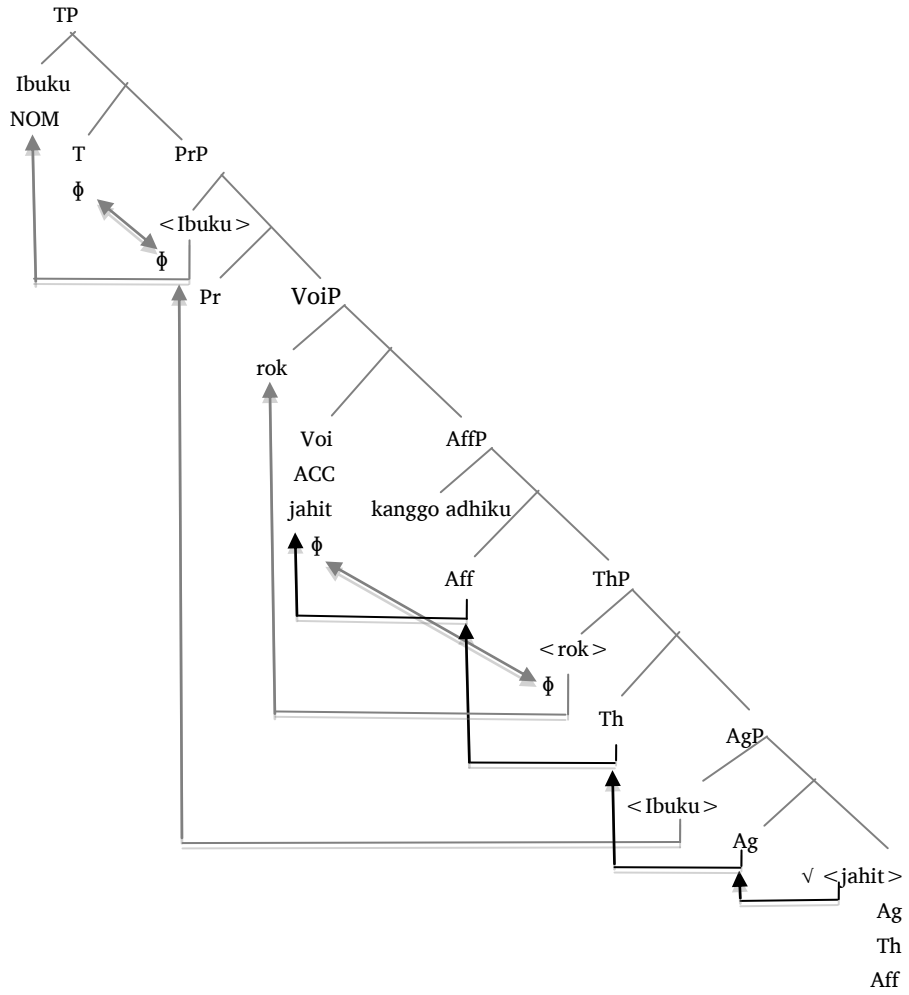

Figure 10. The Thematic Paraphrase for the Benefactive Argument.

Next, the thematic paraphrase of the instrumental argument is shown in (15).

(15) *Ani* *m-(p)enthung uwit* *nganggo* *kayu*
Ani active-hit tree with wood
'Ani hit the three with a wood'

In (15), a PP *nganggo kayu* 'with wood' is merged at the [Spec, Ins]. Figure 11 illustrates the derivation of the thematic construction.

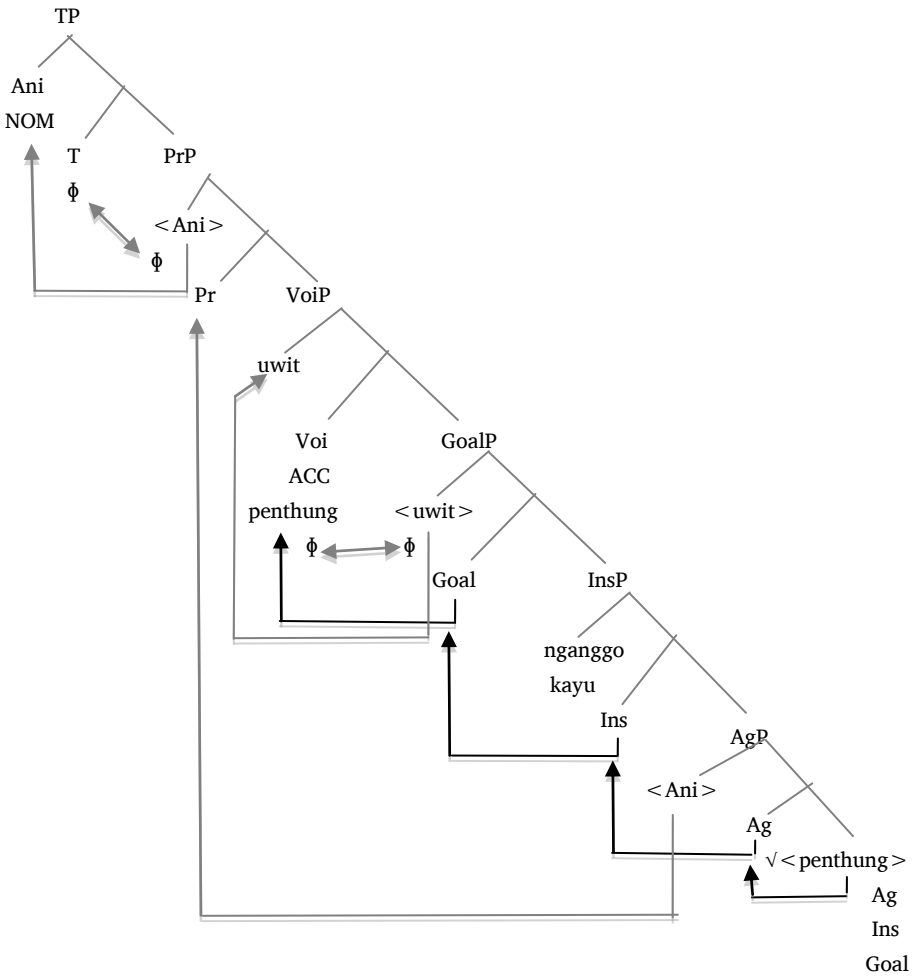

Figure 11. The Thematic Paraphrase for the Instrumental Argument

I discuss now the thematic paraphrase of the theme marker.

(16) Ani n-(t)awa-(*n)i* tetangga dagangan-e
Ani active-market-Appl neighbors merchandise-his
'He marketed his merchandise to the neighbors'

In (16), the Aff category selects a DP with an unvalued case feature *tetangga* 'neighbors' and the applicative *-i* is merged at the Aff-head. As a result, the probe in Voi

assigns Acc to the Aff-DP and not to the Th-DP *dagangane* 'his merchandise'. Th-DP is then marked with inherent Acc case. The derivation is illustrated in figure 12.

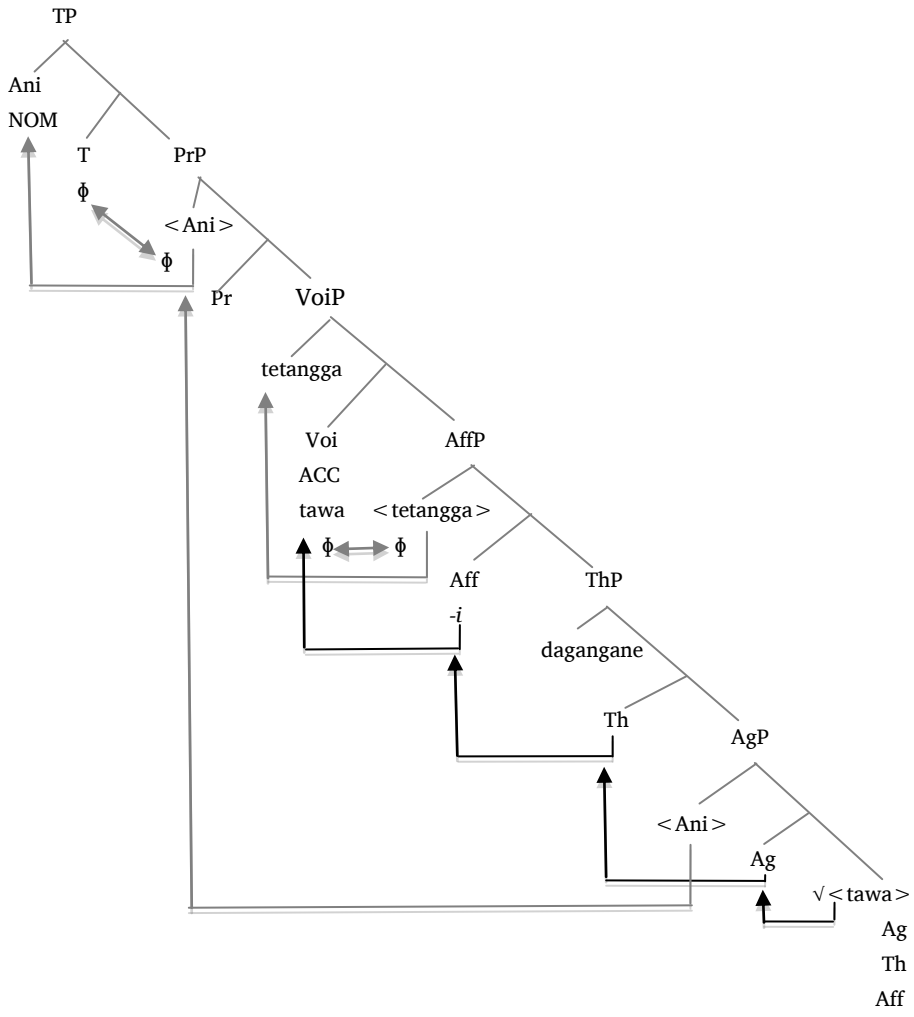

Figure 12. The Thematic Paraphrase for the Theme Argument

It is important to point out here that there is no way for *-ake* to occur in more than one argument head at the same time because the only structural case other than Nom is Acc. Hence if *-ake* is generated in more than one head, one of the arguments will not be case marked and the derivation will crash.

5 Conclusion

It can be concluded that the previous frameworks fail to account for the multiple use of *-ake* in Javanese and the similarity between the applicative constructions and their thematic paraphrases. Bakers' (1998) framework fails to explain why Javanese prepositions are not morphologically related to the applicative morphemes and why the applicative morphology is verbal. The problem of Marantz (1993) and Pylkkanen (2002) lies on the single applicative head, which cannot accommodate the multiple use of suffix *-ake* in the grammar and the failure to account for the structure of the thematic paraphrases of the applicative constructions. With Bowers' (2010) multiple argument heads, each of *-ake*'s functions can be accommodated in different argument heads. The Benefactive *-ake* is merged at the Affectee head, the Instrumental *-ake* is merged at the Instrumental head, while the Theme-a*ke* is merged at the Theme head. In addition, the applicative construction and its thematic paraphrase can be derived from a virtually identical structure.

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