*Linguistik Indonesia, Februari 2021, 1-28* *Volume ke-39, No.1*

*ISSN cetak 0215-4846; ISSN online 2580-2429*

# THE TYPOLOGY OF APPLICATIVE/CAUSATIVE MARKING IN TAPUS*

Yanti[1], Tim McKinnon[2] , Peter Cole[3], Gabriella Hermon[4]
*Universitas Katolik Indonesia Atma Jaya[1], Quantitative Scientific Solutions[2], University of Delaware[3, 4]*
regina.yanti@atmajaya.ac.id[1]; Tim.Mckinnon@qs-2.com[2];
pcole@udel.edu[3]; gaby@udel.edu[4]

**Abstract**

This paper constitutes an initial examination of the applicative/causative suffix *-ge* in Tapus, a divergent traditional Minangkabau variety spoken in rural Western Sumatra. Our aim is to show that the similarities and divergences from Standard Indonesian of traditional rural varieties provides insight into the properties of "Indonesian-type" languages in general. The distribution of applicatives/causatives in Tapus is interesting for several reasons. First, applicative/causative suffixes in Indonesian-type languages are well-known for the use of the same morphology for a variety of purposes. The fact that a single form is used for these different functions raises the question of whether the applicative/causative morphemes are two (or more) distinct morphemes or whether the form has a unitary linguistic function. We will show that the unitary analysis for causative and benefactive uses of the applicative/causative suffix cannot account for the data in Tapus. Another area of interest with regard to this suffix relates to constraints on movement. We show that the Extreme Locality Hypothesis cannot account for the Tapus data based on the interaction between the applicative/causative suffix and information question formation/relativization. Finally, we demonstrate that Pylkkänen's typology of applicatives makes incorrect predictions with respect to the interpretations available for benefactives in Tapus and other Indonesian-type languages, showing the necessity for an expanded taxonomy of applicative forms. Our general conclusion is that the detailed examination of grammatical constructions in divergent Malayic varieties leads to new and surprising insights into the grammatical profile of Indonesian-type languages.

Keywords: applicatives, causatives, Indonesian-type languages, typology, Tapus

***Abstrak***

*Makalah ini merupakan hasil kajian awal terhadap akhiran aplikatif/causative -ge dalam bahasa Tapus, sebuah ragam traditional bahasa Minangkabau yang digunakan di pedesaan Sumatra bagian barat. Dalam makalah ini kami menunjukkan bahwa persamaan dan perbedaan antara Bahasa Indonesia Baku dengan ragam-ragam bahasa di pedesaan membuka wawasan tentang sifat-sifat bahasa 'tipe Indonesia' secara umum. Ada beberapa hal yang menjadikan pola aplikatif/kausatif dalam bahasa Tapus menarik. Pertama, akhiran-akhiran aplikatif/kausatif dalam bahasa-bahasa tipe Indonesia dikenal karena penggunaan morfologi yang sama untuk sejumlah tujuan. Fakta bahwa sebuah morfem digunakan untuk fungsi-fungsi tersebut mendorong pertanyaan apakah morfem aplikatif/ kausatif ini merupakan dua (atau lebih) morfem yang berbeda atau apakah morfem tersebut memiliki satu kesatuan fungsi linguistik. Kami menunjukkan bahwa analisis tunggal (unitary analysis) untuk penggunaan kausatif dan benefaktif dari akhiran aplikatif/kausatif tidak dapat digunakan untuk menjelaskan data dalam bahasa Tapus. Hal lain yang menarik tentang akhiran ini berhubungan dengan batasan-batasan dalam movement. Kami akan menunjukkan bahwa Extreme Locality Hypothesis tidak dapat*

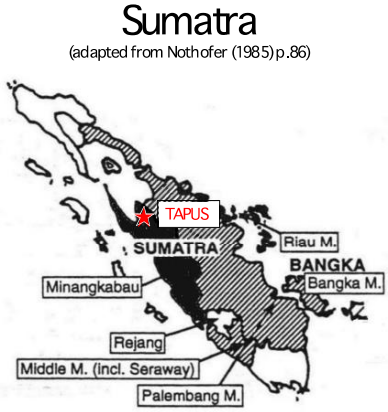
*digunakan untuk menjelaskan data dalam bahasa Tapus berdasarkan interaksi antara akhiran aplikatif/kausatif dan pembentukan pertanyaan informatif atau relavization. Akhirnya, kami menunjukkan bagaiamana tipologi aplikatif yang digagas Pylkkänen tidak memberikan prediksi yang tepat terkait interpretasi yang tersedia untuk benefaktif dalam bahasa Tapus dan bahasa-bahasa 'tipe Indonesia'. Hal ini menunjukkan perlunya perluasan taksonomi bentuk-bentuk aplikatif. Secara umum kami menyimpulkan kajian yang terperinci tentang konstruksi-konstruksi gramatikal dalam berbagai ragam bahasa Malayik menghasilkan wawasan baru dan mengejutkan tentang profil gramatikal bahasa-bahasa tipe Indonesia.*

*Kata kunci: aplikatif, kausatif, bahasa tipe-Indonesia, tipologi, Tapus*

## INTRODUCTION

One of the defining characteristics of "Indonesian-type" languages[i] is the use of the same morphology for what appear to be a variety of different purposes. Prominent among such constructions are applicative and causative constructions. Indonesian-type applicatives/ causatives are potentially problematic for linguistic typology because a single form manifests seemingly different functions when occurring in these differing linguistic environments. This raises the question of whether the applicative/causative morpheme should receive a single unified representation or whether it should be analyzed as two separate morphemes that share a single pronunciation, an issue that we will discuss in greater detail below. Applicative/causative forms are of typological interest for other reasons as well. There exist seemingly firm typological generalizations about both applicatives and causatives. The existence of combined applicative/causative forms raises the question of whether the existence of these forms requires us to revise our understanding of applicative and causative constructions. Finally, we must ask what sorts of synchronic linguistic analyses these constructions demand. As we shall show, the properties of these constructions have implications for far reaching claims about the syntax of Indonesian-type languages. In addition, our analysis has general implications for the typology of applicatives, particularly for the claim that there is a correlation between low and high applicatives and their respective interpretations.

The language on which we will focus our attention is Tapus, a divergent variety of Minangkabau spoken in Western Sumatra near the provincial border with North Sumatra and close to linguistic boundary between Minangkabau and Mandailing Batak.[ii]



Tapus is a "traditional" Malayic language, displaying a robust Indonesian-type voice system (symmetric active and undergoer voices plus a passive voice), and other characteristics associated with Indonesian-type languages. As we shall see, however, the applicative/causative constructions in Tapus differ in many ways from those in Standard Indonesian. These differences, while not providing direct evidence regarding the grammar of analogous constructions in Standard Indonesian, help us to understand the characteristics of the applicative/causatives in Indonesian-type languages generally.

We shall see that Tapus provides evidence against a unitary analysis for causative and benefactive uses of the applicative suffix. Additionally, the interaction between the applicative/ causative suffix and information question formation/relativization (A-bar extraction) provides evidence against the extension of the Extreme Locality Hypothesis to Tapus (cf. Davies 2003). Finally, facts from Tapus show that Pylkkänen's typology of applicatives (see Pylkkänen 2000, 2002 inter alia) makes incorrect predictions with respect to the interpretations available for benefactives in Tapus and other Indonesian-type languages, showing the necessity of an expanded taxonomy for applicative interpretations.

## APPLICATIVE/CAUSATIVES IN STANDARD INDONESIAN

It may be helpful to begin by illustrating the range of uses associated with applicative/ causatives in Standard Indonesian, since Standard Indonesian is familiar to many linguists, and, as we will see below, many (but not all) characteristics of Standard Indonesian are found both in Tapus and in other "Indonesian-type" languages as well. In Standard Indonesian (examples adapted from Sneddon, 1996), an important function of the suffix *-kan* is to convert an intransitive or (rarely) a monotransitive verb to a causative verb:

(1) *-kan* converts an intransitive to a causative

a. Siti bangun.
Siti awake
'Siti woke up'

b. Ibu membangun-kan Siti.
mother ACT.awake-KAN Siti
'Mother made Siti wake up'

(2) *-kan* converts a monotransitive to a causative

a. Wanita itu menjahit baju saya.
woman that ACT.sew clothes 1SG
'That woman sews my clothes'

b. Saya menjahit-kan baju saya ke wanita itu.
1SG ACT.sew-KAN clothes 1SG to woman that
'I have that woman sew my clothes'
('I caused the woman to sew my clothes')

Examples (1) and (2) are reminiscent of prototypical causatives like those described by Comrie (1975) and later authors, who noted that morphological causative constructions in a wide range of unrelated languages instantiated the same or similar patterns. In prototypical causatives, the causative morpheme licenses the addition of a causer argument to the argument structure of the base predicate. The new causer nominal displaces the highest argument of the

base verb as first argument. The "displaced" argument, e.g. the noun phrase that is the subject in an intransitive clause as in (1)a, becomes the direct object in the corresponding causative, as shown in (1)b. A different pattern typically occurs when transitive clauses are made causative. The (displaced) subject of a monotransitive like (2)a becomes an oblique (typically the indirect object or an instrumental) in the corresponding causative, as in (2)b.[iii]

While there exist many examples in Indonesian-type languages that are like (1) and (2) in conforming to the typologically expected pattern for morphological causatives, in other cases, *-kan* appears to play a very different grammatical role, one typically played by an applicative morpheme.[iv] Thus, as was first noted by Chung (1976) for Indonesian, in (3) *-kan* appears to be a benefactive applicative, and to conform to the pattern frequently seen with applicatives cross-linguistically, e.g. in Bantu languages with "asymmetrical" applicatives.[v]

(3) *-kan* as a benefactive applicative

a. Saya menulis surat (untuk ayah saya).
1SG ACT.write letter for father 1SG
'I wrote a letter (for my father)'

b. Saya menulis-kan ayah saya surat.
1SG ACT.write-KAN father 1SG letter
'I write a letter for my father'

When the base verb is employed without *-kan*, as in (3)a, the beneficiary is an optional adjunct rather than a subcategorized complement of the verb. Thus, if *untuk ayah saya* 'for my father' is omitted, there is no understood beneficiary. In contrast, when *-kan* is added to the verbal base, there is still an understood beneficiary even when the overt beneficiary is omitted, indicating that the beneficiary is a subcategorized constituent of V+*-kan*, as in (4):

(4) Saya menulis-kan ∅ surat.
1SG ACT.write-KAN ∅ letter
'I write a letter (for someone unmentioned)'

Furthermore, just as in Bantu asymmetrical applicatives, the bare argument introduced by *-kan* in (3)b becomes the second argument in the argument structure, appearing immediately adjacent to the verb in the active voice. When sentences with the structure of (5)a are passivized, only the beneficiary can become the derived subject, showing that Indonesian applicative uses of *-kan* pattern are like asymmetrical applicatives in e.g. Bantu (the theme cannot be passivized):

(5) Beneficiary as derived subject

a. Ali membeli-kan anak-nya kue.
Ali ACT.buy-KAN child-3 cake
'Ali bought his child cake'

b. Anak itu di-beli-kan Ali kue.
child that PASS-buy-KAN Ali cake
'The child was bought cake by Ali'

c. Anak itu di-beli-kan kue oleh Ali.
child that PASS-buy-KAN cake by Ali
'The child was bought cake by Ali'

(6) Theme cannot be passivized

a. *Kue itu di-beli-kan anak itu oleh Ali.
cake that PASS-buy-KAN child that by Ali
'The cake was bought for the child by Ali'

b. *Kue itu di-beli-kan anak itu Ali.
cake that PASS-buy-KAN child that Ali
'The cake was bought for the child by Ali'

While these examples might suggest that benefactive *-kan* is a prototypical applicative, a broader examination of the data shows that the situation is more complicated than initial appearances would suggest, and that applicative uses of *-kan* do not always result in the transformation of an oblique adjunct into a nominal argument. As is seen in (7), despite the occurrence of *-kan*, the beneficiary occurs in a prepositional phrase:

(7) *–kan* indicates that a non-argument PP is a required core argument of V+*-kan*
Saya menulis-kan surat untuk ayah saya.
1SG ACT.write-KAN letter for father 1SG
'I wrote a letter for my father'

The presence of *-kan* in (7) indicates that the beneficiary is a required argument of V+*-kan* since V+*-kan* is interpreted as 'verb for X' when the beneficiary is omitted (as was shown in example (4), above). These facts, taken in isolation, suggest that the function of *-kan* is to modify the argument structure of the base verb so as to add an argument to the argument structure, a noun phrase argument in the sentences of (5) and a prepositional phrase argument in (7). It should be noted that the added argument is one that is already present in the semantic representation even without the occurrence of *-kan*, but *-kan* in these examples has the effect, typical of applicatives across languages, of converting a non-argument adjunct to a core argument of the verb+*-kan*.

While *-kan* appears to be an applicative morpheme in (5) and (7), in other examples *-kan* does not seem to change the status of a dependent of the verb from oblique adjunct to argument. Rather, in these cases it appears to license syntactically the presence of a direct object that was already present in the argument structure of the base verb, as in the examples below, adopted from Cole and Son (2004: 345).

(8) a. Ia merunding-kan rencana baru.
3 ACT.runding-KAN plan new
'He discussed a new plan'

b. *Ia merunding rencana baru.
3 ACT.runding plan new
'He discussed a new plan'

In (8) *-kan* does not allow the verb to subcategorize for an internal argument that does not occur in the argument structure of the base verb, but, rather, it seems to have the function of

providing grammatical licensing for an internal argument that is already thematically (but not syntactically) licensed by the base verb. The function of *-kan* in (9) is similar (examples are adapted from Cole and Son 2004: 351, glosses retained):

(9) a. Dia tidak memikir-kan saya.
3 not meN-think-KAN 1SG
'She does not think about me'

b. *Dia tidak memikir saya.
3 not meN-think 1SG
'She does not think about me'

c. Yassir pikir [saya di Jakarta]
Yassir think 1SG in Jakarta
'Yassir thinks I am in Jakarta'

d. *Yassir pikir-kan [saya di Jakarta]
Yassir think-KAN 1SG in Jakarta
'Yassir thinks that I am in Jakarta'

In the sentences of (9), *-kan* appears to play the role of allowing the base verb *pikir*, which subcategorizes for a clausal object, to occur with a nominal object. The resulting form, *pikir+-kan*, requires a nominal (rather than clausal) object. Such sentences are neither like causatives in introducing an external argument not present in the argument structure of the base verb nor do they follow the pattern observed in applicatives of converting a monotransitive predicate into a ditransitive. Rather, like the use of *-kan* in (8), *-kan* in (9) appears to play a strictly grammatical role, that of permitting a two-argument predicate to take an argument of a grammatical category different from that taken by the base verb.

Thus, *-kan* seems to have a variety of functions in Standard Indonesian, that of a morphological causative, benefactive applicative and licenser of a nominal complement for a verb that would otherwise not permit this sort of complement. Furthermore, the various uses of *-kan* are in (near) complementary distribution. The causative function of *-kan* is found almost exclusively with intransitive verbs (to a great extent with unaccusatives), benefactive *-kan* occurs nearly always with monotransitives involving a change of state or location, and *-kan* as a licenser of nominal complements occurs with verbs that typically take other sorts of complements, as in the examples of (9). An examination of these examples raises the question of whether the distribution of *-kan* should be analyzed as a single morpheme with a single function (a unitary analysis), or as two separate morphemes (a non-unitary analysis). In this paper, we shall not attempt to differentiate the various versions of non-unitary analyses for closely related senses of a single morpheme. As discussed in Hemmings (2013), there is reason to believe that the various functions of applicative/causative morphemes should be viewed as standing in a polysemous relationship rather than as homophonous.[vi] This issue is tangential to the matters discussed in the current paper, so we refer the reader to Hemmings for further discussion. We do, however, argue for a non-unitary analysis.

**NON-MALAYIC INDONESIAN-TYPE LANGUAGES**

A pattern similar to that in SI is found in a variety of other Indonesian-type languages as well. As is seen in (10)-(11), Balinese *-ang* plays a role similar to Indonesian *–kan* [examples adapted from Arka, 2003]:[vii]

(10) Causative

a. adin cai-ne sakit. (Arka, 2003: 186)
younger.sibling you-DEF sick
'Your younger sibling is sick'

b. cai nyakit-ang adin cai-ne. (Arka, 2003: 187)
you N.sick-ANG younger sibling you-DEF
'You hurt [caused to be sick] your younger sibling'

(11) Benefactive Applicative (Arka 2003:197)

a. Ia meli nasi.
3 N.buy rice
'She bought rice'

b. Ia meli-ang Nyoman nasi.
3 N.buy-ANG Nyoman rice
'She bought Nyoman rice'

While *sakit* means 'sick', *sakit-ang* means 'make sick'/'hurt'. As in Indonesian the simple monotransitive *meli* 'N.buy' becomes benefactive with the addition of the analog of *-kan, -ang*.

A similar pattern is observed in Madurese as well. The addition of the analog of *-kan, -agi*, changes *senneng* 'happy' to 'make happy', as shown in the following examples (Davies, 2010).

(12) Causative

a. Bambang senneng. (Davies, 2010: 311)
Bambang happy
'Bambang is happy'

b. Ita nyenneng-ngagi Bambang.
Ita N.happy-AGI Bambang
'Ita makes Bambang happy'

Similarly to Indonesian, the suffix *-agi* adds a benefactive argument to verbs like 'buy':

(13) Benefactive (Davies 2010: 299)

a. Sa'diyah melle permen kaangguy na'-kana'.
Sa'diyah N.buy candy for RED-child
'Sa'diyah bought candy for the children'

b. Sa'diyah melle-yagi na'-kana' permen.
Sa'diyah N.buy-AGI RED-child candy
'Sa'diyah bought the children candy'

Just as in Indonesian, in (13)a the beneficiary is not specified in the argument structure of the verb when *-agi* is not present:

(14) Sa'diyah melle permen.
Sa'diyah N.buy candy
'Sa'diyah bought candy'

Also similar to Indonesian is the fact that in object voice constructions, in which the direct object becomes the derived subject, when *-agi* is present only the beneficiary and not the theme can be promoted to direct object:

(15) a. Beneficiary Promoted to Subject (verb in Object Voice) (Davies, 2010: 301)
Na'-kana' e-melle-yagi permen bi' Sa'diyah.[viii]
RED- child OV-AV.buy-AGI candy by Sa'diyah
'The children were bought candy by Sa'diyah'

b. Direct Object Promoted Subject (verb in Object Voice)
*Permen e-melle-yagi na'-kana' bi' Sa'diyah.
candy OV-AV.buy-AGI RED- child by Sa'diyah
'Candy was bought the children by Sa'diyah'

Thus, the patterns we have described seem to be quite general in Indonesian-type languages, and might perhaps be seen as supporting the proposal that the applicative/causative affix should receive a unitary syntactic or semantic analysis.

## SOME ISSUES CONCERNING APPLICATIVE/CAUSATIVES

### *The unity of causative/applicatives as analyzed in earlier work*

Before turning to a description of Tapus applicative/causatives, it will be useful to review some of the theoretical and analytical issues raised by earlier research on applicatives in Indonesian-type languages which will be tested against Tapus data. The question of whether causatives and applicatives should receive a unitary analysis was raised in the early literature on Indonesian morpho-syntax by Dardjowidjojo (1978) in an article in which he attempts to find a unitary analysis that explains the properties of the various combinations of *-kan*, *-i* and the active prefix *meN-*:

> A typical treatment of the affixational system in Indonesian has been a list of all the prefixes, the infixes, and the suffixes plus their meanings. While this approach is useful in its own right, it does not tell us just under what circumstances a particular combination of a certain set of affixes produces a benefactive effect and others causative and still others directive, etc.; nor has one ever attempted to see the interrelation among the various verbs derived from these affixes (Dardjowidjojo 1983: 3, originally published as Dardjowidjojo 1978).

Dardjowidjojo reaches the conclusion that:

> While to a certain extent we can see a regularity of the interrelation of the verbs with respect to their transitivity properties, it is found that no useful generalization can be made without having to add an open list of exceptions… Therefore, given a base, there is no way of telling what particular affix or set of affixes this base can or must take, and

> in many cases we do not know what kind of transitivity the resultant verb will acquire (Dardjowidjojo 1983: 31).

Dardjowidjojo's negative conclusion has not deterred linguists from attempting to provide unified analyses that account for a substantial portion of the existing forms. For example, Chung (1976) and Vamarasi (1999) argued that the affixes marked a single process of promotion which varied depending on the verb class.

More recently, the claim that *-kan* has a single, unified function was made by Cole and Son (2004), who argue that the core uses of Indonesian *-kan* lack a unified semantic function, but a unified syntactic analysis of the major uses of the morpheme is possible by treating *-kan* as providing syntactic licensing for the presence of arguments in the argument structure that are not syntactically licensed by the base verb. The semantic effects of the suffix in some contexts are claimed to fall out from whether *-kan* is affixed to a verb with a dependent (complement or adjunct) that lacks syntactic licensing or to a verb with dependents that are all syntactically licensed. Putting aside technical details, Cole and Son (2004) claim that *-kan* has a unified syntactic function in all these cases and that the differing semantic functions are simply side effects of a unified syntactic function.

The critical test confronting Cole and Son (2004), as well as other attempts to provide unitary analyses of *-kan* in Indonesian and its analogs in other Indonesian-type languages, is whether the analysis can successfully predict when the addition of *-kan* (or its analog) to a predicate will result in a causative reading, when the result will be simply to license the presence of a nominal complement, and when there will be a benefactive reading. Cole and Son (2004) were able to predict correctly that *-kan* would occur when there is a mismatch between the semantic representation and argument structure (e.g. in applicatives and when *-kan* is needed to license the presence of a nominal direct object), but the analysis failed to predict that the causative use of *-kan* would be restricted to intransitives (primarily unaccusatives), and that it would generally be ill-formed with respect to transitive clauses. Cole and Son's analysis predicted that a causative interpretation should be possible whenever *-kan* applies to a clause with a fully saturated argument structure, an incorrect prediction.

In contrast to the attempt by the above authors to provide a unitary analysis of *-kan* and its analogs, Kroeger (2007) argues that there is evidence that in Indonesian there are in fact two distinct affixes, *-kan*$_1$ and *-kan*$_2$.[ix] He describes *-kan*$_1$ as "morphosemantic". It has the effect of altering the semantic representation of the base predicate by adding change of location or change of state (the latter taken to be a metaphoric extension of change of location) to the meaning of the base verb, deriving "causative" *-kan* as well as *-kan* employed with verbs of motion like the following[x]:

(16) Dia memukul-kan kepala pada dinding.
he ACT.beat-KAN$_1$ head to wall
'He beat his head against the wall.'

The analysis of *-kan*$_1$ is to be contrasted with that of the benefactive use of *-kan*, *-kan*$_2$, which Kroeger describes as "morphosyntactic", and which he argues has a purely syntactic function (as in example 3b), that of incorporating the beneficiary into the argument structure of V+ *-kan*$_2$ without changing the semantic representation of the sentence.

In the present article, among other issues, we shall examine whether there is reason to agree with Kroeger that a unified analysis of the various uses of *-kan* and its analogs leads to incorrect predictions. This is a matter of some general importance because the same analytic issues discussed by Kroeger for Standard Indonesian arise in Indonesian-type languages generally. As we shall show below, the facts of Tapus specifically favor a non-unified rather than a unified analysis.

***Extreme locality***

We will next provide brief introductions to a number of analytic and theoretical issues in the study of Indonesian-type languages, for which, as we shall show later in the paper, Tapus applicatives/causatives provide important data. The first of these is "extreme locality". In a variety of influential publications rooted in his work on Madurese, Davies (2003, inter alia) has conjectured that not only Madurese but Indonesian-type languages in general are constrained by a more stringent restriction on movement rules than is found e.g. in English. Davies conjectures that in Indonesian-type languages movement is subject to an "extreme locality" requirement: no interclausal movement is possible. This proposal is of importance because it makes the claim that languages differ typologically with respect to constraints on core grammatical processes like movement, constraints that might otherwise be thought to be derived directly from "Universal Grammar", and, hence to be invariant across languages.

In support of the extreme locality hypothesis, Davies presents evidence from Madurese to support the claim that apparent instances of interclausal movement of NPs have in fact been incorrectly analyzed in the literature. For instance, seeming instances of subject to object raising are claimed in fact not to involve interclausal movement, but rather a base generated "proleptic" (anticipatory) NP in the matrix clause that is coreferential with a null pronoun in the lower clause.

(17) Siti ngera Hasan$_i$ bari' [pro$_i$ melle motor]. (Davies 2005: 645)
Siti thinks Hasan yesterday buy car
'Yesterday Siti thought Hasan to have bought a car'

According to Davie's prolepsis analysis, *Hasan* is generated in the matrix clause, and is coreferential with a pronoun in the complement clause, so examples like (17) that appear on initial examination to be instances of "subject to object raising" do not require movement.

This reanalysis of apparent instances of subject to object raising eliminates the necessity for interclausal movement in a large number of cases. This allows Davies to argue that Madurese obeys a restriction against any interclausal movement ("extreme locality"). He conjectures, furthermore, that it may be possible to extend this analysis to all Indonesian-type languages.

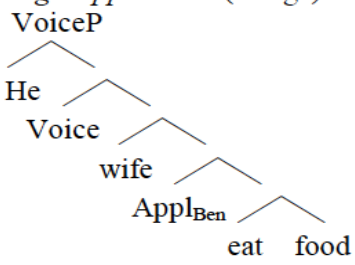
We shall argue below, based on facts related to Tapus applicative/causatives, that in fact this proposal cannot be extended to Tapus, a "traditional" Malayic language, and, hence, cannot be true for Indonesian-type languages generally. This fact suggests that extreme locality is not a typological characteristic of Indonesian-type languages as such, though it may be characteristic of Madurese and other languages spoken on the island of Java (Javanese, Balinese and Sundanese).

***The interpretations of applicatives***

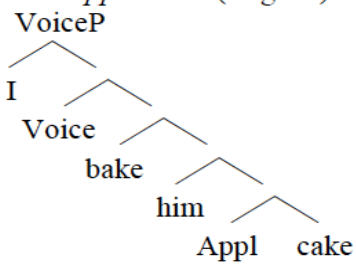
A second theoretical issue for which data from Tapus and other Indonesian-type languages will be shown to be relevant is the semantic typology of applicatives. In a series of influential cross-linguistic studies of applicatives, Pylkkänen (2000, 2002, 2008) has made the claim that there are two types of applicatives, high applicatives and low applicatives:

(18) High and low applicatives (Pylkkänen 2000: 199)

a. *High Applicative* (Chaga)




b. *Low Applicative* (English)




According to Pylkkänen, high applicatives denote a relation between an event and an individual while low applicatives denote a relation between two individuals (the theme and the beneficiary, in the case of benefactives). High applicative heads attach above the "Root" (i.e. above VP) while low applicative heads attach below it. What is important for our purposes is that low applicative heads modify the direct object and are interpreted as directional possessive relations: [him [TO-THE-POSSESSION OF [cake]]] or [him [FROM-THE-POSSESSION OF [cake]]], depending on the lexical properties of the applicative in the specific language. According to Pylkkänen's analysis, low applicatives are restricted to transitive sentences since they denote a relation between a direct object (theme) and an individual (the beneficiary). The restriction of applicatives to transitive sentences is also taken to be diagnostic that an applicative is a low applicative. Thus, the applicatives like *-kan* and its analogs in Indonesian-type languages are necessarily low applicatives, because they are (almost entirely) restricted to transitive clauses. Since applicatives in Indonesian-type languages are by definition low applicatives, a second prediction is made: they must indicate transfer of possession, either transfer to or transfer from the beneficiary. While variation in terms of the direction of transfer is predicted to be possible, low applicatives are claimed to always imply transfer of possession. We shall see that Indonesian-type languages generally, and Tapus particularly, constitute counter examples for these predictions. These facts suggest that Pylkkänen's typology of high and low applicatives makes incorrect predictions with respect to the interpretive possibilities in Indonesian-type languages.

**TAPUS**

We shall now turn to Tapus, a member of the Minangkabau group of Malayic languages.[xi] As mentioned above, Tapus is a "traditional" Malayic language displaying a robust Indonesian-type voice system, among other characteristics of Indonesian-type languages. The traditional Malayic varieties of central Sumatra are primarily spoken in relatively inaccessible rural areas rather than large towns and cities. Unlike urban Malay/Indonesian, the languages spoken in these communities can be traced back to Proto Malayic (Adelaar, 1985). In contrast, the varieties spoken in major Indonesian cities (e.g. Jakarta) show signs of simplification similar to that seen

in Creole languages (although there is no evidence that they have passed through a pidgin stage).

### *Tapus applicative/causatives*

Unlike some other traditional Sumatran Malayic varieties (e.g. Kerinci), Tapus retains an applicative/causative suffix, *–ge*, which is cognate with *-kan*, and is used in many constructions in which *–kan* is used in Indonesian. We shall see that Tapus provides evidence against a unitary analysis for causative and benefactive uses of *-ge*. Additionally, the interaction between *-ge* and relativization/information question formation (so-called A-bar extraction) provides evidence against the extension of the Extreme Locality Hypothesis to Tapus. Finally, facts from Tapus show that Pylkkänen's typology of applicatives makes incorrect predictions with respect to the interpretations available for benefactives in Tapus and other Indonesian-type languages.

Before turning to the detailed discussion related to the above claims, we would like to examine the distribution of the suffix in Tapus in greater detail and point out how it differs from *–kan* in Indonesian. This subsection is of particular interest to Indonesian specialist, and is of importance in general since Tapus has not been described previously in the literature.

### *The distribution of the applicative/causative in Tapus: Similarities with Indonesian*

The following examples show that in general the distribution of the applicative/causative in Tapus (20) is similar to that in Indonesian (19) and to the examples from Standard Indonesian shown earlier in this paper.

(19) Indonesian causative *-kan*

a. cangkir-nya pecah. (Cole and Son 2004: 340)
cup-3 broken
'The cup broke'

b. Tono memecah-**kan** cangkir-nya. (Cole and Son 2004: 341)
Tono ACT.break-APPL cup-3
'Janet broke the cup'

(20) Tapus causative *-ge*

a. pot.buŋo du pocah
vase that broken
'That vase broke'

b. adiᵃʔ gu momocah-**ge** pot.buŋo du
younger.sibling 1SG ACT.break-APPL vase that
'My younger brother broke that vase'

The suffix *-ge* also displays many of the same functions as the Indonesian applicative suffix *-i*.[xii]

(21) a. Indonesian *-i*
Mereka menanam-**i** kebun.
3PL ACT.plant-APPL garden
'They plant the garden'

b. Tapus -*ge*
uraŋ-du monanam-**ge** kobun du bataŋ coklat
person-that ACT.plant-APPL garden that tree chocolate
'They plant chocolate trees in the garden'

The suffix -*ge* is also used in benefactive applicative constructions similar to those with -*kan* in Indonesian.

(22) Indonesian benefactive applicatives (examples from Son & Cole [2004: 124], (glosses retained))
a. Prepositional phrase benefactive
Tika memanggang roti itu (untuk Erik)
Tika MEN.bake bread the for Erik
'Tika baked the bread (for Erik)'
b. Double object benefactive
Tika memanggang-**kan** Erik roti itu.
Tika MEN.bake-KAN Erik bread the
'Tika baked Erik the bread'

(23) Tapus benefactive applicatives
a. Prepositional phrase benefactives
iɲo monjaiʔ roʔ untu[a]ʔ anaʔ-ã)
3 ACT.sew skirt for child-3
'She sewed a skirt (for her child)'
b. Double object benefactives
iɲo monjaiʔ-**ge** anaʔ-ã roʔ
3 ACT.sew-APPL child-3 skirt
'She sewed her child a skirt'

Not only is -*ge* used for both causative and benefactive functions, but benefactive -*ge* shows the same asymmetry with respect to passivization seen with -*kan* in Indonesian.

(24) Active double object constructions in Tapus
siti momaŋgaŋ-ge fitri so-ikua ayam
Siti ACT.bake-APPL Fitri one-CLF chicken
'Siti has grilled Fitri a chicken'

(25) Grammatical passivization of beneficiary in double object construction
a. fitri di-paŋgaŋ-ge siti so-ikua ayam
Fitri PASS-bake-APPL Siti one-CLF chicken
'Fitri was grilled a chicken by Siti'
b. fitri di-paŋgaŋ-ge so-ikua ayam deʔ siti
Fitri PASS-bake-APPL one-CLF chicken by Siti
'Fitri was baked a chicken by Siti'

(26) Ungrammatical passivization of theme in double object construction

a. * so-ikua ayam du di-paŋgaŋ-ge fitri deʔ siti
one-CL chicken that PASS-bake-APPL Fitri by Siti
'A chicken was baked for Fitri by Siti'

b. * so-ikua ayam du di-paŋgaŋ-ge fitri siti
one-CLF chicken that PASS-bake-APPL Fitri Siti
'A chicken was baked for Fitri by Siti'

The sentences of (19)-(26) show that Tapus causative and benefactive/applicatives sentences manifest roughly the same distribution as analogous sentences in Indonesian as illustrated earlier in this paper.

***Divergence from Indonesian***

Despite many similarities, the properties of *-ge* in Tapus are not identical to those of *-kan* in Indonesian. Rather, we shall show that important differences exist. These properties of Tapus can also be used to argue against a unified approach for causative/applicative suffixes and hence support the approach taken in this paper.

***Optionality of –ge***

We shall first show that *-ge* is optional in constructions in which Indonesian *-kan* is obligatory. While we do not fully understand all the factors contributing to the optionality of *-ge*, the suffix is almost always optional in causative constructions. The suffix *-kan* is obligatory in such constructions in Indonesian:

(27) Unaccusative/causative in Tapus is optional

a. Unaccusative 'break'
pot.buŋo du pocah
vase that shattered
'That vase broke'

b. Causative 'break'
adiᵃʔ gu momocah(-ge) pot.buŋo du
younger.sibling 1SG ACT.shattered(-APPL) vase that
'My younger brother broke that vase'

(28) Unaccusative/causative

a. Unaccusative 'bathe'
adiᵃʔ gu mandi
younger.sibling 1SG bathe
'My younger sister bathed'

b. Causative 'bathe'
umaʔ gu momandi(-ge) adiᵃʔ gu
mother 1SG ACT.bathe-APPL younger.sibling 1SG
'My mother bathed my younger sister'

(29) Ergative/causative

a. Ergative 'fly'
layaŋ-layaŋ du təbaŋ
kite that fly
'That kite is flying'

b. Causative 'fly'
abaŋ gu monəbaŋ(-ge) layaŋ-layaŋ du
older.brother 1SG ACT.fly-GE kite that
'My brother is flying the kite'
(='My brother makes the kite fly')

In contrast to causatives like (26) – (28), benefactive *-ge* is obligatory:[xiii]

(30) Benefactive degraded without *–ge*

a. (i) fitri mombawoʔ-ge santi tas
Fitri ACT.bring-APPL Santi bag
'Fitri brought a bag for Santi'

(ii) *fitri mombawoʔ santi tas
Fitri ACT.bring Santi bag
'Fitri brought a bag for Santi'

b. (i) fitri momasaʔ-ge santi sup
Fitri ACT.cook-APPL Santi soup
'Fitri cooked soup for Santi'

(ii) *fitri momasaʔ santi sup
Fitri ACT.cook Santi soup
'Fitri cooked soup for Santi'

These facts do not only illustrate differences between Tapus and Indonesian, but they are also important for determining whether a unitary function should be posited for *-ge* in Tapus. If causative and benefactive *-ge* are in fact instances of the same suffix, there is no reason to expect that *-ge* would be completely optional in one construction and strongly preferred in the other. This, however, would not be surprising if causative and applicative *-ge* are separate, distinct morphemes. The differences between applicative and causative *-ge* would, however, be mysterious if a unitary function for *-ge* is hypothesized. Thus, the differential treatment of *-ge* in these two constructions constitutes a type of evidence against a unitary function for the suffix that is not available from Standard Indonesian.

***Extension of applicative -ge to clausal adjuncts***

We would like to turn next to a function of *-ge* that is similar to but which goes a step beyond the function of benefactive/applicative *-kan* (*-kan*$_2$) in Indonesian. We saw earlier that benefactive *-ge*, like *-kan*$_2$, alters the argument structure of a verb but not its semantics. In contrast, the function of *-kan*$_1$ is to alter the meaning of the predicate by introducing a causative agent. Thus, as in the analogous sentence in Indonesian, in (31) the presence of *-ge* makes the prepositional phrase a subcategorized argument of verb+*-ge*.

(31) tika momaŋgaŋ-ge roti du untuᵃʔ erik
Tika ACT.bake-APPL bread that for Erik
'Tika baked that bread for Erik'

In Indonesian *-kan*$_2$ alters the argument structure by converting a prepositional phrase adjunct into an argument of the verb (either an NP or a prepositional phrase argument), without, however, altering the meaning of the sentence.[xiv] In Tapus, however, we shall see that with certain predicates the properties of *-ge* go beyond those of *-kan*$_2$, and *-ge* changes the status of adjunct **clauses** (rather than prepositional phrases) to arguments. This property is found only in applicative constructions, and similar changes in the status of adjunct clauses do not occur when causative *-ge* is used. Thus, these facts provide additional support for the claim that causative and benefactive *-ge* are in fact separate suffixes and should not receive a unitary analysis.

The predicates in question include the following:

(32) a. bɛraŋ 'angry'
b. putuyh aso 'to be/feel devastated'
c. sonaŋ 'happy/glad'

The inchoative (base) form of the verb is illustrated in the following examples:

(33) Examples of inchoative verbs
a. amin bɛraŋ suŋguᵃh tadin pagi
Amin angry very this morning
'Amin was very angry this morning'
b. fitra putuyhaso toruyh
Fitra broken.hope continue
'Fitra is desperate all the time'
c. fitri sonaŋ potaŋ
Fitri happy yesterday
'Fitri was happy yesterday'

These predicates must appear with *-ge* when they take an NP object and the verb will typically appear with the active (*N-* ) prefix. However, when an object occurs a shift in meaning takes place as well:

(34) a. oraŋ du mombɛraŋ-ge adiᵃʔã
person that ACT.angry-APPL younger.sibling.3
'That person scolded his younger brother'
b. oraŋ du momutuyh aso-ge gu
person that ACT.broken hope-APPL 1SG
'That person made me desparate'
c. anaʔ du moŋonaŋ-ge gu
child that ACT.happy-APPL 1SG
'That kid made me happy'

These are clearly instances of causative *-ge*.[xv]

Predicates like those in (34) are also well formed in conjunction with adjunct clauses in both their inchoative (base) and causative forms:

(35) Non-causative (inchoative) verb with adjunct clauses

a. agu putuyh aso deʔ iŋo monokoʔ adiªʔ gu
1SG broken hope because 3 ACT.hit younger.sibling 1SG
'I was devastated because the he hit my younger brother'

b. umaʔ bɛraŋ deʔ santi makan kue du
mother angry because Santi eat cookies that
'Mother was angry because Santi ate those cookies'

c. anaʔ du sonaŋ deʔ ali dataŋ
child that happy because 3 come
'That kid was happy because Ali came'

(36) Causative predicate with adjunct clauses

a. oraŋ du momutuyh aso-ge gu deʔ iŋo
person that ACT.broken hope-APPL 1 SG because 3
monokoʔ adiªʔ gu
ACT.hit younger.sibling 1SG
'That person made me desperate because he hit my younger brother'

b. umaʔ mombɛraŋ-ge ina deʔ santi makan kue du
mother ACT.angry-GE Ina because Santi eat cookies that
'Mother scolded Ina because Santi ate those cookies'

c. anaʔ du moŋonaŋ-ge umaʔãʔ deʔ binil monjonguªʔ
child that ACT.happy-APPL his.mother because his.wife ACT.visit
uraŋ.tuoõ
the.parents
'The son made his mother happy because his wife visited the parents'

It is clear that the 'because' clause in (35) is an adjunct rather than a complement because WH extraction from adjunct clauses as in (37) is ungrammatical but extraction from complement clauses as in (38) is well-formed:[xvi]

(37) Ungrammatical WH extraction from adjunct 'because' clause

a. *siapo$_i$ yaŋ oraŋ du putuy haso deʔ ___$_i$ monokoʔ adiªʔ diyã
who REL person that broken hope because ACT.hit younger.sibling 2
'Who$_i$ is it that the person was devastated because (that person$_i$) hit your sister?'

b. *siapo$_i$ yaŋ umaʔ bɛraŋ deʔ ____$_i$ makan kue du
who REL mother angry because eat cookies that
'Who$_i$ is it that mother was angry because (that person$_i$) ate the cake?'

c. *siapo$_i$ yaŋ anaʔ du sonaŋ deʔ _____$_i$ monjoŋuªʔ uraŋ.tuoõ?
who REL child that happy because ACT.visit the.parents
'Who$_i$ is it that the child is happy because (that person$_i$) visited the parents?'

(38) Grammatical WH extraction from complement clause

a. apo$_i$ yaŋ budi piki$^a$ _____$_i$ di-ambi$^a$ʔ deʔ anaʔ du?
what REL Budi think PASS-take by child that
'What is it that Budi thinks was taken by that kid?'

b. siapo$_i$ yaŋ fitri pocayo _____$_i$ mombaoʔ pitih du?
what REL Fitri believe ACT.bring money that
'What is it that Fitri believes brought the money?'

In the examples of (37) and (38) the predicates occur without the suffix *-ge*. The absence of *-ge* is expected with complement clauses since the meaning of the predicates is not causative in these examples.

In (39)–(40), however, *-ge* (optionally) occurs on the predicate, but, surprisingly, the presence of *-ge* does not make the predicates causative:

(39) ayah putuyh aso-(ge) deʔ adi$^a$ʔ-gu indoʔ bueʔ tugas
father broken hope-APPL because younger.sibling-1SG NEG make assignment
'My father is frustrated because my younger sibling did not do the assignment'
(in response to a question about who did not do the assignment)[xvii]

(40) umaʔ bɛraŋ-(ge) deʔ santi makan kue du
mother angry-APPL because Santi eat cookies that
'Mother was angry because Santi ate those cookies'
(response to a question about who ate cookies)

It would appear to be a mystery why the attachment of *-ge* to the expressions in (35)a and (35)c results in causatives in (36)a and (36)c but there is no change in meaning in (39) and (40) and the verb stays inchoative.

We would like to propose the following solution to this apparent irregularity: In verb + *-ge* + **NP**, morphosemantic (causative) *-ge* occurs. This is because the base predicates in (35) are intransitive and therefore do not license a nominal object. An object is licensed only if causative (morphosemantic) *-ge* is added to the verb stem. In contrast, in examples like (39) and (40) we claim that the function of *-ge* is purely syntactic. Like *-ge* with adjunct prepositional phrases, *-ge* with adjunct clauses has the effect of altering the argument structure without affecting the meaning. It does this by changing the adjunct clause to a complement clause, a process similar to the effect of *-kan*$_2$ in Indonesian, which changes adjunct prepositional phrases to arguments, but does not affect the meaning.

The claim that *-ge* converts adjunct clauses to complement clauses can be tested by examining whether the presence of *-ge* changes the grammatical properties of the 'because' clause. We saw earlier (as was illustrated in examples (37) and (38)) that, similar to English and many other languages, extraction is possible from complement (argument) clauses but not from adjuncts. This, if *-ge* affects the argument structure by converting an adjunct clause to an argument clause, it would be expected that extraction would become possible from 'because' clauses when 'applicative' *-ge* is present. It will be remembered that extraction is not possible when *-ge* is absent, as was illustrated in (37) above. :

Extraction is, however, possible when *-ge* is appears on the main predicate:

(41) Grammatical WH extraction from complement 'because' clause

a. siapo$_i$ yaŋ guru diyã putuyh aso-ge deʔ ____$_i$ moŋeluh?
who REL teacher 2SG broken hope-APPL because ACT.complain
'Who$_i$ is it that your teacher was devastated because (that person$_i$) complained?'

b. siapo$_i$ yaŋ anaʔ du sonaŋ-ge deʔ _____$_i$ dataŋ?
who REL child happy-APPL because arrive
'Who is it that the child is happy because (that person) already arrived?'

c. siapo$_i$ yaŋ umaʔ bɛraŋ-ge deʔ _____$_i$ makan kue du?
who REL mother angry-APP because eat cake that
'Who is it that mother was angry because (that person) ate that cake?'

In our analysis, the examples of (41) are taken to show the extension of the morphosyntactic function of *-ge* from promotion of prepositional phrase adjuncts to arguments, to promotion of clausal adjuncts to complement clause arguments. These examples also support the extension to Tapus of Kroeger's claim that causative and applicative *-kan* should not receive a unitary analysis. What is notable is that the causative interpretation of the suffix never co-occurs with the function of changing the status of a constituent from adjunct to argument. Thus, the examples of (41), in which there is clear evidence from extraction that the adjunct clause has become an argument rather than an oblique dependent of the verb, can never be interpreted as causatives.

Note that (our extension of) Kroeger's analysis would predict that under certain circumstances a sentence would be ambiguous between a causative and an applicative interpretation, but that these interpretations would never be mixed (causative plus promotion of adjunct to argument would not occur). Ambiguity could be found if the predicate in question allows a choice between [V $CP_{adjunct}$] or [V NP ($CP_{adjunct}$)] structures. It is predicted that in [V-**ge** $CP_{adjunct}$] structures, the effect of *-ge* would be applicative, and would result in the promotion of the CP adjunct to complement ([V-**ge** $CP_{complement}$]). In contrast, in [V NP ($CP_{adjunct}$)] structures (as exemplified in ((36)a and c) above, in which a noun phrase complement occurs, [V-**ge** NP ($CP_{adjunct}$)] would receive a causative interpretation. Apparent ambiguity could occur if NP is phonologically null. In such cases, verb+-*ge* would be predicted to be causative. Our analysis makes two predictions about such examples. First, we predict that such ambiguities should occur. Secondly, we predict that when the causative interpretation does occur the adjunct would not be promoted to complement status. Thus, in these cases extraction from the adjunct would still not be possible.

Turning back to examples like (39) and (40), these sentences are in fact ambiguous, as predicted. The predicate of the main clause in these examples, in addition to the inchoative meaning illustrated above can be understood to also have a causative interpretation meaning something along the lines of the following: 'You devastated [an unnamed person] because she hit your younger sibling,' 'Mother scolded [an unnamed individual] because Santi ate those cookies,' etc. Thus, the first prediction, that such ambiguities will occur, is in fact correct. The second prediction is that when a causative meaning occurs, extraction from the 'because' clause will still not be possible. In other words, using the causative suffix *–ge* does not have an effect on endowing the adjunct clause with complement status, thereby allowing extraction from that

clause. This prediction is also correct, as exemplified below with an overt NP complement in the main clause:

(42) Use of causative suffix *–ge* with adjunct clause
kepala sokolah du putuyh aso-**ge** murit du deʔ guru moŋeluh
head school that broken hope-GE student that because teacher ACT.complain
'The principal made the student devastated because the teacher complained'

(43) Subject question from adjunct clause ungrammatical
*siapo$_i$ kepala sokolah du putuyh aso-**ge** murit du deʔ __$_i$ moŋeluh?
who head school that broken hope-GE student that because ACT.complain
(Who did the principal make the student devastated because that person complained?)

Note again the contrast between causative *–ge*, which does affect the argument structure status of the following adjunct clause, and the *–ge* in (44) found on inchoatives, the sole function of which seems to be to mark the promotion of the adjunct clause to complement, thereby allowing extraction:

(44) Applicative *–ge* with apparent adjunct clause (promoted to complement clause)
siapo$_i$ yaŋ kepala sokolah du putuyh aso-ge deʔ __$_i$ tolambeʔ toruyh
who REL head school that broken hope-GE because late continue
'Who is it that the principal was devastated because (that person) was always late?'

(45) Extraction out of adjunct clause with no applicative marker on V (no promotion of adjunct to complement)
*siapo$_i$ yaŋ kepala sokolah du putuyh aso deʔ __$_i$ tolambeʔ toruyh
who REL head school that broken hope-GE because late continue
('Who is it that the principal was devastated because (that person) was always late?')

As predicted, extraction out of 'because' adjuncts is not possible in the case of causatives, but only when *-ge* indicates promotion of the adjunct to complement status. These facts provide additional evidence in favor of the claim that causative and applicative *-ge* are separate lexical elements, each with its own distinct grammatical properties.[xviii]

### *Implications for extreme locality*

We have argued that in Tapus the suffix *-ge* should not receive a unitary analysis, and should be viewed as two separate lexical items. Similarly to causative *-kan* in Indonesian as described by Kroeger, causative *-ge* affects the semantic representation of the sentence by introducing a higher agent argument while applicative *-ge* affects the argument structure (but not the semantic representation) by converting a non-argument dependent of the verb to argument status. As we saw, Tapus differs from Indonesian with regard to which class of adjuncts *-ge*$_2$ is able to convert to an argument. In addition to converting 'for' prepositional phrases to benefactive arguments, in some cases, *-ge*$_2$ also converts adjunct clauses to complement clauses. As far as we know, this function for an applicative suffix is unique to Tapus, and the range and properties of this construction merit further study in the future.

We will now turn to an examination of the implications of applicative *-ge* with regard to Davies' (2003, 2005, 2010 inter alia) influential "extreme locality" hypothesis. As we mentioned earlier, on the basis of patterns observed in Madurese, Davies made the typological

conjecture that not only Madurese but Indonesian-type languages in general are constrained by a more stringent restriction on movement rules than is found in European languages like English. Davies conjectures that in Indonesian-type languages movement is subject to an "extreme locality" requirement: no interclausal movement is possible. Rather, instances of apparent interclausal movement are claimed to be examples of coreference between a base generated "proleptic" nominal in the matrix clause and a phonologically null pronominal in the embedded clause.

We shall argue, however, that in fact this proposal cannot be extended to Tapus, and, hence, cannot be true for all Indonesian-type languages. This fact suggests that extreme locality is not a typological characteristic of Indonesian-type languages generally but rather characterizes Madurese and perhaps certain other languages spoken on and near the island of Java (e.g. Javanese, Sundanese and Balinese).

To see this, let us return to the analysis of predicates like *sonaŋ-ge* 'happy' in Tapus. It will be remembered that we demonstrated that when *sonaŋ-ge* is followed by an object NP, the only interpretation possible is the causative interpretation 'make someone happy' rather than the inchoative (stative) 'be happy'. The interpretation provides us with clear evidence of whether the verb *sonaŋ-ge* has a V-*ge* NP structure in a given sentence.

Let us now look at the predictions of the "extreme locality" hypothesis. A structure along the lines of that below would be necessary if examples like those of (46) contain proleptic NPs and, therefore, conform to "extreme locality":[xix]

(46) siapo$_i$ yaŋ roy sonaŋ-ge t$_i$ [deʔ **pro**$_i$ lah dataŋ]?
who REL Roy happy-GE because past arrive
'Who is it that Roy is happy because (that person) already arrived?'

As shown in (46), "extreme locality" requires that instances of apparent extraction from subordinate clauses must in fact be instances of coreferentiality between a "proleptic" NP in the main clause and a phonologically null pronoun in the subordinate clause. In the case of Tapus, however, this makes an incorrect prediction with respect to the interpretation. In [*sonaŋ-ge* NP] structures, the interpretation of *sonaŋ-ge* should be restricted to 'make someone happy' rather than 'be happy' because *sonaŋ-ge* is followed by an NP, but, as we saw above, when extraction from the subordinate clause occurs, that reading is in fact impossible, and 'be happy' is the only possible reading. Thus, the structure required for compatibility with "extreme locality" makes the wrong predictions with respect to possible interpretations of *sonaŋ-ge*. In contrast, the structure proposed in this article, which involves interclausal movement, and which is therefore incompatible with "extreme locality", makes the correct predictions:

(47) siapo$_i$ yaŋ diyã putuyh aso-**ge** [deʔ __$_i$ monokoʔ adi$^a$ʔ diyã]?
who REL 2SG broken.hope-GE because ACT.hit younger.sibling 2SG
'Who$_i$ is it that you were devastated because (she$_i$) hit your younger sibling?'

In (47) the 'because' clause is the sole complement of *aso-ge*. Thus, the expected interpretation is 'feel devastated' rather than 'make someone devastated'. The function of applicative *–ge* in these examples is as we described above: to promote an adjunct clause to complement, thereby allowing extraction out of that clause. As a result, the analysis that violates "extreme locality" predicts the correct interpretations. On the other hand, the proleptic structure with null coreferentiality between a "proleptic" NP in the main clause and a phonologically null

pronoun in the subordinate clause makes an incorrect prediction with respect to the interpretation.

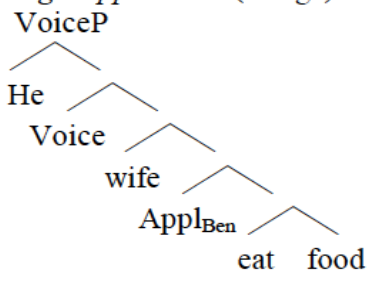
***Interpretations of applicatives***

Before moving on to the next argument, it may be useful to summarize what has been shown so far. We have argued that the differences between Tapus and Indonesian provide us with evidence regarding the typological properties of applicative/causatives in Indonesian-type languages. First of all, an extension to Tapus of Kroeger's arguments against a unitary analysis for *-kan* correctly predicts a variety of facts in regarding the languages in question. Secondly, facts surrounding the interaction between applicative/causatives and information question formation/relativization (A-bar extraction) provide evidence that Extreme Locality is not a typological characteristic of Indonesian-type languages generally. In this section we will turn to the implications of Tapus applicative with regard to an analysis of applicatives that has received considerable attention in recent years, that of Pylkkänen (2000, 2002, 2008). We shall show that the typological predictions made by this analysis are incorrect with regard to Tapus, as well as with regard to Indonesian-type languages generally.

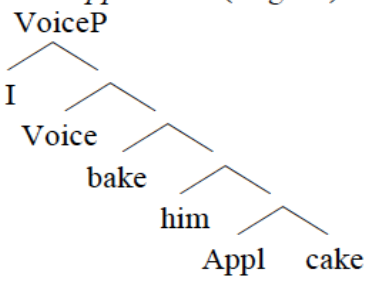
As we mentioned earlier, in a series of influential cross-linguistic studies of applicatives, Pylkkänen (2000, 2002, 2008) has made the claim that there are two types of applicatives, high applicatives and low applicatives, as shown in (18) (repeated here for convenience.)

(18) High and low applicatives (Pylkkänen 2000: 3, 6 a-b)

a. *High Applicative* (Chaga)




b. *Low Applicative* (English)




The applicatives found in Indonesian-type languages appear on initial examination to fit the predicted pattern for low applicatives. According to Pylkkänen's analysis, low applicative are restricted to transitive sentences since they denote a relation between a direct object (theme) and an individual (the beneficiary). Thus, the applicatives like *-kan* and *-ge* in Indonesian-type languages must be low applicatives, because they are (almost entirely) restricted to transitive clauses. Since applicatives in Indonesian-type languages must be low applicatives, a second prediction follows. According to Pylkkänen, low applicatives always imply transfer of possession.

Returning to Tapus, as in other Indonesian-type languages, we know that *-ge* applicatives are low applicatives because they are restricted to transitive clauses. In Tapus, however, the interpretations found differ from those predicted for low applicatives. Consider first benefactive sentences that do not contain the applicative marker *-ge*, i.e. sentences in which an oblique, adjunct prepositional phrase occurs:

(48) tika momaŋgaŋ roti du untuᵃʔ Erik
Tika ACT.bake bread that for Erik
'Tika baked that bread for Erik'

In the absence of *-ge* there are no construction specific restrictions on interpretation predicted by Pylkkänen's analysis. In sentences like (48) two different interpretations are in fact possible, a transfer of possession reading and what has been termed a deputative reading:

(49) Readings of benefactives
a. Transfer of possession
Tika baked the bread in order for Erik to have the bread (transfer of possession from Tika to Erik).
b. Deputative
Erik was supposed to bake the bread but instead Tika did it for him.

In the deputative reading Erik may never take possession of the bread. There is no change of possession from Tika to Erik. In both (22)a and (22)b, Indonesian examples which are repeated below, the dominant interpretation is change of possession, but the deputative reading is clearly possible:

(22) Indonesian benefactive applicatives (examples from Son & Cole [2004: 124] (glosses retained)
a. Prepositional phrase benefactive
tika memanggang roti itu (untuk erik)
Tika MEN.bake bread the for Erik
'Tika baked the bread (for Erik)'
b. Double object benefactive
tika memanggang-**kan** erik roti itu.
Tika MEN.bake-KAN Erik bread the
'Tika baked Erik the bread'

We turn next to sentences from Tapus in which *-ge* occurs and the beneficiary remains in a prepositional phrase:

(50) tika momaŋgaŋ-**ge** roti du untuᵃʔ erik
Tika ACT.bake-GE bread that for Erik
'Tika baked that bread for Erik'

As a low applicative, according to Pylkkänen's analysis, the only interpretation of (50) should be the change of possession interpretation. In fact, however, both the deputative and the change of possession interpretations are possible, and the deputative interpretation is the dominant interpretation. These facts run counter to the predictions of Pylkkänen's low applicative analysis.

The final construction to be considered is double object benefactives like the following:

(51) tika momaŋgaŋ-**ge** erik roti du
Tika ACT.bake-GE Erik bread that
'Tika baked that bread for Erik'

In Tapus, examples like (51) can only receive a deputative reading. Contrary to Pylkkänen's predictions, the change of possession reading is not possible or constitutes a very forced and unnatural reading.

These results raise the question of whether, more generally, the range of interpretations available for benefactive constructions in Indonesian-type languages conforms to or contradicts Pylkkänen's predictions. The table below compares the interpretations available for Madurese (as reported by Davies 2013), Indonesian (our data) and Tapus:

(52) Interpretations for benefactives in Indonesian-type languages

P = change of possession, D = deputative

| | PP benefactive | | Double object benefactive | |
|---|---|---|---|---|
| | Ø | w/appl. marker | Ø | w/appl. marker |
| Madurese | P or D | P > D | * | P > D |
| Indonesian | P > D | D > P | * | P > D |
| Tapus | P > D | D > P | * | D > P |

> = Preferred interpretation

The low applicative analysis makes no predictions with regard to prepositional phrase benefactives without an analog of *-kan*. Incorrect predictions, however, are made for prepositional phrase benefactives employing an analog of *-kan* and for double object constructions. In all these cases, the only possible reading should be the change of possession reading, but in fact, the languages reported vary for a given construction regarding which interpretation is preferred. The deputative reading is possible in all cases, and it is in fact preferred in both Indonesian and Tapus for the analog of *-kan* + prepositional phrase. The most significant departure from Pylkkänen's predictions is found in the Tapus double object construction. In that construction, the predicted reading (change of possession) is not possible, and the only reading that occurs is the deputative interpretation.

We conclude that Pylkkänen's proposals regarding the typology of applicative constructions are incorrect for Indonesia-type languages. The expected correlations between purely syntactic properties such as whether the construction is restricted to transitives or intransitives and the interpretations available are not found.

## CONCLUSIONS

To summarize, in this paper we have examined the analog of the Indonesian causative/ applicative suffix *-kan* in Tapus, a previous undescribed Malayic languages spoken in central Sumatra. The results have been interesting for a number of reasons. Tapus provides support for a proposal by Paul Kroeger (2007), who argues against attempts like that of Cole and Son to provide a unitary analysis of *-kan* in Indonesian. Rather, Kroeger argues that there are two separate suffixes with very different grammatical and semantic properties. Kroeger's claims are confirmed by data from Tapus, and, in our opinion, would appear to hold for Indonesian-type languages generally. We also show that despite many similarities, the properties of overt

analogs of *-kan* are much more varied than has been reported previously. In Tapus, for instance, *-ge* is optional in environments in which *-kan* is obligatory, and has the effect of incorporating into the argument structure certain adjunct clauses rather than only benefactive prepositional phrases. Evidence is also provided that Tapus is not subject to "extreme locality". Finally, the range of interpretations for benefactives is quite different from what has been predicted in the current literature on applicatives. The data from Tapus, and from Indonesian-type languages generally, does not appear consistent with Pylkkänen's proposals regarding the possible structures for applicative clauses.

More generally, our conclusion is that the Malayic languages of Sumatra, while often similar to Standard Indonesian, differ amongst themselves in a myriad of significant details. The variation is not merely lexical and morphological, but also encompasses the syntax of the language. It is important to study the details of a wide variety of such languages in order to have an accurate understanding of the range of variation possible in Indonesian-type languages.

## NOTE

The authors would like to thank an anonymous reviewer for very helpful comments on the earlier draft.

## REFERENCES

Adelaar, S. (1985). Proto-Malayic: The reconstruction of its phonology and parts of its morphology and lexicon. Leiden University: Doctoral Dissertation.

Arka, I. Wayan. (2002). 'Voice systems in the Austronesian languages of Nusantara: Typology, symmetricality and Undergoer orientation'. https://openresearch repository.anu.edu.au/handle/1885/41058A

Arka, I W. (2003). *Balinese morphosyntax: A lexical-functional approach*. Canberra: Pacific Linguistics.

Bresnan, J. & L. Moshi. (1993). Object asymmetries in comparative Bantu syntax. In Sam Mchombo (ed.), *Theoretical aspects of Bantu grammar 1*. Stanford: CSLI Publications, 50-93.

Chung, S. (1976). On the subject of two passives in Indonesia. In. C. Li (Ed.), *Subject and Topic*. 57-98. New York: Academic Press.

Cole, P. & Min-Jeong Son. (2004). The argument structure of verbs with the suffix *-kan* in Indonesian. *Oceanic Linguistics* 43(2). 339-364. [https://muse.jhu.edu/article/177193/pdf]

Comrie, B. (1975). Aspect. Cambridge: Cambridge University Press.

Dardjowidjojo, S. (1978). *Some aspects of Indonesian and Javanese linguistics*. Manoa: University of Hawai'i.

Dardjowidjojo, S. (1983). *Beberapa aspek linguistik Indonesia*. Jakarta: Penerbit Djambatan.

Davies, W.D. (2003). Extreme locality in Madurese *wh*-question. *Syntax* 6. 237-259. [http://semantics.uchicago.edu/kennedy/classes/w06/readings/davies03.pdf]

Davies, W.D. (2005). Madurese prolepsis and its implications for a typology of raising. *Language* 81. 645-665. [https://muse.jhu.edu/article/187218/summary]

Davies, W.D. (2010). *A grammar of Madurese*. Berlin: Mouton de Gruyter

Kroeger, P. (2007). Morphosyntactic vs. morphosemantic functions of Indonesian *–kan*. In Annie Zaenen, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling, and Chris Manning (eds.), *Architectures, rules, and preferences: Variations on themes of Joan Bresnan*, 220-261. Stanford: CSLI Publications.

Kulikov. (2001). 'Causatives'. In M. Haspelmath, E. König, Oesterreicher and W. Raible (eds.) *Language Typology and language universals. An international handbook*. Vol. 2, 889-898. Berlin: Walter de Gruyter.

Hemmings, C. (2013). Causative and Applicatives: The case for polysemy in Javanese. *SOAS Working Papers in Linguistics*. Vol. 16. 167-194.

[https://www.soas.ac.uk/linguistics/research/workingpapers/volume-16/file88039.pdf]

Himmelmann, N.P. (2005). The Austronesian languages of Asia and Madagascar: Typological Characteristics. In A. Adelaar and N. P. Himmelmann (eds.) *The Austronesian Languages of Asia and Madagascar*, 110-181. London: Routledge.

Kurniati, Santi, Yanti, Timothy Mckinnon, Yosephine, Peter Cole, Gabriella Hermon, and Bradley Taylor. (2016). Tapus Minangkabau Database. A joint project of the Department of Linguistics and Cognitive Science, University of Delaware and the Department of Linguistics, Max Planck Institute for Evolutionary Anthropology and supported by Atma Jaya Catholic University of Indonesia.

McKinnon, T., Yanti, Cole, P., & Hermon, G. (2015). Infixation and apophony in Malay: Description and developmental stages. *Linguistik Indonesia, 33*(1), 1-20. [http://ojs.linguistik-indonesia.org/index.php/linguistik_indonesia/article/view/26]

Peterson, D.A. (2007). *Applicative Constructions*. Oxford: Oxford University Press.

Pylkkänen, L. (1999). Causation and External Arguments. In Liina Pylkkänen, Angeliek van Hout, & Heidi Harley (eds.), *Papers from the Penn/MIT Roundtable on the Lexicon*. MITWPL 35, Cambridge, MA.

Pylkkänen, L. (2000). What applicative heads apply to. In Michelle Minnick, Alexander Williams & Elsi Kaiser (eds.), *Proceedings of the 24th Annual Penn Linguistics Colloquium*. Penn Working Papers in Linguistics, 7.1. Department of Linguistics, University of Pennsylvania. 197-210.

Pylkkänen, L. (2002). Introducing Arguments. Cambridge, MA: Massachusetts Institute of Technology doctoral dissertation.

Pylkkänen, L. (2008). *Introducing Arguments. Linguistics Inquiry Monograph* 49. Cambridge, MA: MIT Press.

Ross, J. R. (1967). Constraints on variables in syntax. Doctoral dissertation, MIT.

Shibatani, M. & I K. Artawa. (2015). Balinese valency classes. In Andrej Malchukov & Bernard Comrie (eds.), *Valency Classes in the World's Languages*, Volume 2, Case Studies from Austronesia, the Pacific, the Americas, and Theoretical Outlook. Berlin: Mouton de Gruyter. 877-940.

Sneddon, J.N. (1996). *Indonesian reference grammar*. New South Wales: Allen and Unwin.

Sneddon, J.N., A. Adelaar, D.N. Djenar, & M.C. Ewing. (2010). *Indonesian reference grammar* (2nd Ed.). New South Wales: Allen and Unwin.

Song, J. J. (1996). *Causatives and Causation: A Universal-typological Perspective*. Essex: Addison Wesley Longman Limited.

Vamarasi, M. K. (1999). *Grammatical Relations in Bahasa Indonesia*. Pacific Linguistics D-93. Canberra: Research School of Pacific and Asian Studies, The Australian National University.

Yanti. (2010). A reference grammar of Jambi Malay. University of Delaware: Doctoral Dissertation.

---

* This paper derives from a presentation at the "Workshop on Applicatives in Indonesian-Type Languages", held on June 16, 2014 in conjunction with the Eighteenth International Symposium on Malay/Indonesian Linguistics (Procida, Italy). We would like to thank everyone who provided comments and suggestions about our work on this topic, both those who were present in Procida and those with whom we discussed our ideas elsewhere, among them, especially, Bernard Comrie, David Gil, Martin Haspelmath, Malcom Ross and Uri Tadmor. We would also like to thank the Department of Linguistics of the Max Planck Institute for Evolutionary Anthropology and the National Science Foundation (BCS-0444649 and BCS-1126149) for providing the support that made this work possible. We would like to thank Fitri and Fitria for giving us judgements. Finally, we would like to thank the two anonymous reviewers for their constructive feedback and comments on this paper.

[i] We use the notion of "Indonesian-type languages" as described in Arka (2002). Arka's criteria for distinguishing between Phillipine-type and Indonesian-type languages have been widely adopted in the subsequent typological discussion on Austronesian languages.

[ii] Mckinnon et al. (2015) describes some divergent characteristics of Tapus.

[iii] Later works showed that languages differ with respect to the derived status of the original arguments of the base verb, though not with regard to the introduction of the causer argument. See Song (1996) among other works for an overview.

[iv] See Peterson (2007) for a typological study of applicative constructions in a wide variety of languages.

[v] See Peterson (2007: 69) for discussion of symmetrical versus asymmetrical Bantu languages. One example of a study that does address inter-linguistic variation in Bantu is Bresnan and Moshi (1993), who contrasted the symmetry patterns of benefactive applicatives in various Bantu languages, focusing especially on Chichewa (spoken in Malawi) and Kichaga (spoken in Tanzania). In Kichaga, on the one hand, both objects in an applied benefactive construction can be passivized and incorporated onto the verb. In Chichewa, on the other hand, the patient cannot be the subject of a passive nor can it be incorporated as an object pronoun, showing that closely related languages can vary as to whether the two objects of an applied transitive verb are treated symmetrically.

For Generative analyses of applicatives see Pylkkänen (2000, 2002 among others).

[vi] The data in Hemmings (2013) is from Javanese rather than Indonesian and is based on the analysis of the applicative/causative morpheme *–aké*. For our purposes, we take both homophony and polysemy to be instances of the non-unitary analysis because polysemy posits that the morpheme in question has more than one sense. We recognize, of course, that the different senses may come from a single historical source. What is important for our purposes is that synchronically the various senses cannot be reduced to a single, more abstract sense.

[vii] See Shibatani and Artawa (2015) for a detailed description of the distribution of the applicative/causative suffixes in Balinese.

[viii] Davies notes that the verb stem in object voice constructions tends to display the actor voice morpheme in addition to object voice morphology. Additionally, ungrammatical sentences in which the theme object is the subject of the object voice verb (e.g. (15)b) are still unacceptable if the actor voice morpheme is absent. See Davies (2010) for details.

[ix] Kroeger describes the relationship between the functions of *-kan* as homophony, but his point is that there are two distinct functions. He does not consider whether homophony or polysemy is the preferred analysis for the relationship between these distinct functions.

[x] For details of Kroeger's analysis, and, specifically, why he groups together "causative *-kan*" and *-kan* with verbs of motion, see Kroeger (2007).

[xi] Both naturalistic and elicited Tapus data were collected between 2013 to 2015. Additional data needed for this paper were collected in later years. The naturalistic data were published in Kurniati et al. (2016) and are available at The Language Archive, https://archive.mpi.nl/tla/islandora/object/lat%3A1839_00_0000_0000_0000_0000_4?display=list&f%5B0%5D=compound_policy_datastream_children_access_levels_ms%3A%22public%22&f%5B1%5D=cmd.Country%3A%22Indonesia%22&f%5B2%5D=cmd.Language%3A%22West%5C%20Sumatra%5C%20Indonesian%22&f%5B3%5D=cmd.Language%3A%22Minangkabau%2C%5C%20Tapus%22

[xii] It is common in Malayic varieties for a single suffix to be used for most of the functions of the two Indonesian applicative/causative suffixes *-kan* and *-i*, e.g. *-i* in Jambi Malay (Yanti 2010), *-in* in Jakarta Indonesian (Sneddon, Adelaar, Djenar and Ewing, 2010).

[xiii] With certain predicates we found that *–ge* could be missing in the applicative reading of the verb, but the version with *–ge* was judged by native speakers as "better":

(i) iɲo monjaiʔ(-ge) anaʔã roʔ
3 ACT.sew-APPL her.child skirt
'She sewed her child a skirt.'

(ii) aku momaŋgaŋ-(ge) fitri roti
1SG ACT.bake-APPL Fitri bread
'I baked Fitri bread.

[xiv] We will, however, have more to say about the interpretation of benefactives below.

[xv] Lexical shifts e.g. 'cause to be angry' to 'scold' in the case of *bɛraŋ* 'angry', are typical of causative constructions cross-linguistically.

[xvi] Example (37) is a cleft construction containing a headless relative clause, as is indicated by the complementizer *yaŋ*, which is indicative of argument relativization. Such a relative clause obeys the usual constraints on movement from islands first proposed by Ross (1967).

[xvii] The consultant preferred this example without *–ge*.

[xviii] There are many unanswered questions about the distribution of the applicative suffix in Tapus. One of the reviewers raised the issue of whether the use of the *-ge*$_2$ suffix was limited to emotive or psych predicates and whether the adjunct clauses that were 'promoted' were all limited to clauses of reason. We hope to be able to address these and similar questions in future research, but there is not enough relevant data in our corpus at present to address these issues now.

[xix] The structure of (44) is in fact slightly more complex than that given here because the occurrence of *yaŋ* indicates that (44) is a clefted structure with a headless relative clause as a substructure. Since these complications do not affect our argument, we omit them here.