Ways to go in Rama: A Case Study in Polygrammaticalization

Colette G. Craig
University of Oregon

1. INTRODUCTION

The term ‘polygrammaticalization’ is used here to describe the phenomenon by which a single morpheme is the source of multiple ‘grammaticalization chains’ where the expression ‘grammaticalization chain’ itself needs explaining. ‘Grammaticalization’ is the evolutionary process by which grammatical morphemes arise. Although it is assumed that the original source of all grammatical morphemes is ultimately a lexical morpheme, the term grammaticalization often covers instances of the evolution of free to bound grammatical morphemes:

1. lexical \(\rightarrow\) free grammatical \(\rightarrow\) bound grammatical

FIRST TYPE OF  SECOND TYPE OF
GRAMMATICALIZATION  GRAMMATICALIZATION

Instances of the first type of grammaticalization, from lexical to free grammatical morpheme, are the widely documented cases of lexical verbs as sources of adpositions and verbal auxiliaries. Instances of the second type of grammaticalization, from free to bound grammatical morpheme, are found in the formation of verbal affixal morphology, such as bound subject (and object) person agreement markers arising from free personal pronouns, and bound tense/aspect markers from free verbal auxiliaries. The term ‘chain’ is used to evoke the step-by-step nature of the grammaticalization process, which is most directly observable in the pairing of two morphemes through a scenario of change, creating links with the internal structure outlined below:

2. [SOURCE \(\rightarrow\) pathway \(\rightarrow\) OUTCOME]
Chaining happens when the outcome of a link becomes the source component of another link, the notion of source being a relative one:

SOURCE pathway OUTCOME/SOURCE pathway OUTCOME/SOURCE pathway OUTCOME

This is of course a rather simplistic account of what is meant by grammaticalization chain, but it should suffice for the purpose of this paper, which is to focus primarily on determining the immediate and distant sources of particular grammatical morphemes, and on reconstructing, at least in bare outline form, several grammaticalization chains in a specific language. The principle aim of this paper is to account for an additional characteristic of chaining: the fact that a source morpheme may be at the origin of multiple grammaticalization chains which may develop in separate functional domains within the same language. Additional issues associated with discussions of grammaticalization and chaining — unidirectionality of the process, search for parameters of correlation, continuous or discontinuous nature of the evolutionary scheme — will be acknowledged only as they bear on the task at hand.

Incorporating the notions of grammaticalization and chaining into the descriptive grammar of a language has the effect of adding both a dynamic and a diachronic dimension to the task. In the synchronic study of a particular language, the phenomenon of 'chaining' surfaces in morphemes related by polysemy which can be interpreted as traces of links of various chains. The degree of semantic connectedness between polysemous morphemes can then be seen to correspond to the relative stages of the morpheme on a grammaticalization chain. Although it is rare to have all the links of a grammaticalization chain still present at any one time in a language, comparative as well as typological data can usually help reconstruct the chaining process.

This paper is a case study of grammaticalization chains in Rama, a Chibchan language of Nicaragua. It responds to the needs for an adequate description of the persisting recurrence of a particular morpheme BA(NG) which appears in various shapes and in numerous functions. Some of its grammatical functions are illustrated in the following set of examples:

1. a. postposition
   naas sii ba aa taak-iikar
   I water PSP neg go-want
   'I don't want to go get/for water.'

   b. conjunction of subordination
      tiiskama ni-sung-bang taak-i
      baby 1-see-SUB go-TNS
      'I am going (in order) to see/look at the baby.'

   c. prospective aspect
      tiiskama ni-tanang-bang
      baby 1-look at-ASP
      'I am going to look at the baby.'

In the course of accounting for the various uses of the grammatical morpheme BA(NG), most of the major grammatical structures of the language will need to be considered, including verb words, adpositional phrases, main and subordinate clauses, since BA(NG) functions either as a postposition or as one of a number of verbal affixes identifiable as argument, subordination, aspect or mood marker.

The claim of the paper is that the multiplicity of grammatical functions of BA(NG) observed in the synchronic grammar of Rama can be plotted on several grammaticalization chains, the components of which have already been recognized in the verbal morphology of other languages of the world. This case study from Rama will hopefully contribute to a better understanding of how such grammaticalization chains evolve, by adding evidence of likely sets of source and target morphemes and possible paths of evolution. However, the most important contribution of this study will lie in the description of the rich network of grammatical constructions which tightly holds many parts of the Rama grammar together. This network consists of parallel and interconnected chains of grammaticalization which have all ultimately evolved from a single lexical source — in this instance the lexical verb BANG 'GO' through different grammatical domains of the language.

The paper is organized as follows. The major typological characteristics of Rama are given in Section 2 as a background on the major grammatical structures of the language. Next, all identified instances of the grammatical morpheme BANG are examined. They are presented in pairs, according to the structure of links they form, as mentioned above [SOURCE ... pathway ... OUTPUT]. The first two sets of pairs belong to the domain of argument marking: one relates the goal postposition BANG to a certain type of verbal prefix BA- called 'relational preverb' (section 3), the other relates the same goal postposition to a subordinating marker BANG (Section 4). The other sets of paired BANG morphemes belong to the domain of tense-aspect-
modality marking and relate a form of the lexical verb ‘GO’ to aspectual auxiliaries and suffixes as well as mood markers (Section 5).

A number of hypothesized grammaticalization chains are then reconstructed from the pairings of morphemes presented above. Section 6 reconsiders the grammaticalization chains of the domains of argument marking and tense-aspect-modality marking. All these data are brought together to offer an overview of the interactions postulated between the various grammatical constructions.

2. THE RAMA LANGUAGE: A TYPOLOGICAL OVERVIEW

Rama is an obsolescent language spoken today by a few dozen native speakers on the Atlantic Coast of Nicaragua. The earliest linguistic material on the language is from the early part of this century and is limited to word lists and short grammatical sketches (Lehmann 1914, 1920; Conzemius, 1927). These early Rama references mention only some of the material covered in this paper. The majority of the postpositions are identified, the relational preverbs are not recognized as such, although some appear in examples, some of the imperative forms are given but the majority of the aspect markers are not. The discrepancy between the earlier data and that which are presented here begs the question of whether it is due to the way the data were gathered, or whether it is an indication of linguistic change, or both.

The early data were collected entirely through direct elicitation and contain no text material, while the data on which the present analysis is built consists primarily of a collection of spoken narrative texts. Complementary direct elicitation was used mostly to clarify the morphemic analysis of the texts. Although texts were collected from two speakers, an older native-speaker and a younger native speaker, the language described in this paper is that of the native speaker alone.

Rama has a basic SOV word order and exhibits a number of the typological characteristics of verb final languages, such as postpositional phrases, preverbal argument marking and postverbal tense-aspect marking, all illustrated below:

(1) SOV

kumaa bauali ku-u

woman bowl take-TNS

‘the women took bowls.’

Ways to go in Rama

(2) POSTPOSITIONS

ipung ika

island from

nguu ki

house to

kumaa u

woman with

‘From the island’ ‘in the house’ ‘with the woman’

(3) FULL LEXICAL SUBJECT VS SUBJECT PROCLITIC:

a. namangku kruabu tabi-i

now

amaing; kikna isi

tiger come out-TNS again;

i-kalmbk-i

man like

3-stands-TNS

‘Now the tiger comes out again; he stands up like a man.’

b. nah ngriing-i tatah

I beat-TNS

ni-sung-i

mashed 1-do-TNS

‘I beat it and I mash it up.’

(4) POSTVERBAL TENSE-ASPECT-MODALITY MARKING

a. an-uplaul-u

3pl-dream-TNS

b. an-alpaik-i

3pl-think-TNS

‘they dream’ ‘they think’

(5) POSTVERBAL MARKING OF SUBORDINATION

kruabu kruabu an-sung-ka

tiger

an-alpaik-i

3pl-see-sub

kikna

3pl-think-TNS

‘When they see the tiger, they think it is a man.’

All the above examples point to Rama having a morphosyntax rather typical of verb final languages. However, at the clause and sentence levels, Rama cannot be said to be a strictly verb final language in that it takes both preverbal and postverbal oblique arguments, and has both subordinate/main and main/subordinate clausal order.
OBLIQUE ARGUMENTS
a. V obl: nah ngaibi-u / naing tuaa kantu
   I run-TNS my father from
   'I ran away from my father.'

b. Obl V: / salapka tuaa sauk u / i-ku-u
   fish big hook with 3-catch-TNS
   'He caught a big fish with a hook.'

SUBORDINATE CLAUSES
a. subordinate + main clauses
   [ nah maa alkuk-kata ], nah uwalk siik-ut
   I you hear-sub I long time come-IRR
   'If I had heard you, I would have come a long time ago.'

b. main + subordinate clauses
   kruubu tamaaski ut tabi-i [ kumaa i-sung-bang ]
   tiger morning every come out-TNS woman 3-see-SUB
   'The tiger comes out every morning in order to see the woman.'

This section has established the basic traits of Rama morphosyntax needed to proceed with the study of a number of interlocking grammaticalization chains. Postpositional phrases and bound verbal morphology define two functional domains: a preverbal subject and object marking and a postverbal tense-aspect-modality marking, a distribution consistent with the morphological typology of verbs in verb-final languages.

3. FROM POSTPOSITION TO RELATIONAL PREVERB

The first pairing of morphemes to be examined is that of the goal postposition BANG and the relational preverb BA-, as an instance of grammaticalization from a free grammatical morpheme to a bound verbal affix. Rama relational preverbs, of which BA- is the most commonly used, were initially described in Craig (1987) and then brought into typological and diachronic perspective with other cases of the phenomenon from various languages of the Americas in Craig and Hale (1988).

The expression 'relational preverb' is meant to be self-explanatory: 'preverb' because it is prefixed to the verb and 'relational' because it marks a relation between an argument of the proposition and the verb. The sentences below illustrate how these two types of argument marking co-exist, with examples of the two types of instrumental marking, the postposition (PSP) u, as shown in 8b, and the related relational preverb (RP) yu- found in (8a):

Text excerpt: the 'kiskis' (tongs)

a. ung-ki yaadar tkua yu-nsu-uung-kama
   pot-in thing hot RP-with-1PL-make-SUB
   'For us to make hot things in the pot with (it).'

b. nsu-suluk u angka nsu-uung-i
   1PL-finger PSP-with cannot 1PL-make-TNS
   'With our fingers we can't do it.'

The hypothesis developed in Craig (1987) and Craig and Hale (1988) is that Rama relational preverbs come from postpositions through a process of progressive incorporation of the postpositional element into the verb word — from discourse motivated cliticization to morphological lexicalization.

The interesting aspect of relational preverbs in Rama is that they co-occur in the language with the postpositions from which they are derived, as shown in the inventory of relational preverbs given below:

POSTPOSITIONS RELATIONAL PREVERBS
ba(ng) 'goal, target'  ba-
us 'comitative, instrumental'  yu-
ka(ng) 'ablative, source'  k(a)-
si 'locative'  su-
au 'object'  yaa-
kii 'locative'  

cane 'beneficiary'
kii(ng) 'beneficiary'  

cane 'beneficiary'  

Postpositions and relational preverbs differ in their phonological shapes in that most postpositions appear in one of two forms, either a long form with a final velar consonant, which is used in postverbal or left dislocated postpositional phrases, or an open syllable form without the velar. Relational preverbs are always in the short form, conforming to the phonological reduction which is said to correlate with the process of grammaticalization of a free morpheme into a bound morpheme. In particular, while the postposition BANG exists in both long and short form BANG and BA, the relational preverb is always the short form BA-.

There are various patterns of use of postpositions and relational preverbs attested in Rama: pre- or postverbal postposition with an overt NP (10a,
10a), relational preverbs with or without the NP with which they are
cstrued (10b,c), as outlined below:

(10) a. [NP PSP] V a'. X V [NP PSP]=

b. 0 [RP-V] c. NP [RP-V]

The sets of examples in (11, 12) below illustrate how not all the patterns
shown in (10) are found for any specific pairing of postposition, relational
preverb and verb. For example, the verb ngalbi- 'to run' cannot take the
relational preverb ka-, but can take the relational preverb ba- in the pattern
given in 11c. Conversely, it will take the postpositional constructions with
ka/ngalbi but not the ones with ba/ngalbi of patterns a. and a'.

(11) a. naing taata ka na-ngalbi-u
my father PSP/from 1-run-TNS
'I ran away from my father.'

a'. na-ngalbi-u naing taata kang
1-run-TNS my father PSP/from
'I ran away from (him).'

b. ka-na-ngalbi-u
RP/from-1-run-TNS
'I ran away from my father.'

c.* naing taata ka-na-ngalbi-u
my father RP/from-1-run-TNS
(I ran away from my father.)

(12) a.* paalpa ba aa an-alpi-u
manatee PSP/for NEG 3PL-look-TNS
(They did not look for a manatee.)

a'.*aa an-alpi-u paalpa haang
PSP/for

b. ba-an-alpi-u
RP/for-3PL-look-TNS
'They looked for (it).'

c. paalpa aa ba-an-alpi-u
manatee NEG RP/for-3PL-look-TNS
'They did not look for a manatee.'

The discrepancy of behavior illustrated by the ungrammatical examples
(11c* and 12a*) is indicative of two characteristics of the phonemonon of
grammaticalization of postposition into relational preverbs in Rama. One is
that the grammaticalization process is postposition and verb specific. The
other is that it proceeds in stages, from simple cliticization to complete
lexicalization with the verb, yielding two types of relational preverbs:
procliticized and lexicalized.

The differences between patterns of procliticized and lexicalized relational
preverbs emerged from a study of the uses of relational preverbs in narrative
texts. The results of the text counts are contained in Table 1 below which is
based on Craig and Hale (1988: 324). The postpositions are ordered vertically
in their increasing order of frequency of use as postposition, and, conversely,
their decreasing frequency of use as relational preverb:

<table>
<thead>
<tr>
<th>PSP/PV</th>
<th>a. [NP PSP];</th>
<th>b. [0 PSP];</th>
<th>c. [PV-verb];</th>
<th>d. NP [PV-verb]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba/ngalbi</td>
<td>39%</td>
<td>61%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PURPOSE</td>
<td>(0)</td>
<td>(0)</td>
<td>(13)</td>
<td>(20)</td>
</tr>
<tr>
<td>u/yu</td>
<td>31%</td>
<td>51%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>ASSOC/INST</td>
<td>(35)</td>
<td>(0)</td>
<td>(57)</td>
<td>(20)</td>
</tr>
<tr>
<td>a(ak)/ya-DATIVE</td>
<td>49%</td>
<td>39%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(21)</td>
<td>(0)</td>
<td>(17)</td>
<td>(5)</td>
</tr>
<tr>
<td>su/su-LOC</td>
<td>89%</td>
<td>11%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(0)</td>
<td>(4)</td>
<td>(0)</td>
</tr>
<tr>
<td>ki/ki-LOC</td>
<td>98%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(90)</td>
<td>(0)</td>
<td>(2)</td>
<td>(0)</td>
</tr>
</tbody>
</table>

The table emphasizes the need to consider each morpheme separately,
as each one displays a different distribution pattern. The most glaring fact to
be gleaned from Table I is the series of zeros in column b. which creates a
gap in the pattern of possible constructions.
The significance of the gap is that there are no stranded postpositions in Rama: in case of zero anaphora affecting the object NP of a postposition, the postposition occurs attached to the verb as a relational preverb. This analysis was later confirmed through direct elicitation.\textsuperscript{5}

The relational preverbs which result from the systematic avoidance of stranded postpositions are analyzed as being cliticized, and are to be found in column c.\textsuperscript{6} Meanwhile, the relational preverbs found in column d. represent cases of lexicalization of the relational preverb with the verb, as instance of advanced incorporation.

As discussed in greater detail in Craig and Hale (1988), one can distinguish between cliticized and lexicalized relational preverbs in Rama by:

a) the nature of the conditions under which they occur;

b) their degree of productivity;

c) the semantic relation that holds between preverbs and postposition.

All the criteria will be reviewed in turn.

3.1. The nature of the conditions under which they occur

The cliticized relational preverbs are those which arise in case of zero anaphora of the NP and the lexicalized ones are those which are used in conjunction with an overt NP. The fact that, on the rare occasion that a pronoun is used — such as in first and second person or in the third person for emphasis — it is accompanied by a postposition and not a relational preverb supports further the claim that the trigger of the cliticization of a postposition is the non-overtness of a third person object NP itself.\textsuperscript{7}

3.2. Their degree of productivity

The cliticization of the stranded postposition is productive in the sense that the procliticized relational preverb may occur with all sorts of verbs, and that it affects all postpositions whose NP is non-overt, the limit to the freedom of association of a cliticized relational preverb and a verb being of a pragmatic nature. In contrast, the incorporated relational preverbs are lexically restricted to combinations of specific postpositions with specific verbs. A text example (13) will be given to illustrate the productivity of the cliticized relational preverb. The text, which is a fuller version of (8) above shows the procliticization of the instrumental relational preverb\textsuperscript{yu-} in every instance of zero anaphora of its object NP, once the NP kiskis 'tongs' has been established in

(13a) as the referent NP for the oblique instrument arguments of the different verbs of (13b-e). In all four clauses, the anaphoric instrumental NP is non-overt and the verb takes an instrumental relational preverb\textsuperscript{yu-}. However note how, in (13f), an instrumental postposition appears, specifically when a new instrumental NP is introduced, as a full lexical NP which establishes a contrast between two instruments, the tongs 'kiskis' and nsu suluk 'our fingers'. This switch to the postpositional phrase pattern supports the analysis that the relational preverbs in the preceding clauses are cliticized to the verb because of the non-overtness of their object NP.

(13) Cliticization of stranded PSP with anaphora marked ().

a. Nainguku kiskis nisu-kuaakar-i,
sois tongs 1PL-have-TNS
That's why we have the tongs,

b. suuli-kaas yu-nsu-auk-kama,
animal-meat ( ) RP/with-1PL-roast-SUB
for us to roast meat with (it),

c. suma yu-nsu-apii-kama
banana ( ) RP/with-1PL-extract-SUB
for us to take out banana with (it),

d. an ungi karka salpka-kaas yu-nsu-kaniis-kama
and pot out:from fish-meat ( ) RP/with-1PL-fry-SUB
and for us to fry fish from the pot with (it),

e. ungi yaadar tkua yu-nsu-ueng-kama,
pot thing hot ( ) RP/with-1PL-make-SUB
for us to do hot things in the pot with (it).

f. Nsu-suluk u angka nisu-ueng-i,
our-finger PSP/with can't 1PL-make-TNS
With our fingers we can't do it,

g. nsu-su-ak-ka-ting
our-finger 3-burn-too much-TNS
we would burn our fingers too much.

The text sample shows a procliticized instrumental relational preverb associating with a variety of verbs: 'to roast' in (13b), 'to take out' in (13c), 'to fry' in (13d) and 'to make' in (13e), i.e. the process is productive. It also demon-
strates how the instrumental oblique argument of the same verb 'to make' can also be expressed through a postpositional phrase, as in (13f), the choice between postposition and relational preverb being a matter of the overtness status of the instrumental NP itself, and not of the combination of specific postpositions with specific verbs.

The major lexicalized patterns are combinations of the comitative yu- with motion verbs, to be considered in the next section, and combinations of a limited number of verbs with the relational preverb BA-. There were 17 examples of the BA- relational preverb with an overt NP in the text study. Only two verbs accounted for 16 of the 17 cases: They were [NP BA-alpi-] 'to look for something' (11 occurrences) and [NP BA-ting-] 'to want something' (5 occurrences). These two verbs are characterized by the fact that they are only found in the relational preverb construction with a direct object NP, or conversely, the objects of these two verbs can never appear as the objects of free standing postpositions. Both verbal roots exist by themselves, with associated but different meanings: aapi- means 'to find' and ríng- means 'to happen'.

Examples of two incorporated relational preverbs are found in the following text sample (14): The BA- of the construction [NP BA-alpi-] in (14a) (which contrasts with the bare verb aapi of the next clause (14b)) and the yu- of the construction [NP yu-siik-] found in clauses (14c and d):

(14) a. ngulkang ba-an-alpi-u
   wild pig RP/for-3PL-look-TNS
   'They looked for the wild pig.'

b. an-aapi-u  an-aung-i
   3PL-find-TNS 3PL-say-TNS
   'They found (it), they say.'

c. naiksangku ning ngulkang yu-an-siik-u
   that way the wild pig RP/with-3PL-come-TNS
   'So they brought the wild pig.'

d. ngulkang bangku yu-an-siik-u  kaing
   wild pig now RP/with-3PL-come-TNS DISC.
   'They brought the wild pig now.'

e. an-angsk-u
   3PL-clean-TNS
   'They cleaned (it).'

As will be discussed in the section on tense-aspect-modality below, the relational preverb BA- is found elsewhere in other instances of lexicalization such as the formation of the progressive aspect marker baakar, a compound of ba-aakar [RP/for-V/be].

With the instrumental/comitative relational preverb yu-, the most common instance of lexicalization involves verbs of motion, sliik 'come' or taak- 'go'. A comparison of the cases of lexicalization of BA- and yu- brings out the need to introduce the notion of degrees of lexicalization. While the BA- lexicalizations discussed above represent a fairly advanced stage of the process, the instances of yu- incorporation represent a more incipient degree of lexicalization. The pair of examples below show a clearly instrumental postposition u and an incorporated relational preverb which, although it may still be interpreted as an instrumental, exhibits semantic drift as will be discussed shortly:

(15) a. PSP: Maukala i-park-i  seem ngiobang u
   net 3-make-TNS same silkgrass PSP/with
   'He makes nets with silkgrass.'

b. RP: Naing taata ngiobang yu-i-siik-i  ngeuki
   my father silkgrass RP/with-3COME-TNS house in
   'My father brings the silkgrass in the house.'

3.3. The semantic relation that holds between each type of relational preverb and its postposition of origin

The third factor that distinguishes proclititized relational preverbs from incorporated relational preverbs is their stable semantics. While cliticized relational preverbs maintain the interpretation that they would have as postpositions, fully incorporated relational preverbs exhibit semantic drift from their associated postpositions, as was just mentioned earlier.

The best illustration of this difference can be found in examples of the instrumental/comitative relational preverb yu-. The above text sample (13) showed how the postposition in (13f) and the cliticized relational preverbs of (13b-e), were all given the same instrumental interpretation, i.e. there was no semantic drift of the relational preverb.

Meanwhile, examples (15) above and (16,17) below illustrate how there is a semantic difference between constructions with a free postposition u and constructions with an incorporated relational preverb yu-. One way to charac-
terize the semantic difference is in terms of the relative control of the agent over the movement of the object, with the incorporated form corresponding to a reading of increased control of the agent:

(16) a. PSP: ...
    barka aa i-taak-u baaning and u
    but NEG 3-go-TNS then them PSP/with
    "... but she did not go with them."

b. PSP: Taak u m-taak-u
    who PSP/with 2-go-TNS
    "With whom did you go?"

c. RP: Tiiskama taak yu-taak-u
    [+agent] child who RP/with-go-TNS
    "Who took (carried) the child?"

(17) a. RP: ngurii psukii yaing tiiskama yu-i-taak-u
    hole inside her child RP/with-3-go-TNS
    "Inside the hole she took her child."

b. PSP: namba y-taakar ngurii ki yaing tiiskama u
    [+agent] still 3-stay hole in her child PSP/with
    "She stays still in the hole with her child."

The complex verbs yu-taak [with-go] 'to take, carry' and yu-siik [with-come] 'to bring' are the most common instances of incorporated relational preverbs: the comitative postposition with either of the two basic verbs of movement. In fact, of the 20 tokens of the preverb yu- used in combination with an overt NP found in the text study, 18 are in combination with either siik- 'come' or taak- 'go'.

The goal of this section was to establish the existence in Rama of postpositions and bound relational preverbs paired through a process of progressive grammaticalization. The phenomenon has been documented for a number of languages of the world, including many languages of the Native Americas. The contribution made by the Rama data is two-fold. It constitutes a good case for showing the origin of such relational preverbs, since the postpositions from which the relational preverbs are derived co-exist in the language. It is also an interesting case for exploring the process by which such relational preverb constructions may arise through a series of steps from cliticization of stranded postpositions to complete lexicalization into the verb word. If a distinction is established between the two types of relational

preverbs, cliticized and lexicalized, one can begin to talk about a grammaticalization chain:

Postposition --- cliticized RP --- lexicalized RP

A discussion of the nature of the chain and the heterogeneity of its component links will be postponed until the final section.

4. FROM POSTPOSITIONS TO SUBORDINATING MARKERS

The second instance of grammaticalization to be considered in this paper relates subordinating morphemes to postpositions. The phenomenon has been observed in other languages and does not exhibit very different characteristics in Rama, as will be shown below, although it provides further evidence for establishing certain paths of evolution linking certain postpositions to certain subordinating markers. Of specific interest for this paper is the pairing of the goal postposition BANG and the purpose subordinator BANG.

The structural characteristics of the subordinate clause are the absence of tense marking and the presence of a subordinating morpheme which expresses the meaning relation of the dependent clause to the main clause.

The set of subordinating morphemes includes:

(18) purposive bang 'in order to, for'
purposeful kama 'in order to, for'
temporal/conditional kaa 'when/if'
counterfactual koa 'if'
succession su 'upon, and then, since'

These subordinating morphemes are suffixed to tenseless verbs.

(19) a. krubu tamaaski u tiab-i kumaas i-sung-bang
    tiger morning every come out-TNS woman 3-see-SUB
    'The tiger comes out every morning to see the woman.'

b. krubu an-sung-ka an-alpaik-i kilkna
    tiger 3PL-see-SUB 3PL-think-TNS man
    'When they see the tiger, they think it is a man.'

The presence of a postverbal postpositional phrase in the following example underlines the fact that the subordinating morphemes are verbal suffixes rather than clausal conjunctions of subordination:
(20) kiskis yu-i-siik-ka nguu ki
tongs RP/with-3p-come-SUB house in
sut kumaab kaa abung su kiibi uung-kama
we woman put fire in straighten make-SUB
‘when he brings the tongs into the house we women put it in the
fire to straighten it.’

The most interesting aspect of subordination in Rama is the nature of
the subordinating suffixes themselves. All the Rama subordinators are related
to postpositions, as described below.

(21) Subordinators Postpositions
bang ‘purpose’ ba/na ‘goal’
kama ‘purpose’ kama ‘goal’
ka ‘time, condition’ ka/na ‘ablative’
kata ‘counterfactual condition’ ka/na ‘’
su ‘time, after/upon’ su ‘locative’

As a verb final morpheme, the purpose subordinator BANG is always in
the long form.11

Examples illustrating the use of the pairs of postpositions and subordinators
follow:

(22) ba/na a. PSP naas sii ba aa taak-i
I water PSP/for NEG go-want
‘I don’t want to go for water.’

b. SUB tiiskama ni-sung-bang taak-i
baby I-see-SUB/to go-TNS
‘I am going to see/look at the baby.’

(23) kama a. PSP tamaik suuli-kaas ni-auk-ut maing kama
tomorrow animal-meat 1-cook-IRR you PSP/for
‘Tomorrow I will cook some meat for you.’

b. SUB nah suuli-kaas ba-alp-i ni-paya-kama
I animal-meat RP-look-TNS 1-buy-SUB/for
‘I am looking for meat to buy.’

(24) su a. PSP ipang su an-siik-u
island PSP/on 3PL-come-TNS
‘They came to the island.’

Ways to go in Rama

b. SUB nais tum-ting-atkur-su y-aakiri
right so dark-happen-ASP-SUB/upon 3-stay-TNS
‘Upon getting dark, he stays.’

(25) ka/na a. PSP nah altawa-i ‘naing taata kang
I afraid-TNS my father PSP/for
‘I am afraid of my father.’

b. SUB nah kaafi ngu-atkur-ka kalma ni-sku-ut
I coffee drink-ASP-SUB clothes I-wash-TNS
‘When I have drunk up my coffee, I will do the
wash.’

c. SUB nah maaj alkuuk-kata, nah uwaik siik-ut
I you hear-SUB I long time come-IRR
‘If I had heard you, I would have come a long time
ago.’

The hypothesized grammaticalization of postpositions into subordinators
raises issues of why and how postpositions become subordinators —
assuming the evolution always goes in that direction — and which postpositions become
which subordinators — assuming that some patterns can be established across
languages of the world where similar evolutions have arisen.

The issue of why postpositions would be the source of subordinators is
not a very complex one. Structurally, it has to do with subordinate clauses
being treated like nominal constituents and the analogical use of the marking
of oblique nominal arguments of a simplex sentence (monoclusal) for oblique
clausal arguments of a complex sentence. In Rama there are few overt features
of clausal nominalization — besides the stripping of tense on the embedded
verb and the structural parallelism between postpositional phrases and adverbs.
Nial subordiate clauses. Both types of clauses have the same word order,
both within their respective prashal structure and within the sentence struc-
ture; the same way postpositional phrases are either post- or preverbal,
subordinate clauses either follow or precede the main clause.12 More inter-
esting is the semantic relation that holds between postpositions and subordi-
nators, and the way in which postpositions match subordinators. The matchings
observed in Rama support the patterns of prototypical matching described in
Genetti (1986) for data from completely unrelated languages (Tibeto-
Burman) and reproduced below, with the Rama cases in bold letters:
As shown in (27a and b) the subordinator BANG of the embedded verb may alternate with a relational preverb BA- on the main verb which gives the same semantic reading of purpose subordination. Both subordinators — BANG and subordinating preverb BA- may in fact co-occur (27c). This double marking might be a type of speech “error” found in casual speech and may not qualify as an instance of “grammar” proper, but it is documented in recorded narratives. In any case, such examples may indicate the possibility of some relational preverbs coming indirectly from postpositions via shift to subordinator. The postpositions therefore are linked to both relational preverbs and subordinators in Rama, as indicated by the arrows below. The dotted line indicates the possibility of an additional indirect link between postposition and relational preverb mentioned above.

As shown in (27a and b) the subordinator BANG of the embedded verb may alternate with a relational preverb BA- on the main verb which gives the same semantic reading of purpose subordination. Both subordinators — BANG and subordinating preverb BA- may in fact co-occur (27c). This double marking might be a type of speech “error” found in casual speech and may not qualify as an instance of “grammar” proper, but it is documented in recorded narratives. In any case, such examples may indicate the possibility of some relational preverbs coming indirectly from postpositions via shift to subordinator. The postpositions therefore are linked to both relational preverbs and subordinators in Rama, as indicated by the arrows below. The dotted line indicates the possibility of an additional indirect link between postposition and relational preverb mentioned above.

As shown in (27a and b) the subordinator BANG of the embedded verb may alternate with a relational preverb BA- on the main verb which gives the same semantic reading of purpose subordination. Both subordinators — BANG and subordinating preverb BA- may in fact co-occur (27c). This double marking might be a type of speech “error” found in casual speech and may not qualify as an instance of “grammar” proper, but it is documented in recorded narratives. In any case, such examples may indicate the possibility of some relational preverbs coming indirectly from postpositions via shift to subordinator. The postpositions therefore are linked to both relational preverbs and subordinators in Rama, as indicated by the arrows below. The dotted line indicates the possibility of an additional indirect link between postposition and relational preverb mentioned above.

Postpositions $\longrightarrow$ Relational Preverbs

Subordinators $\longrightarrow$ Relational Preverbs

5. ON THE VERBAL ORIGIN OF SOME TENSE/ASPECT/MODALITY MARKERS

While the preceding sections dealt with instances of grammaticalization in the domain of argument marking, this section deals with parallel instances of grammaticalization which take place in the domain of aspect and modality marking. The parallelism consists of the fact that some of the morphemes involved in the inventory of aspect and modality marking are homophonous with some of the postpositions, relational preverbs and subordinators considered in the above sections. This is particularly the case with the morpheme BANG which is the focus of this paper.

Once again the main purpose of the discussion is to relate grammatical...
morphemes to their sources, both immediate and original, in order to sketch out the grammaticalization chains along which these morphemes may be plotted. The discussion of the origin of most of the aspect and modality markers in Rama will lead to the original lexical source of the multiple chains of grammaticalization to which the morpheme BANG belongs.

And once again, other interesting issues such as the nature of the pathways or the relative timing of the various evolutions will be mentioned only in passing here.

5.1. The inventory of Rama aspect and mood markers

Rama has a set of tense markers which are independent of the aspect and modality markers considered here, and which appear in verb final position:

(28) simple tense markers       Complex tense markers (with aspect or modality overtones)
   -i ‘present’               -ing ‘now, for sure’
   -u ‘past’                 -uing ‘used to’
   -ut ‘future’              -uing ‘will for sure/every time’

Aspect/mood markers are closer to the verb stem, in the typologically expected relative order [V-ASP-TNS]. The inventory of postverbal aspect and mood markers is given below:

(29) Aspect markers:
   1. -askul             ‘complete’
   2. -aikar-tike        ‘repetitive’
   3. aikar             ‘stative/resultative’
   4. -bang              ‘1person imperative’
   5. -bang             ‘perspective: to be going to’
   6. aikar/baakar      ‘progressive’
   7. baakar            ‘perspective: to be about to’
   8. -kama aikar       ‘perspective: to be ready to’
   9. bating            ‘perspective: to be going to’
  10. bating baakar     ‘perspective: to get ready to’

A word of caution is needed here — the above inventory may look more definitive and categorial than it should. It represents the list of postverbal forms identified so far as functioning as aspect or mood markers. It is a working tool for the purpose at hand, shaped by the awareness of the gradual nature of the process of grammaticalization itself and of the textual nature of the database, where variation in the use of forms abounds. The inventory is functionally oriented and regroups various types of constituents, such as suffixes (1, 2, 4, 5, 8) and free auxiliaries (3, 6, 7, 8, 9, 10). This issue of morpheme boundaries bears on the later discussion of the process of grammaticalization. The main point to notice in this inventory is the recurrence of two morphemes, BA(NG) and AAKAR in both simple and polymorphic markers. In particular note that BA(NG) appears as a simple morpheme marking imperative and prospective aspect markers, as well as in the complex forms bating, baakar and bating baakar.

5.2. Deverbal origin of aspect and modality markers

It is not difficult to argue in Rama that aspect and modality markers have lexical verbs as their sources. When compared to the inventory found in the literature on the basic concepts which are sources of grammaticalization (see in particular Heine, Claudi and Hunnemeyer, Volume I), the Rama inventory offers no surprises:

(30) AAKAR
    ATKUL
    BANG suppletive form of TAAK
    TING HAPPEN, in complex form BATING
    BE/LOC
    FINISH
    GO
    GO-HAPPEN = WANT

All four verbs are well within the semantic range of verbs from which tense, aspect and modality markers are derived across languages.

The case of ATKUL ‘finish’ being the source of a complete aspectual marker constitutes a typical example of the phenomenon of grammaticalization of a lexical verb into an aspectual marker. It will be used to illustrate some of the correlates of the process of grammaticalization, such as the switch of morphological category (from main verb to suffix) which is accompanied by a shift of semantics, from the act of finishing set in time to the more abstract concept of completeness. The semantic shift is noticeable in Rama because the use of the suffix -atkul emphasizes the completeness of the impact on the object rather than a notion of end point in time:

(31) VERB
    a. atkut-kun
        finish-make
        ‘get it done!’
b. *tabulaak tkeeruk nsw-atkul-u*  
   *evening grave 1PL-finish-TNS*  
   ‘We finished (digging) the grave in the evening.’

(32) ASPECT  
   a. *paalpa an-sung-atkul-u*  
      *manatee 3PL-see-ASP-TNS*  
      ‘They saw the whole manatee.’
   
   b. *dor y-aakang-atkul-u*  
      *door 3-shut-ASP-TNS*  
      ‘She shut the door tight.’
   
   c. *kauling an-apulk-atkul-su ba-an-taak-u*  
      *people 3PL-gather-ASP-SUB RP/GF-3PL-GO-TNS*  
      ‘Upon having gathered *all* the people, they went (to look) for him.’

(33) VERB + ASPECT  
   *y-ausa aikut-atkul-u y-aung-i*  
   *3-strength finish-ASP-TNS 3-say-TNS*  
   ‘Her strength is totally gone, she says.’

The example of the lexical verb ‘finish’ giving rise to a complete aspect marker in *Rama* is one of the most common examples of grammaticalization in the domain of tense-aspect-modality.

The grammaticalization of the lexical verb ‘go’, which is also fairly common across languages, exhibits various language particular characteristics in *Rama*. One has to do with the actual nature of the morpheme *BANG* and its relation to the *Rama* verb *taak* ‘go’. Another is the fact that the original morpheme *BANG* has given rise to a number of grammaticalization processes, some of which may have developed in parallel, but independent fashion, yielding a number of aspect and modality markers.

It happens to be that, in the grammar of present-day *Rama*, the main lexical form of the verb GO is *taak*, which is phonologically unrelated to the morpheme *BANG*. The link between the two morphemes is that *BANG* is a suppletive form of *taak* in the second person imperative form. As a main verb, at least, *BANG* has a free variant *mang*:

(34) a. *i-taak-u, tawan ki yu-i-taak-u*  
      *3-go-TNS town to with-3-go-TNS*  
      ‘He went, he took it to town.’

   b. *mang, tawan ki yu-mang!*  
      *go town to with-go*  
      ‘go, take it to town!’

It is therefore what surfaces today as the suppletive imperative form of the verb GO which is the source of the grammatical morphemes functioning as aspect markers. As a grammatical morpheme of the domain of tense-aspect-modality, the simple suffixal form *BANG* carries two irreals functions. One is that of prospective aspect marker ‘to be going to’:

(35) a. *baal-n-eating-bang*  
      *PREF-1-talk-ASP*  
      ‘I am going to talk.’
   
   b. *tiiskama ni-tanang-bang*  
      *baby 1-look at-ASP*  
      ‘I am going to look at the baby.’

That the function of the suffix *BANG* is aspectual is clearly shown by examples such as the one below, in which the lexical verb stem is a verb of movement and the reading of *BANG* is not that of a verb of movement anymore:

(36) *i-traat-bang*  
      *3-walk-ASP*  
      ‘he is going to walk.’

The other aspectual function of the suffix *BANG* is that of first person plural imperative, which takes a first person plural subject marker:

(37) a. *mwaing yairi s-tuk-bang*  
      *1PL soup 1PL-drink-IMP*  
      ‘Let’s drink our soup.’
   
   b. *m-kuik si-suk-bang*  
      *PL-hand 1PL-wash-IMP*  
      ‘Let’s wash our hands.’

The modality function of this instance of *BANG* is also made clear with an example where the lexical verb is itself the verb *taak* ‘go’:

(38) *ka-s-taak-bang*  
      *RP/from-1PL-GO-IMP*  
      ‘Let’s go away from it.’
BANG is also found as a component of two bimorphemic aspectual forms, BAAKAR and BATING, formed with BA- and either the stative auxiliary AAKAR ‘be’ or the helping verb TING ‘happen’.

There appear to be two BAAKAR forms which are distinguished by their semantics and the optionality of the combination. BA- may optionally combine with AAKAR in its function of progressive marker:

(39) a. nah paun baakir-i
   1 cry AUX-TNS
   ‘I am crying.’

b. tiiskiba-lut kaun aakur-u
   child-PL holler AUX-TNS
   ‘The children were hollering.’

BA- is not optional in the other BAAKAR form, a prospective marker signalling the imminence of an action ‘to be about to’:

(40) yaadar yu-n-siik baakur-u, barka n-suleer-uang-u
    smthg RPL-1-bring AUX-TNS but 1-forget-do-TNS
    ‘I was about to bring in something, but I forgot.’

The combination of BA- with the helping verb TING ‘happen’ which yields the form BATING actually exists as a main verb meaning ‘want’. It is therefore already a derived lexical verb which is the source of the other prospective aspect marker ‘to be going to’:

(41) a. suuma i-bating-i
    banana 3-want-TNS
    ‘He wants a banana.’

b. i-traat bating-i
    3-walk ASP-TNS
    ‘He is going to walk.’

c. suuma y-antik bating-i
    banana 3-cut ASP-TNS
    ‘He is going to cut bananas.’

d. nah yuwa-ting bating-i
    1 old-get ASP-TNS
    ‘I am going to get old.’

The meaning of BATING as an aspectual marker is very close to the simple prospective marker BANG.

This is not the end of the aspectual forms involving the morpheme BANG. The two complex auxiliary forms just presented may also combine, yielding another prospective aspect, this one with two instances of BA-, as in bating baakar ‘to be getting ready to’:

(42) na ba i-kit bating baakur-u
    1 FSP/on 3-jump ASP ASP-TNS
    ‘He got ready to jump on me.’

(43) n-alngu bating baakir-i
    1-drink ASP ASP-TN
    ‘I get ready to drink.’

(44) abingka tabi bating baakir-i
    sideways come out ASP ASP-TNS
    ‘I am getting ready to come out on the side now.’

The last aspectual forms just described, BAAKAR and BATING are the result of rather complex stepwise processes of grammaticalization. Although the morpheme BA- found in those bimorphemic forms derives ultimately from the lexical verb BANG ‘go’, it is likely that its most immediate source is the relational preverb BA-, itself derived from a goal postposition, which is the one which is originally derived from the verb ‘go’. If this analysis is correct, this particular chain of grammaticalization would involve the steps sketched below:

VERB --- postposition --- relational preverb --- aspect

Several arguments can be advanced to support the analysis of the BA-of BAAKAR and BATING having as its source an already grammaticalized relational preverb rather than the lexical verb ‘go’. One is the position of the affix in the word, in a preverbal position characteristic of relational preverbs. Another is a parallelism between the prospective BAAKAR aspect ‘to be about to’ and the prospective KAMA AAKAR aspect ‘to be ready to’, as in:

(45) ASP n-taak-kama aakar-i
    1-go-SUB ASP-TNS
    ‘I am ready to go.’
Both prospective aspects have the same components: a goal/purpose morpheme combining with the auxiliary AAKAR 'be'. The difference in the morphological category of the purpose morpheme, a suffixed subordination marker in the case of kama and a prefixed relational preverb in the case of BANG is related ultimately to different behavioral properties of the two purpose morphemes. There happens to be no relational preverb equivalent for the postposition-subordinator KAMA, as established in the early section on relational preverbs.

(46) VERB BA-AAKAR vs VERB-KAMA AAKAR
VERB RP-AUX VERB SUB AUX
'to be about to V' 'to be ready to V'

This section has introduced several more instances of the morpheme BANG as it pertains to the verbal morphology of the language from the domain of tense-aspect-modality marking. It established that the lexical origin of BANG is in the paradigm of the verb 'go' surfacing today as the suppletive imperative form. It also outlined various evolutions of BANG into grammatical markers of aspect and modality.

6. POLYGRAMMATICALIZATION: OVERVIEW OF INTERCONNECTED RAMA GRAMMATICALIZATION CHAINS

The previous sections have described a number of grammaticalization chains which all involved verbal morphology; in some instances preverbal morphology, as with relational preverbs; and in others postverbal morphology, as with subordinators and aspect/modality markers. The interest of the Rama data lies in the fact that related morphemes are found in both the pre- and post-verbal morphology; as described in the various sections, some of the same morphemes appear to fulfill multiple functions such as relational preverbs, subordinators, and aspect/modality markers.

This final section will discuss the possible scenarios by which the various grammaticalization chains considered in this paper may have evolved. The earlier emphasis on a consideration of the relative notion of source in a chain will then be complemented by an attempt at identifying some of the pathways linking sources to target verbal affixes. It will be assumed, as stated at the beginning of this paper, that the overall direction of a grammaticalization chain is of course from lexical to grammatical, and from free to bound morphology. However, one of the notions that emerges from the exercise of sketching out full grammaticalization chains is the fact that some of them reveal a somewhat heterogenous nature, to the extent that not all their hypothesized component links will fall within the range of prototypical instances of grammaticalization.

The types of verbal affixation discussed in this paper belong to two grammatical domains: the domain of argument marking and the domain of tense/aspect/modality marking, which, conforming to typological tendencies of verb final languages, align themselves in the following fashion for main verbs: argument marking in preverbal position and tense/aspect/modality marking in postverbal position. Each domain will be considered in turn, before attempting a final sketch of the multiple interconnections the morpheme BANG creates in the grammar of the language.

6.1. Argument marking domain

In the argument marking domain, the two grammaticalization chains are a) the one accounting for the evolution of relational preverbs, and b) the one accounting for subordinators. These two grammaticalization processes have a common local source — the set of postpositions — and follow two different paths of evolution — one to preverbal and the other to postverbal position.

The path of evolution from postposition to relational preverb is well-documented in Rama. As argued in Craig and Hale (1988), the different types of relational preverbs found in Rama, together with the types of relational preverbs of other languages of the Americas, can be placed on a continuum that provides a sketch of the possible evolutionary scenario of such verbal morphology.

The contribution of the Rama data to the study of the evolution of relational preverbs is in the documentation of an initial stage of simple cliticization. At this early stage, all that seems to be involved is a surface reanalysis which does not affect semantics and is discourse dependent, in the sense that zero anaphora is discourse dependent. Whether the cliticization is more than a surface phenomenon, that is to say whether it affects grammatical relations in such a way that the oblique NP could be said to have been promoted to the status of direct object, is not easily settled for the Rama data. In other languages of the Americas, the presence of relational preverbs can be positively related to changes in grammatical relations, through overt morphology characteristic of certain grammatical relations, but the lack of
relevant morphology in Rama does not allow for language internal argumentation and the analysis must remain theory-dependent for that language. The points to be made here are that Rama has a much less syntactically involved type of cliticization of relational preverb than is commonly found in languages with such verbal prefixes, and that this cliticized type of relational preverb represents a possible first step in the path of evolution of relational preverbs.

Within a typological-functional framework the difference between discourse cliticized relational preverbs and syntactically incorporated (grammatical relation changing) relational preverbs need not be an absolute categorial one. Such a framework allows for the gradual evolution of one type into the other. Within such a framework, the type of cliticized relational preverb found in Rama could be considered as a relational preverb which has advanced on the chain of grammaticalization less than its syntacticized counterpart in other languages.

Further down the chain of grammaticalization are other types of incorporated relational preverbs, the ones which in Rama allow for a full, overt NP to be construed with them. As described earlier, these incorporated relational preverbs are characterized by the specific pairing of certain relational preverbs with certain verbs, and a change in semantics accompanying the change from free postposition to bound relational preverb. These Rama incorporated relational preverbs align themselves on a continuum from incipient to advanced lexicalization. The selection of relational preverbs and verbs that are lexicalized together is assumed to be a reflection of the cognitive and cultural salience of the combination which translates into high frequency of use in natural texts. Of interest here is the decomposition of the link from postposition to relational preverb into several steps, two of which are attested in Rama: cliticization and lexicalization. The different manifestations of the morpheme BANG are the best examples of lexicalization in Rama.

While the above remarks are a consideration of how postpositions are the source of grammaticalization chains, they do not address the issue of where the postpositions themselves ultimately came from in Rama. Evidence for postulating a verbal lexical source rather than another source for Rama postpositions can only be pointed out in the synchronic grammar of Rama for the case of the morpheme BANG. As discussed earlier, there exists a verbal morpheme BANG which is a suppletive form of the verb 'to go'.

When all these aspects of the morpheme BANG are assembled, a rather complete grammaticalization chain from free lexical to bound grammatical morphemes can be constituted, as follows:

(47) \[ V \rightarrow \text{PSP} \rightarrow \text{CLITICIZED RP)-(SYNTACTICIZED RP')-LEXICALIZED RP \]

GO GOAL GOAL Direct Object

It may be added that the initial step of the grammaticalization of the postposition BANG into a bound relational morpheme, through cliticization, may not really constitute a bonafide instance of grammaticalization. It may fall rather within the scope of reanalysis. However, this link appears to belong to the chain of virtue of being the most likely source for the lexicalized relational prefixes.

The chain of grammaticalization which links postpositions to subordinators constitutes another path of evolution taken by the postpositions in the language. By structural analogy between the two types of oblique arguments of a verb, the nominal and the clausal type, the concrete markers of oblique NP are extended to become the markers of the more abstract set of relations that hold between main verbs and their adverbal clausal complements. The extension of postpositions to subordinators does not entail much change. The embedded verb of the adverbal complement clause is already a nominalized construction in that it is stripped of its tense marker, and both nominal and clausal markers follow the element with which they are construed: NP for the postposition and final verb of the embedded clause for the subordinator.

The parallel between the markings of these two oblique arguments — nominal and clausal — extends to the fact that subordinate clauses may also, under certain circumstances, be marked by relational preverbs on the main verbs, instead of by a subordinator on the embedded verb, the same way oblique NPs may be marked either by postpositions or relational preverbs. Such a parallel exists only with the morpheme BANG of goal and purpose, which is found in pairs of patterns outlined below, with the same meaning:

(48) embedded verb bang/ SUB MAIN VERB
    embedded verb ba/RP-MAIN VERB

There is little data available on the use of the relational preverb BA- as a subordinating morpheme. An example of it is given again below (cf. 27b):

(49) ni-tanang ba-n-taak-i
    1-look    RP/for-1-go-TNS
    'I am going to look at it.'
Pairs of the type shown in (48) would argue therefore for two different paths of evolution of relational preverbs, directly from postpositions and indirectly from postpositions through subordinators:

\[(50) \text{postpositions} \rightarrow \text{relational preverbs} \rightarrow \text{subordinators} \rightarrow \text{relational preverb}\]

The evolution of subordinating relational preverbs is presented in parenthesis to emphasize its ephemeral nature in the language. However, if its existence is acknowledged, it constitutes a challenge to the established view in studies of grammaticalization that grammaticalization involving the emergence of subordinating morphology is unidirectional: From main clause to subordinated clause. In the case of the BA- subordinating relational preverb of Rama, the direction would appear to be from subordinate morphology to main clause morphology.

6.2. Aspect/modality domain

The grammaticalization chains in the domain of aspect/modality marking exhibit many more cases of the morpheme BANG. Within the aspect/modality marking system, BANG functions either as a verbal suffix (prospective aspect or imperative mood: V-bang), or as a relational preverb which is part of auxiliary type markers (progressive and prospective aspect auxiliaries: V baakar. It is tempting to consider the path of evolution from the verb 'go' to the prospective aspect suffix -BANG as passing through a stage of verb serialization. One could probably construct a case for verb serialization in Rama on the basis of several arguments. For one, such constructions do exist in the language; they are limited to combinations of action verb and a few final verbs, most of them motion verbs:

\[(51) \text{a. naas ngulkang alais-traal-i} \]
\[1 \text{ wild pig } \text{hunt-walk-TNS}\]
\[\text{‘I go hunt the wild pig.’}\]

\[b. \text{an-kuu-angul-u} \]
\[3\text{PL-put-reach-TNS}\]
\[\text{‘They managed to put him (in the hospital).’}\]

\[c. \text{nsul u y-alpaak-alkung-u} \]
\[\text{we PSP/with 3-meet-go-TNS}\]
\[\text{‘They went to meet together with us.’}\]

While more work needs to be done on these constructions, one remark can be made now: these three action verbs themselves do not have exactly the same status. Traal is the freest of the three, being used either in serial verb constructions or as a free lexical verb, while the other two, angul and alkung, are already constrained in their use to this type of construction and do not seem to have the status of free lexical morphemes. Their behavior is reminiscent of directional morphemes. What the three have in common with BANG is that they are movement verbs appended to lexical verbs, with the additional characteristic that a certain process of grammaticalization may have already been set in motion for at least two of them.

Another argument for taking a serial verb construction as the conduit for the grammaticalization of BANG into an aspect and modality marker would be its particular use in the first person plural imperative, where the meaning of motion is still retrievable:

\[(52) \text{nsu-kami-bang} \]
\[1\text{PL-sleep-IMP/GO}\]
\[\text{‘Let’s (go) sleep.’}\]

The use of BANG in first person imperative, if it is to be analyzed as a grammaticalized imperative marker, is the closest link between the free lexical motion verb BANG and a bound aspect/mood marker -BANG.16

It is assumed that verb serialization is the most likely structural source of the first person plural imperative suffix BANG and the prospective BANG. However, it is not the only possible path of evolution for the instances of the morpheme BANG in the bimorphemic prospective and progressive aspects. As pointed at by the form of the complex auxiliary forms kama aakar / baakar, the source of these prospective aspect markers may be a complex construction with the copula aakar as the higher verb and kama/BA- as markers of embedding.
6.3. Polygrammaticalization

This paper has presented data from a language in which various chains of grammaticalization interlocked through a common set of morphemes. All the chains presented have already been identified in other languages. Verbal prefixes derived from postpositions, subordinators derived from postpositions, aspect markers derived from verbs, auxiliaries derived from subordinators and relational preverbs. The density of the interconnections between the chains is what makes the Rama data interesting, as well as some aspects of the internal make-up of the chains.

This case study ends up raising more questions than it answers about the nature of grammaticalization chains and how to conceive of them in the detail, including the issue of the relation of the process of grammaticalization to that of reanalysis. It has hopefully provided a good example of “polygrammaticalization”, defined as a multiplicity of grammaticalization chains that may originate in one particular lexical morpheme. I will leave questions of the relative timing of the various evolutions and of the nature of the pathways followed for further research.

The following table illustrates clearly, for the morpheme BANG, the notion of ‘polygrammaticalization’, which I have argued for in this paper.17

<table>
<thead>
<tr>
<th>Argument marking domain</th>
<th>VERB</th>
<th>tense-aspect-modality domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1 BANG go</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*2 BA(NG) →</td>
<td>*3 BA- VERB → *4 BA-alpi</td>
<td></td>
</tr>
<tr>
<td>PSP/goal</td>
<td>RP/goal</td>
<td>TO FIND</td>
</tr>
<tr>
<td>*5 BANG →</td>
<td>*6 BA- VERB</td>
<td></td>
</tr>
<tr>
<td>SUB/purpose</td>
<td>RP/purpose</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AAKAR BE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TING HAPPEN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BATING WANT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*7 -BANG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1PL IMP; ASP/prospective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*8 (B)AAKAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP/progressive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*9 BAAKAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP/progressive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*10 BATING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP/desiderative prospective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BATING BAAKAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP/progressive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1PL Imperative form. In non-imperative context, -BANG corresponds to a future tense or prospective aspect.

*8 (B)AAKAR stands for the optional presence of the RP BA- on the verb aakar ‘to be (at)’. As auxiliary verbs both aakar and BAAKAR carry a meaning of progressive aspect.

*9 BAAKAR is another auxiliary verb derived from the lexicalization of a RP BA- with the verb aakar, to give a prospective aspect ‘to be about to’.

*10 Auxiliary verb BATING, from the lexical verb BATING ‘to want’, itself derived from the lexicalization of a RP BA-.

One of the goals of this study was to make the case for a functional typological approach to grammatical description, an approach which incorporates the phenomenon of grammaticalization as an integral part of the analysis. In the case of Rama, it offered the means to handle an essential component of the grammar of the language — its extensive
morphological interconnection through the morpheme \( BA(NG) \) across grammatical structures.

OTES

The term was suggested to me by Alan Timberlake. I am grateful for the careful reviews of the draft of this manuscript by the co-editors and Gillian Remeika. Rama is presently the object of a language revitalization project carried out within the context of the new Autonomous State of the Atlantic Coast of Nicaragua. Research on the Rama language has been supported by grants from the National Science Foundation (BNS 851156), the Wenner Gren Foundation for Anthropological Research #4906, the Failing Fund and Research funds from the Graduate School of the University of Oregon. The data were collected in Bluefields, Nicaragua, in the course of various field trips in 1985, 86, 87, 88. I would like to thank here the various people who have contributed to the development of the Rama Language Project: the Rama speakers, Nora Rigby and Cristina Benjamin, the research assistants Bonny Tibbits and Barbara Assadi, and my colleagues in Linguista for Nicaragua, in particular Ken Hale, Danilo Salmancar, Susan Norwood and Wayne O'Neil. The research in Nicaragua is sponsored by the Center of Documentation and Research on the Atlantic Coast (CIDCA, Galio Gurdian, director).

The present paper will only deal with a particular set of interconnecting grammaticalization chains, although more examples of grammaticalization chains could be studied. Another case of grammaticalization chain, for instance, is that which links independent subject personal pronouns and preverbal subject clitics, also a common one in the languages of the world.

All dependent subject (and object) pronominal forms are morphologically related to the independent personal pronouns, as shown here with an example of the third person plural:

a. Full NP: \( kiika-bu-a-ak-\) ‘the men paddle’
   man-pl paddle-tense
b. Independent PRO: \( anu-a-ak-\) ‘THEY paddle’
   they paddle-tense
c. Pro-clitic: \( an-ak-\) ‘they paddle’
   they-paddle-tense

Rama has an additional type of postverbal marker, \( ka\-ng\), which is found in relative clauses:

\( s\-\text{uulikas ni-\text{paay\-yo-\text{ka\-ng neil ai ni-tang-u meat 1-buy-tns REL Nelly obj 1-give-tns } \text{The meat I bought, I gave it to Nelly.}} \)

However, this marker is not strictly a 'relativizer' (REL) as glossed in the example, \( ka\-ng\), which is optional in relative clauses, is a discourse marker of presupposed information and may in fact appear on the end of main clauses too. This morpheme is not a verbal suffix as much as a clause final particle, which is evidenced by the presence of a tense marker on the verb and the possibility of elements intervening between it and the verb. The reason it is brought up here is simply to emphasize the general post verbal placement of all clause embedding marking.

5. Direct elicitation also showed that the ten occurrences of the postposition \( BA(NG)\) of column a. is an artifact of the texts that have been collected — the postposition \( BA(NG)\) was found in direct elicitation, see example 1a.

6. Going back to column c. now, note that not all instances of relational preverbs in that column are of the ditransitive type. That column contains also the instances of lexicalized relational preverbs whose objects happen to be zero anaphora too.

7. The supporting evidence for the claim can be found in examples such as:

a. \( \text{ma k\-an-tak\-a-i you raz\-from 1-afraid-tns \text{I am afraid of you.}} \)
   \( \text{ba k\-an\-tal\-a-ta-i you raz\-from 1-afraid-tns \text{I am afraid of you.}} \)

8. The other two cases of overt NP construed with the preverb \( yu\-\) which do not involve either of these two verbs turn out to be, upon closer look, cases of left dislocation of the NP; accordingly, they are to be analyzed as instances of procliticization triggered by the standing effect of the dislocation.

9. One could argue that the cases of overt NPs construed with the relational preverb \( yu\-\) are instances of syntactic incorporation which results in the NP being the object of the verb. The absence of extensive morphosyntax in Rama — the language has no object or number agreement, no object case marking, no voice system — deprives us of very convincing arguments for such an analysis, although a few standard ones may be advanced. One is the structural argument of word order. Rama has a strict SOV word order and both pre- or post-verbal postpositional phrases. In the constructions involving a relational preverb and an overt NP to be construed with it, that NP is always in the preverbal object position. One could also advance a semantic argument to the effect that the patient semantic relation of the overt NP to the verb is more typical of object NPs. Text counts of topic chains, as the ones done in Tibbitts (1988) would also provide some argument in support of a promotion analysis, although this whole issue deserves a paper of its own and will not be pursued any further here.

10. There is one additional conjunction of subordination, \( ka\-ng \text{ ‘because’} \). This morpheme was already introduced as a marker of relative clauses, as well as a discourse marker of independent presupposed clauses (see fn. 4 above). Unlike the other subordinators, it follows a fully inflected verb.

11. The postposition is in the long form \( ba\-n\) when part of a dislocated postpositional phrase, either post- or preverbally. If anything needs explaining in the forms of the subordinatory it is the presence of the short form \( -ka\) of the time subordinator, not the morphologically expected post verbal long form of \( -ba\-n\).

12. Additional evidence of the closeness of postpositions and subordinators is the existence of complex subordinating morphemes of the type (borrowed N + PSF), as in \( \text{tawt ki\-at the time, when’ or [borrowed N + SUB], as in tawt ka ‘time when, when’} \)
13. The argument for ascribing to BANG a lexical verb as its source is primarily a typological one. Note how it behaves like a verb in taking a relational pronominal.

14. Lehmann and Conzemius had noted the imperative first person plural marker bang. The apparent lack of first person plural marker in Conzemius may be due to defective phonological transcription since the only example given is of a verb with an initial s- which would make hearing the first person plural s(u) difficult:

a. siik-bang (Conzemius, 1927:336)
   come-IMP
   'Let us come.'

b. sa-siik-bang (Lehmann, 1914:15)
   1PL-come-IMP
   'Let us come.'

15. There is actually a verb kaa meaning 'to put', whether it can in any way be shown to be related to the postpositions ka(n)g 'from' and kama 'for' remains to be seen. The fact that kama does not behave like the other goal postposition bang with respect to the possibility of becoming a relational pronominal may argue for a different origin for the two goal postpositions.

16. The serial verb analysis of the imperative first person plural corresponds to the encoding of a particular component of a prototypical imperative situation: that the imperatives are requests to move or change from one state to another. Rama is an interesting language in that its grammar encodes the fact that the intended effect of the imperative speech act is the creation of a sequence of two actions or states: a first state or action to be abandoned and moved away from and a second state or action to be embraced and moved toward. While the serialized motion verb bang marks the motion toward the desired new action or state, there is, in Rama, the possibility of encoding in an imperative form the move away from the first action or state, through the use of the relational pronominal kaa, from the ablative bang 'from', as is illustrated below:

a. kaa-yuk-ta
   1PL/from-sit-happen
   'sit down'

b. kaa-y-alanka
   1PL/from-1PL-turn back
   'let's turn back'

17. Examples to illustrate the table are re-assembled below:

<table>
<thead>
<tr>
<th>BANG/BA</th>
<th>PSP</th>
<th>RP</th>
<th>MOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. kaas sii ba aa taak-ikar</td>
<td>1 water PSP NEG go-want</td>
<td>1 'I don't want to go get water.'</td>
<td></td>
</tr>
<tr>
<td>b. yaaing aa ba-y-alanka-i, aa y-alanka-i</td>
<td>he NEG RP-3-turn back-TNS NEG 3-turn back-TNS</td>
<td>1 'He never turned back for (it/him); he never turned back.'</td>
<td></td>
</tr>
<tr>
<td>c. ni-tamang ba-n-taak-i</td>
<td>1-look RP-1-go-TNS</td>
<td>1 'I am going to look at it.'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WAYS TO GO IN RAMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP d. tamaik siita sur-aaplik ba-taak-i ma u tomorrow oysters 1-pick RL-go-TNS you PNP/with 'Tomorrow we'll go pick oysters with you.'</td>
</tr>
<tr>
<td>SUB e. tiiskama ni-sung-bang taak-i baby 1-see-sub go-TNS 'I am going to look at the baby.'</td>
</tr>
<tr>
<td>ASP f. tiiskama ni-tamang-bang baby 1-look-at-ASP 'I'm going to look at the baby.'</td>
</tr>
<tr>
<td>VB g. i-taak-uc: tawan ki yu-i-taak 3-go-TNS town to with-3-go-TNS 'He went' 'he took it to town.'</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>PSP a. tamaik su-ishi-kaas ni-aak-uc maing kama tomorrow animal-meat 1-cook-IRR you PNP/for 'Tomorrow I will cook some meat for you.'</td>
</tr>
<tr>
<td>SUB b. nba su-ishi-kaas ba-alp-i ni-pa-a-kaata 1 animal-meat RP-look-TNS 1-buy-SUB 'I am looking for meat to buy.'</td>
</tr>
<tr>
<td>ASP/MOD c. see (20a,b) kama awkar 'be supposed to'</td>
</tr>
<tr>
<td>MOD d. tiiskiba umling taak-kama skud ki child all go-MOD school to 'All the children must go to school.'</td>
</tr>
<tr>
<td>SU</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>