

# NOMINAL TENSE IN CROSS-LINGUISTIC PERSPECTIVE

RACHEL NORDLINGER<sup>1</sup> AND LOUISA SADLER<sup>2</sup>  
*University of Melbourne<sup>1</sup> and University of Essex<sup>2</sup>*

November 18, 2003

## 1 Introduction

It is a general assumption in linguistic theory that the categories of tense, aspect and mood are inflectional categories of verbal classes only.<sup>1</sup> However, there are a number of languages around the world in which nominals and other NP constituents are also inflected for tense, aspect and mood (henceforth TAM). That nominals may be inflected for TAM has been noted in the grammatical descriptions of individual languages for some time (e.g. Boas (1947) on Kwakiutl, Guasch (1956) and Gregores and Suárez (1967) on Guaraní, Hockett (1958) on Potawatomi, Firestone (1965) on Sirionó, among others), and, more recently, in various typological works (e.g. Anderson 1985, Mel'čuk 1994, Evans 2000, Lehmann and Moravcsik 2000, Raible 2001). Nevertheless, the possibility of TAM as an inflectional category of nominals has remained largely omitted from general linguistic discussion.<sup>2</sup> The purpose of this paper is therefore to provide a detailed survey of the phenomenon of nominal TAM and its properties in a variety of the world's languages. We argue that, while certainly unusual, the phenomenon is far less marginal than the general paucity of discussion in the literature might lead one to expect.

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<sup>1</sup>Some parts of this paper build on previous work reported in Nordlinger and Sadler (2000) and Sadler and Nordlinger (2001). For comments, suggestions and many interesting leads we thank Alexandra (Sasha) Aikhenvald, D.N.S. Bhat, Joan Bresnan, Alec Coupe, Matthew Dryer, Nick Evans, Dan Everett, Brent Galloway, John Hajek, Dagmar Jung, Jacqueline Lecarme, Hitomi Ono, Bill Palmer, Tom Payne, Nick Piper, Joachim Sabel, Ruth Singer, Andy Spencer, Lesley Stirling, Judith Tonhauser, audiences of LFG00 and LFG01, and members of the LINGTYP discussion list. We are especially grateful to Joan Bresnan, Nick Evans, Brian Joseph, Lesley Stirling, Greg Stump, Judith Tonhauser and two anonymous *Language* referees for extensive comments on an earlier version of this paper leading to significant improvements in presentation and analysis; and to Sasha Aikhenvald, Sebastiana Ertel (via Dagmar Jung), Nick Evans, Brent Galloway, P.J. Mistry, Hitomi Ono, Tom Payne and Joachim Sabel for providing access to unpublished data. Needless to say, none of these people are to be held responsible for any remaining inadequacies of this paper, and we apologise if we have not always been able to do justice to their comments. Nordlinger would like to acknowledge the financial support of the Australian Research Council (APD F9930026) and the University of Melbourne, and Sadler the University of Essex for a period of sabbatical leave during which this paper was prepared.

<sup>2</sup>Throughout this paper we use the terms 'nominal' and 'nominal constituent' to refer to either nouns or other constituents of NP/DPs (e.g. articles, pronouns, etc.). The term 'nominal TAM' thus refers to the inflectional encoding of tense, aspect or mood information on nouns or any other NP/DP constituents.

The existence of tense/aspect/mood as an inflectional category for nominals has significant implications for many aspects of linguistic theory. It challenges theories of word class categorization which see nouns as inherently time-stable, and therefore not open to temporal modification, unlike verbs (Givón 1979, 2001); as well as those that consider distinct inflectional categories to be central to the establishment of distinct word classes of nouns and verbs. TAM-inflected nominals also have interesting implications for semantic theories that consider nouns to be semantic predicates with their own temporal interpretation independent of that of verbs (e.g. Enç (1981, 1986), Musan (1995), among others); and for formal grammatical architectures that assume that clausal tense information must necessarily be associated with the clausal head (usually the verb). These and other implications are discussed in further detail in section 4.

The primary purpose of this paper is to establish the existence of the phenomenon of nominal TAM, by demonstrating the formal and functional properties of TAM marking on nominals in a variety of languages of the world. With this in mind, we have largely restricted our discussion here to what we take to be the most central or ‘core’ instances of this phenomenon, namely those cases in which (constituents of) *dependent* NPs are inflected for (standardly defined) categories of tense, aspect and/or mood. These constitute the core cases of TAM-inflected nominals since they would seem to preclude traditional analyses that treat tense, aspect and mood as only inflectional properties of verbs, verbal auxiliaries or functional heads such as particles.<sup>3</sup> If the encoded TAM category is a part of the inflectional system of the nominal, then it clearly belongs to the NP/DP in the syntax. Furthermore, if the NP/DP in question is a dependent of the clause (i.e. functioning as an argument or adjunct of a clause headed by a verb), then the presence of TAM marking can not be attributed to it being a clausal predicate or head.

There are many other ways in which tense, aspect and mood can come to be associated with nominals which could quite properly be included in a comprehensive typology of nominal TAM, but are not discussed here in any great detail. These include the cross-linguistically common situation in which clausal TAM is encoded on nominal predicates in verbless clauses. This type of TAM on nominals is simply the nominal equivalent of regular verbal tense on verbal predicates, and is therefore less challenging for standard conceptions of TAM, and less interesting for our present purposes. However, it is clearly an example of the encoding of

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<sup>3</sup>Opinions differ as to whether tense, aspect and mood should be considered properties of the clause itself, or of the clausal head (i.e. the verb). Foley and Van Valin (1984:224) and Van Valin and LaPolla (1997:47) treat all three differently: for them, aspect is a property of heads (‘nuclear layer’), tense a property of the clause, and (root) modality a property of the ‘core’ (including the head and its core arguments). It is important, however, to distinguish between the semantic/syntactic scope of a category, and its morphological realisation. Tense, aspect and mood, when encoded morphologically in a language, are usually inflectional properties of verbs, despite the fact that their syntactic and semantic scope may be clausal (or otherwise).

regular TAM on nominal constituents. This type of nominal TAM marking is found in many Austronesian languages (e.g. Mwoɬlap (François 2003)) and numerous other languages such as Abaza (O’Herin 1995), Bininj Gun-wok (Evans in press), Tundra Nenets (Salminen 1997), Turkish (Lehmann and Moravcsik 2000:742), Tzutujil (Daley 1985, cited in Baker 2003:51), as well as in many of the languages which we discuss here.

A second type of TAM marking on nominals that will not be discussed in detail here involves elements which might be considered (clausal) TAM clitics that are phonologically attached to nominal constituents. Examples include the Serbo-Croatian auxiliary, and the clitic auxiliary *’ll* in English, as in ‘John’ll be home tomorrow’. Such elements are, by definition, syntactically and morphologically independent, attaching to their hosts at a purely prosodic level. Clitics of this sort (Halpern’s (1995) ‘bound words’) are syntactic rather than inflectional elements, and are therefore excluded from discussion here, though they do raise many interesting issues in their own right.<sup>4</sup> Indeed many languages do have floating TAM clitics which may attach to a variety of constituents including dependent NPs. Languages in which such clitics attach to dependent nominals to encode the TAM for the clause include the Australian language Garrwa (Furby and Furby 1977), and the Arawak languages Apurinã (Facundes 2000) and Tariana (Aikhenvald 2003, see also section 2.1).

Further, we do not consider as examples of nominal TAM such vestiges of verbal tense/aspect/mood marking as may be retained in deverbal nominalisations. In Polish, for example, the imperfective/perfective aspectual distinction encoded with verbs is retained in derived action nominals. Thus, corresponding to the verbal pair *czytać* (imperfective)/*przeczytać* (perfective) ‘to read’ are the derived action nominals *czytanie/przeczytanie*. While both could be translated into English as ‘the reading’ (e.g. ‘The reading of the book gave me much pleasure’), *czytanie* refers to the process of reading, while *przeczytanie* refers to the totality of the act of reading (Comrie and Thompson 1985:363). This aspectual distinction is clearly an inflectional category of the original verb, rather than of the nominal word class to which the derived forms belong.

The languages discussed in this paper together provide a good illustration of what we take to be core cases of nominal TAM and share (at least) the following characteristics:<sup>5</sup>

<sup>4</sup>Of course it may well be that some cases of TAM clitics turn out on closer analysis actually to be morphological rather than syntactic elements, such as Halpern’s (1995) ‘unusually placed inflectional affixes’, which he terms ‘lexical clitics’. These may therefore be properly treated as inflectional elements in some (extended) model of inflection (see for example Anderson’s treatment of clitics as phrasal affixes (Anderson 1993)). In this case, such elements would constitute further core examples of the phenomenon we address in this paper, but we err on the side of caution here in omitting them from the present discussion.

<sup>5</sup>In the interests of space, we illustrate aspects of the phenomenon with a small number of languages, but end each major section with a listing of all the languages which we have found to

- (i) nouns (or other NP/DP constituents) show a distinction in one or more of the categories of tense, aspect and mood, where these categories are standardly defined as they would be for verbs (e.g. Crystal 1997);
- (ii) this TAM distinction is productive across the whole word class, and not simply restricted to a small subset of forms;<sup>6</sup>
- (iii) the TAM distinction is not restricted to nominals functioning as predicates of verbless clauses, but is encoded on arguments and/or adjunct NP/DPs in clauses headed by verbs;
- (iv) the TAM marker is a morphological category of the nominal word class, and cannot be treated as a syntactic clitic that merely attaches to the NP/DP phonologically.

The encoding of TAM on nominals can have one of two broad functions. In one it specifies information intrinsic to the nominal itself, independently of the TAM of the clause. We refer to this type as ‘independent nominal TAM’ (section 2.1).<sup>7</sup> Alternatively, it may function to provide TAM information for the whole proposition, often (but not always) in conjunction with the TAM of the verb. We term this type ‘propositional nominal TAM’ (section 3). In the remainder of this paper we discuss the formal and functional properties of these two types in some detail, exemplifying from a range of typologically and genetically diverse languages. In section 4 we discuss the implications of this nominal TAM data for linguistic theory in general.

## 2 Independent nominal TAM

### 2.1 Independent nominal tense

Since nominal (semantic) predicates as well as verbal predicates may be temporally located (e.g. ‘ex-soldier’, ‘former friend’, ‘future President’, ‘wife-to-be’),

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date with the relevant type of nominal TAM marking. Since the aim of this paper is not to carry out a typological survey based on an areal or genetic sampling methodology, the list of languages we survey here is certainly not exhaustive. Neither is it fully representative in the geographical, genetic and typological distribution it reflects. Nonetheless, we aim to show here something of the formal and functional properties of TAM marking on nominals and thereby stimulate further research in the area of TAM-inflected nominals, and the use of TAM with other non-verbal constituents more generally.

<sup>6</sup>Thus we exclude forms like ‘ex-’ in English, which apply only to a small semantically defined class of nominals: ‘ex-wife’, ‘ex-boss’, but not ? ‘ex-dog’, ? ‘ex-desk’. See section 2.1 for further discussion.

<sup>7</sup>In precursors of this work this type of nominal TAM-marking was referred to as ‘non-propositional nominal TAM’.

there is no reason in principle why nominals could not bear TAM inflection of their own. Indeed, contrary to widely-held assumptions, such nominal TAM marking is attested across a range of languages, including many from North and South America. Nominal TAM inflection in this function operates completely independently of the TAM of the clause, and serves to locate the time at which the property denoted by the nominal holds of the referent or, in the case of possessive phrases, the time at which the possessive relation holds. Thus, it provides temporal information local to the NP to which the nominal belongs. In this sense, it is functionally analogous to regular verbal tense which provides information local to the phrase headed by the verb (namely, the clause).

A straightforward example of independent nominal TAM inflection is provided by Tariana, an Arawak language from north-west Amazonia, Brazil.<sup>8</sup> Nouns in Tariana can be inflected for either past or future tense (unmarked nouns are unspecified for tense) (Aikhenvald 2003).<sup>9</sup> The occurrence of tense morphology on nominals is very widespread, indeed Aikhenvald reports that around 40% of nouns in texts are tense-inflected.

There is a single form for nominal future tense, *-pena*, which specifies that the property denoted by the nominal holds in the future: *wa-ʃimari-pena* (1PL-son.in.law-FUT) ‘our future son-in-law’; *pi-ya-dapana-pena* (2SG-POSS-house-FUT) ‘your future house’. Nominal past tense has three forms: *miki-ri* for masculine singular nouns, *-miki-ru* for feminine singular nouns, and *-miki* for plural nouns. It is used more with animates than inanimates, but possible with both. Examples include *correio-miki-ri* (post office-PST-NF) ‘old/former post office’ and *du-sa-do-miki-ru* (3SG.NF-spouse-FEM-PST-FEM) ‘his late spouse’ (Aikhenvald 2003).

In contrast, propositional tense is encoded via floating tense/evidentiality clitics, which attach *phonologically* to the verb or any other focused constituent (including nominals). The nominal tense system is much simpler than that of the propositional tense/evidentiality clitics, and the forms are quite distinct from their propositional counterparts (see Aikhenvald (2003) for discussion).

Examples of the use of these nominal tense markers in regular verbal clauses are given below. The fact that the temporal reference of the nominal can be independent of that of both the verb and the clause within which it appears, is illustrated by (2) in which a future tense nominal co-occurs with a verb carrying the reported remote past clitic:<sup>10</sup>

<sup>8</sup>The data provided is courtesy of Sasha Aikhenvald, and is taken from her grammar (Aikhenvald (2003)). At the time of writing the published grammar was not yet available and so we are unable to provide page numbers for the examples that we cite.

<sup>9</sup>Although Aikhenvald describes these nominal tense markers as clitics they appear inside oblique case markers, which she considers to be suffixes (Aikhenvald 1999) and so for our purposes are clearly part of the inflectional morphology of nouns.

<sup>10</sup>Non-obvious abbreviations in these examples include: AFF ‘affix’, CL.ANIM ‘animate

- (1) *Thepi di-mare=pidana eta-miki-ri-nuku.*  
 to.water 3SG.NF-throw.CAUS=REM.P.REP eagle-PST-NF-TOP.NON.A/S  
 ‘He threw the remains of the eagle (lit. the ‘ex-eagle’, what used to be the eagle) into water.’
- (2) *Kayu-maka hĩ waripere unyane-pena di-kakwa=pidana.*  
 so-AFF DEM:ANIM Walipere flood-FUT 3sg.NF-plan=REM.P.REP  
 ‘Thus Walipere was planning the future flood.’

Such data raises the question of how (or even whether) this type of nominal tense marking is to be distinguished from derivational affixes such as the English ‘ex-’ (e.g. ‘ex-husband’, ‘ex-President’). The distinction is not at all straightforward – the two types of affixes clearly cover some of the same semantic ground – but it is possible to identify some significant differences.<sup>11</sup> Most importantly, nominal tense markers are fully productive, inflectional affixes that attach to all (regular) members of the nominal word class. The prefix ‘ex-’ in English, on the other hand, is quite restricted in its semantics and more clearly derivational in function. It is most common with nouns denoting occupations (‘ex-President’, ‘ex-director’, ‘ex-teacher’) and non-kin relationships (‘ex-wife’, ‘ex-boyfriend’). It is substantially less appropriate with common nouns such as ‘dog’ and ‘house’ (?ex-dog, ?ex-house). Such restrictions are not found in the true nominal tense examples, as can be verified in the examples throughout this section. Further evidence for the inflectional status of nominal tense affixes can be found on a language specific basis. In some languages nominal tense forms portmanteaux with other inflectional nominal categories, such as possession and definiteness (see the discussions of Hixkaryana and Somali below, respectively). In some languages independent nominal tense is encoded with the same affixes that are used to encode regular verbal tense with verbs (see the discussion of Potawatomi and Halkomelem Salish below, for example). And in other languages independent nominal tense can be shown to be syntactically active, triggering adjectival agreement (see Somali).

A similar nominal tense contrast to Tariana is found in Guaraní, a Tupí-Guaraní language which is widely spoken in Paraguay (Guasch 1956, Gregores and Suárez 1967, de Canese 1983, see also the brief discussion in Mel’čuk 1994:54). Guaraní has the nominal tense suffixes *-kwé* PST (sometimes *-ré*), *rá*<sup>12</sup> FUT and *-rangue* for a future which is not to be realized (that is, an irrealis future), which occur on nominal arguments and on nominalisations. Examples include:

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classifier’, DEM.ANIM ‘demonstrative animate’, NF ‘non-feminine’, PAUS ‘pausal’, PRES.VIS ‘present visible’, REL ‘relative’, REM.P.REP ‘remote past reported’, TOP.ADV ‘topic advancement’, TOP.NON.A/S ‘topical non-subject clitic’.

<sup>11</sup>We are grateful to Matthew Dryer for discussion of some of these issues.

<sup>12</sup>For the typesetters: á here and in example (4) should be ã with ´ superimposed.

- (3) *h-óga-kwé*  
his-house-PST  
'his former house' (Gregores and Suárez 1967:127)
- (4) *h-emi-apò-rá*  
his-work-FUT  
'his future work' (ibid)
- (5) *aò-apò-hà-ré*  
maker of clothes-PST  
'the one who made the clothes' (ibid)

In possessive examples such as (3) and (4), there are two semantic predicates with respect to which the tense marker may logically be interpreted. One possibility is that the tense marker temporally locates the nominal referent itself (e.g. 'former house'). Another possibility is that the tense marker refers not to the nominal, but rather provides the time at which the *possessive relation* holds (e.g. 'formerly possessed'). These Guaraní examples are in fact ambiguous: example (3) can mean either 'my thing which used to be a house (e.g. it has burned down)' or 'the house which used to be mine (but now belongs to somebody else)'. Such ambiguity appears to hold in the large majority of languages which combine independent nominal TAM marking with possessor inflection (including Tariana exemplified above).

The independence of the nominal tense from the TAM of the whole proposition in Guaraní is illustrated by the following examples, in which the propositional and nominal tense vary independently of each other.<sup>13</sup>

- (6) *O-va-ta che-róga-kue-pe.*  
3-move-FUT 1SG-house-PST-in  
'He will move into my former house.'
- (7) *A-va-va'ekue hóga-rã-pe.*  
1SG-move-PST 3.house-FUT-in  
'I have moved into his future house.'

In the above languages, the independent nominal tense system is formally distinct from the tense marking system of verbs. However, if such nominal inflection is truly encoding tense categories similar to those more familiarly encoded on verbs, then we might expect to find the same markers encoding tense categories with both nouns and verbs. This has in fact been reported for a number

<sup>13</sup>The following Guaraní examples, including (37) below, were kindly collected for us by Dagmar Jung from Sebastiana Ertel, a native speaker of Guaraní from Asunción now resident in Cologne, Germany. The examples from Gregores and Suárez (1967) ((3) - (5)) are written in what was at the time standard Guaraní orthography, while the informant data is represented in the current standard orthography.

of North American languages including Potawatomi (Hockett 1958), Kwakw'ala (Anderson 1985) and Halkomelem Salish (Galloway 1993, Burton 1997).<sup>14</sup> Hockett provides the following illustrative examples from Potawatomi (1958:238):<sup>15</sup>

- (8) a. *nkəʃatəs*  
       'I am happy (verb)'  
       b. *nkəʃatsəpən*  
       'I was formerly happy (but not now)'
- (9) a. *nčiman*  
       'my canoe (noun)'  
       b. *nčimanpən*  
       'my former canoe, now lost, destroyed, or stolen'

Brent Galloway (p.c.) provides examples from Halkomelem Salish showing that both nouns and verbs can be tense-inflected (with the same set of forms) in the same clause. The tense-inflection on the verb (or verbal auxiliary) encodes propositional tense, and that on the noun encodes independent nominal tense. Example (10) contains both propositional past tense marking (encoded on the negative auxiliary) and independent nominal past tense marking (encoded on the object NP), thus illustrating that the same form can be used in two functions in the same clause.

- (10) *éwe-lh kw'étslexw the-l sí:l-á:-lh.*  
       NEG.be-PST see           the(f)-my grandparent-PST  
       'He didn't see my late grandmother.' (Brent Galloway, p.c.)

This is contrasted with the following example, in which the object NP remains in the past tense while the verb is encoded for future tense. This clearly demonstrates that the nominal and verbal tense systems are independent of each other (despite the identity of form), otherwise we would expect such cases of conflict in tense values to result in ungrammaticality.

- (11) *El-'éliyemet-tsel-cha                           the-l       sí:l-á:-lh.*  
       REDUP-dream.about-1SG.SUBJ-FUT the(f)-my grandparent-PST  
       'I'll be dreaming about my late grandmother.' (Brent Galloway, p.c.)

<sup>14</sup>Outside of North America, the use of a single set of tense markers to encode both regular tense on verbs and independent tense on nominals has been reported for the Amazonian language Jarawara (Dixon 2004).

<sup>15</sup>Interestingly, Joseph (1979) discusses the use of a similar suffix in Cree (*-ipan*), which also means 'former, past'. However, in Cree the marker is more similar to English 'ex-', being possible only with nouns that denote living entities. Thus *nimosōm-ipan* 'my late grandfather' is possible, but not *\*nitospwākan-ipan* 'my former pipe'.

## 2.2 Independent nominal tense and possession

In the languages discussed above, we've seen examples in which the interpretation of the nominal tense inflection is ambiguous between the temporal location of the nominal referent itself, or the temporal location of the possessive relation of which the nominal is the object. In some languages this latter use has been grammaticised such that it is the only interpretation possible for nominal tense inflection. This is the case for many Carib languages, and we illustrate this for Hixkaryana (Derbyshire 1979,1999).<sup>16</sup>

In Hixkaryana independent nominal tense is expressed with a series of portmanteau nominal suffixes which mark present, past and remote past possession, and depossession.<sup>17</sup> The possessor is coded by a prefix which expresses person, and which co-occurs with the suffixal possession/tense markers. Here the tense marker serves to temporally locate the possessive relation, rather than the property denoted by the nominal, so that *ro-kanawa-tho* '1-canoe-POSS.PAST' means 'canoe which used to be mine', rather than 'my thing which used to be a canoe'.

The following examples are provided by Derbyshire (1979:98-99).<sup>18</sup>

- |  |  |
|--|--|
| (12) <i>ro-kanawa-ti</i><br>1-canoe-POSSD<br>'my canoe'              | (13) <i>ro-kanawa-tho</i><br>1-canoe-POSSD.PST<br>'the canoe that used to be mine'   |
| (14) <i>ow-ot-ti</i> ( <i>owoti</i> )<br>2-meat-POSSD<br>'your meat' | (15) <i>ow-wo-ti-thiri</i><br>2-meat-POSSD-PST<br>'that meat which used to be yours' |
| (16) <i>i-he-tfe</i><br>3-wife-POSSD<br>'his wife'                   | (17) <i>i-he-tfe-nhiri</i><br>3-wife-POSSD-PST<br>'his former wife'                  |

<sup>16</sup>Similar facts to the Hixkaryana ones discussed here pertain in the other Carib languages including Apalai (Koehn and Koehn 1986), Macushi (Abbott 1991), Wai Wai, Carib, Dekwana, Trio, and Wayana (Derbyshire 1999).

<sup>17</sup>According to Derbyshire (1999) the depossession suffix appears (although rarely) on inalienably possessed nouns to indicate more general reference.

<sup>18</sup>In the examples in this section, some minor alterations have been made in the glosses in order to increase glossing consistency across the languages discussed. Non-obvious abbreviations in these examples include DEV 'devalued', REM 'remote'. Note that the simple past suffix normally follows all allomorphs of the possessor suffix except *ri*, which it replaces. When this occurs we gloss it as POSS.PST.

- (18) *ro-katxho-ø*                      (19) *i-katxho-ø-thiri*  
 1-things-POSSD                      3-things-POSSD-PST  
 ‘my things’                              ‘his old things’

The following examples show nominal and verbal tense marking varying independently – present possession on a nominal co-occurs with verbal past tense.<sup>19</sup>

- (20) *ro-kanawa-ri mar-yako*                      *uro ryhe iro ha*  
 1-canoe-POSS 2S.3O.take-REC.PST.COMPL mine EMPH that INT  
*rokanawari.*  
 1-canoe-POSS  
 ‘You took my canoe, the canoe that belongs to me’ (ibid:129, 288)
- (21) *Waraka y-ow-ti*                      *yakaro i-to-no.*  
 Waraka 3-brother-POSS with 1S.3O-go-IMM.PST  
 ‘I went with Waraka’s brother’ (ibid:11, 22b)

### 2.3 Independent nominal mood and evidentiality

In all of the languages with independent nominal TAM systems that we have discussed above, the only TAM category encoded is the category of tense. In fact, all languages we have found with some independent nominal TAM encode minimally the distinction between past and non-past tense. In some languages this is the only distinction encoded (e.g. Hixkaryana); others have a future tense also (e.g. Tariana, Guaraní). We have found no languages in which independent aspect is marked on nominals.<sup>20</sup> However, there appears to be no principled reason as to why this should be the case, given that such meanings can be encoded by adjectives in languages without inflectional nominal TAM systems (e.g. *my ongoing journey*, *my completed journey*, *my continuing journey*), and may simply be an accidental gap in the data. It is possible, however, for languages to encode (some) independent mood information on nominals. Two such languages include Iatê, which marks possibility, and Nambiquara which marks evidentiality.<sup>21</sup> Crucially, however, these languages *also* mark nominals for independent tense.

Iatê (sometimes Yatê) is a Macro-Jê language spoken in the vicinity of Pernambuco (Brazil). According to Lapenda (1968), nouns in Iatê can be inflected for one of three tenses (past, present and future) and one of two moods (‘realis’

<sup>19</sup>The system of verbal tense marking in Hixkaryana is considerably complex, see Derbyshire (1979: 136) for details.

<sup>20</sup>In one language, Jarawara (Dixon 2004), a suffix glossed ‘habitual, customary’ is used with a predicate nominal in apparent independent function, see (36) below. While this suffix appears to have an aspectual meaning, it does not form part of a systematic aspectual contrast in the language, and so we do not consider it to be a clear-cut example of independent aspect on nominals.

<sup>21</sup>Jarawara also marks nominals for independent mood and evidentiality, see Dixon (2004).

and ‘possible’). The realis mood (which is unmarked) has three tenses (with the present also unmarked), and the possible mood has just two: present and past. The different possibilities and their meanings are given in Table 1, using the noun *seti* ‘house’. Note that the possible mood forms involve taking the realis equivalent and adding the suffix *-kěá* (Lapenda 1968:77).<sup>22</sup>

Table 1: Nominal tense and mood suffixes in Iatê

<b>realis</b>		
pres	<i>seti</i>	that which is a house or serving as a house
past	<i>se‘ti-sê</i>	that which was once a house; that which stopped being a house
fut	<i>sêti-he</i>	future house, will be a house; house which is being built
<b>possible</b>		
pres	<i>se‘t-kěá</i>	a possible house; something which has the possibility of being a house
past	<i>se‘ti-s -kěá</i>	something which would have been a house but wasn’t; something which had the possibility of being a house

Non-propositional evidentiality on nominals (in combination with tense) is reported by Lowe (1999) for Nambiquara, a small family of dialects from the Northern Mato Grosso, Brazil. According to Lowe, nouns in Nambiquara are optionally suffixed for definiteness, and definite nouns may be further inflected for tense and evidentiality, using a distinct set of forms from those used with verbs (Lowe 1999:275).<sup>23</sup> The relevant suffixes found on Nambiquara definite nouns are listed in Table 2 (after Lowe 1999:282) in which ‘unmarked’ seems to contrast with ‘current’ (which Lowe interprets as ‘at the time and place reached in the discourse’). Examples of the use of these affixes are given below:<sup>24</sup>

- (22) *wa<sup>3</sup>lin<sup>3</sup>-su<sup>3</sup>-n<sup>3</sup>ti<sup>2</sup>*  
 manioc-CL:BONE-LIKE-OBSERV.REC.PST.GIVEN  
 ‘This manioc root that both you and I saw recently.’ (Lowe: 1999:282, 32)

<sup>22</sup>The past tense morph in the ‘possible past’ is a regularly conditioned allomorph of the past tense suffix *-sê*.

<sup>23</sup>Although Lowe notes that only a limited number of tense and evidentiality combinations are attested in his (large) corpus (1999:282).

<sup>24</sup>The superscripted numbers in these examples are tone markers.

- (23)  $wa^3lin^3-su^3-nũ^1tã^2$   
 manioc-CL:BONE-LIKE-INFER.DEF.UNMARKED  
 ‘The manioc root that must have been at some time past, as inferred by me (but not by you).’ (ibid:282,35)
- (24)  $hĩ^1na^2su^2 wa^3lin^3-su^3-ntĩ^2$   
 today manioc-CL:BONE.LIKE-OBSERV.REC.PST.GIVEN  
 $ĩ^3-a^1-ra^2$   
 plant-1sg-PERF  
 ‘Today I planted the manioc roots that we both saw earlier in the day.’ (ibid:290, 61)<sup>25</sup>

Table 2: Nambiquara Definite Nominal Endings

-a <sup>2</sup>	definite, unmarked
-ai <sup>2</sup> na <sup>2</sup>	definite, current
-in <sup>3</sup> ti <sup>2</sup>	observational, recent past, given
-ait <sup>3</sup> ta <sup>3</sup> li <sup>2</sup>	observational, mid past, given
-ait <sup>3</sup> tã <sup>2</sup>	observational, mid past, new
-nũ <sup>1</sup> tã	inferential, definite, unmarked
-nũ <sup>1</sup> tai <sup>2</sup> na <sup>2</sup>	inferential, current
-au <sup>3</sup> tẽ <sup>?</sup> tã <sup>2</sup>	quotative, mid past, given

Note however that in another grammatical description of this language by Kroeker (2001)<sup>26</sup>, there is no mention of evidentiality being encoded on nouns at all. Kroeker mentions only the use of tense on nouns, providing examples such as the following (2001:45-46):

- (25) a.  $wxa^2-hu^3kx-ai^3ta^3li^2$   
 POS2-bow-PST  
 ‘your bow (that you had in the past)’
- b.  $hu^3kx-in^3ti^3$   
 bow-REC
- c.  $hu^3kx-a^2$   
 bow-PRES
- d.  $hu^3ki^3-nu^3a^2$   
 bow-FUT

<sup>25</sup>For the typesetters: The  $ĩ$  in the final word of the last example has also got a  $\tilde{}$  underneath it (as well as one on top).

<sup>26</sup>In this description, the language name is spelt Nambikuara.

Some of these tense forms clearly resemble the ‘observational’ tense and evidentiality suffixes of Lowe, but are only described as tense markers by Kroeker. Further research is required to determine the exact nature of the nominal TAM morphology in this language (that is, it is not clear whether these are differences of dialect or analysis).

The nominal TAM systems of Iatê and Nambiquara demonstrate that mood and evidentiality may be non-propositional, modifying a nominal independently of the mood of the proposition as a whole. However, these languages exhibit only a small subset of the range of mood/evidentiality distinctions associated with verbal constituents cross-linguistically. An important question for further research is whether there are any restrictions on the moods that can function non-propositionally, and what these restrictions may be.

## 2.4 Independent nominal tense and definiteness

While the large majority of languages we have found with independent nominal TAM are from the Americas, languages from other parts of the world also exhibit this type of tense marking.

A particularly intricate example of independent nominal tense is found in the Cushitic language of Somali, in which tense interacts morphologically with the nominal category of definiteness, a phenomenon which we have already mentioned in connection with Nambiquara. Lecarme provides extensive discussion of this phenomenon in a series of papers (Lecarme 1996, 1999), and so we illustrate it only briefly in this section. In Somali, definite determiners encode a past/non-past distinction for tense, as shown in Table 3 (Lecarme 1999: 335)<sup>27</sup>

Table 3: Somali Definite Articles

Case	NON-PAST	PAST
NOM	-ku/-tu	-kii/-tii
NON-NOM	-ka/-ta	-kii/-tii

The tensed determiners shown in this table are in paradigmatic opposition with a separate deictic system involving near/far demonstratives, which do not have a temporal interpretation. Somali also has a set of possessive determiners which are suffixed to nominal heads which do show past/nonpast distinctions: *gúri* ‘your house’ *gúrigàagii* ‘your house.PST’ (Saeed 1999:115), with the meaning ‘your former house’.<sup>28</sup>

<sup>27</sup>The *k*-initial forms occur with masculine stems, and the *t*-initial forms with feminine stems.

<sup>28</sup>It is not clear from Saeed’s description whether these constructions have the same ambiguity–

The following examples illustrate the basic system. The use of the non-past determiner in (26) is appropriate where the crisis is ongoing, while in (27) the head noun is inflected with a past tense determiner, which locates the nominal reference in the past (note that we follow Lecarme's glossing practice in providing an explicit morphemic gloss only for the past tense).

- (26) *dhibaata-da Khalij-ku welí way taagán tahay.*  
 problem-DET.F Gulf-DET.M.NOM still FOC.3S permanent is  
 'The crisis of the Gulf still persists.' (Lecarme 1999:335)
- (27) *dhibaata-dii Khalij-ku wáy dhammaatay.*  
 problem-DET.F.PST Gulf-DET.M.NOM FOC.3S end.PST  
 'The (past) crisis of the Gulf ended.' (ibid)

Similarly the choice of determiner in (28) and (29) depends on whether the speaker believes the exhibition is closed or open at utterance time. These examples also demonstrate the independence of the nominal and propositional tense systems. In (28) and (29), for example, the propositional tense (as marked on the verb) remains the same, while the nominal tense varies to signal the change in meaning (Ut = utterance time).

- (28) *bandhíg-gii máad daawatay?*  
 exhibition-DET.M.PST Q.2S see.PST  
 'Have you seen the exhibition (closed at Ut)?' (Lecarme 1999:338)
- (29) *bandhíg-ga máad daawatay?*  
 exhibition-DET.M Q.2S see.PST  
 'Have you seen the exhibition (still running at Ut)?' (ibid:338)

One of the particularly interesting aspects of independent nominal tense in Somali is that it is an agreement category within the NP: attributive adjectives agree in tense (and gender) with the nominal that they modify, sharing the tense endings of the highly irregular verb 'be' ( $\emptyset$  -PST, *-aa* PST.M, *-ayd* PST.F) (Lecarme 1996:4, 1999:343). This is the only language we have found which shows agreement in independent nominal tense. The following examples show gender and tense agreement with masculine singular and feminine plural nouns respectively.<sup>29</sup> Tense concord of this type provides very clear evidence that (nominal) tense marking is an inflectional property in Somali DPs.

- (30) a. *árday-ga wanaagsan*  
 student-DET.M good

i.e. between 'house which used to be mine' and 'my thing which used to be a house'—discussed above for many other languages with independent nominal TAM.

<sup>29</sup>Number may be marked through optional reduplication in Somali adjectives.

- b. *árdáy-gii wanaagsan-aa*  
 student-DET.M.PST good-PST  
 the good student
- (31) a. *árdáy-da wan-wanaagsan*  
 students-DET.F PL-good
- b. *árdáy-dii wan-wanaagsan-aa*  
 students-DET.F.PST PL-good-PST  
 the good students

Further evidence that definite determiners in Somali have a temporal function comes from their interaction with overt temporal modifiers, which must occur with a matching tense marking. In the examples below, the temporal modifier ‘next year’ selects a non-past determiner, while ‘last year’ selects a past determiner.

- (32) *sánnad-ka/\*-kii dambe*  
 year-DET.M next  
 next year
- (33) *sánnad-kii/\*-ka hore*  
 year-DET.M.PST before  
 last year (Lecarme 1999:342)

The past tense marking on Somali determiners interacts with the discourse in ways that extend what we have reported for other languages in the discussion so far, and which raise many open questions for future research. In (35), for example, the past tense marked noun does not have the interpretation ‘ex-students’, but rather is used anaphorically to refer to a past time already mentioned in the discourse and taken as the reference point (Lecarme 1999).

- (34) *árdáy-da baan kasin su’áash-aadii.*  
 students-DET.F FOC.NEG understand.PST question-DET.F.POSS2S.PST  
 ‘The students (who are present/I am telling you about) did not understand your question.’
- (35) *árdáy-dii wáy joogaan.*  
 students-DET.F.PST FOC.3P are present.NPST  
 ‘The students (I told you about) are present.’ (ibid:335)

The discourse interaction of nominal TAM inflection in Somali is possibly linked with its association with definite determiners, which have, by definition, a strong discourse function and are frequently anaphoric (Givón 2001).<sup>30</sup>

<sup>30</sup>A full discussion of the semantic relationship between nominal tense and determiners is be-

## 2.5 Tense Stacking

In a small number of the languages with independent nominal TAM we find examples of tense stacking of a rather different nature than the simple combination of tense and mood/evidentiality exemplified above for Iatê and Nambiquara. These more complex cases involve scoped sequences of TAM markers attached to a single nominal and are thus morphologically encoded equivalents of English complex phrases such as ‘future ex-husband’ or ‘former future President’. This sort of stacking appears to be possible in (at least) one Tupí-Guaraní language, Tupinamba, which is mentioned briefly by Lehmann and Moravcsik (2000). The nominal TAM system in Tupinamba appears largely similar to that of Guaraní, as described above, although Tupinamba is reported to have no TAM marking on verbs, showing that nominal TAM inflection can exist in a language independently of verbal TAM inflection. Lehmann and Moravcsik (2000:742) provide (only) the following examples showing the use of past and future tense with nominals: *rók-a* ‘house’, *rók-wér-a* ‘former house’, *rók-wám-a* ‘future house’. In addition they provide one example which appears to contain two tense markers, future and past: *rók-ám-wér-a* ‘what was to be a house, ex-future house’. The translation implies that the outer suffix (past) has scope over the inner tense suffix (future), that is, the property of being a future house is temporally situated at some point in the past. This appears to be an example of the stacking of two independent nominal tense markers on a single nominal stem.

A similar example is found in the Amazonian language Jarawara (Arawá). The following example shows a nominal inflected with the ‘customary’ marker (glossed HAB) plus future tense plus past tense.<sup>31</sup>

- (36) *fati-tee-ba-ni-hi*  
 wife-HABIT-FUT-IPnf-DEP  
 ‘She was to become (his) wife’ (Dixon 2004)

As with the Tupinamba example, the outer past tense suffix here has scope

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yond the scope of this paper, but it is a topic in need of much further research. Other languages which show a type of association between nominal determiners and tense marking include Mao Naga (Tibeto-Burman), in which nominal suffixes marking spatial deixis can also be used to encode certain independent nominal tense distinctions with some nouns (Giridhar 1994:118-9); Iraqw (Cushitic), in which determiners encode clausal tense distinctions when used discourse-anaphorically (Mous 1993:90); Jingulu (non-Pama-Nyungan) in which clausal tense markers have grammaticalised into nominal suffixes encoding spatial deixis (Pensalfini 1997, 2002); and Wari’, which has two sets of demonstrative pronouns, one set encoding spatial distinctions (proximate to speaker, proximate to hearer, distal) and one set encoding some sort of temporal orientation (just occurred, recently absent, long absent) (Everett and Kern 1999:306ff). Of course, since the deictic and anaphoric functions of tense and definiteness are rather similar, finding a direct relationship between tense and the determiner system is not surprising, but we leave further discussion of this issue for future research.

<sup>31</sup>The gloss IPnf stands for ‘Immediate Past, non-eyewitness evidentiality, feminine gender’.

over the inner future tense suffix, locating the property of being a ‘future wife’ in the past. In this example, however, the nominal is functioning as the predicate of a dependent clause, as indicated by the *-hi* suffix (Dixon 2004). Since propositional TAM (on both verbs and nominal predicates) is encoded with the same set of forms as independent nominal TAM in Jarawara, it is actually not possible to determine whether the outer tense suffix has an independent or propositional tense function here. That is, this may constitute an example of the stacking of two independent nominal TAM markers (as in the Tupinamba example above), or it may in fact demonstrate the stacking of an independent nominal TAM marker and a propositional TAM marker encoding the tense for the proposition as a whole. Since the clause and the nominal are identical in this case, the two analyses are essentially equivalent.

The stacking of independent tense and propositional tense on nominal predicates is, however, more clearly attested for other languages in which independent nominal TAM and propositional TAM have distinct forms. Consider the following example from Guaraní:

- (37) *Che-róga-rã-ta.*  
 1SG-house-FUT-FUT  
 ‘It is my future house, it will be my future house.’ (Dagmar Jung, pc)

In this example there are two tense inflections on the nominal. The first encodes independent nominal tense temporally locating the referent of the nominal itself (‘future house’). The second tense marker, on the other hand, marks the tense of the clause, using a member of the verbal tense series (hence the difference in form). Example (38) repeated from above, shows this second, propositional tense suffix in its usual function, on a verbal predicate.

- (38) *O-va-ta che-róga-kue-pe.*  
 3-move-FUT 1SG-house-PST-in  
 ‘He will move into my former house.’ (Dagmar Jung, pc)

Predicate nominals carrying (independent) nominal tense inflections and also hosting propositional tense clitics are found in the Amazonian language Tariana (Aikhenvald 2003). In Tariana, propositional tense is encoded with a series of tense/evidentiality clitics that attach to the verb or any other focused constituent, including nominals (Aikhenvald 2003). When the nominal is also inflected with an independent nominal tense marker, this gives rise to tense stacking similar to that in Guaraní. In the following examples the predicate nominal carries both a nominal tense suffix (marking future tense in (39) and past tense in (40)) and the ‘present visual’ clitic encoding the tense and evidentiality of the clause as a whole.

- (39) *Pi-ya-dapana-pena=naka.*  
 2SG-POSS-house-FUT=PRES.VIS

‘This is your future house (I can see it).’

(40) *Pi-ya-dapana-miki-ri=naka.*

2SG-POSS-house-PST-NF=PRES.VIS

‘This is what used to be your house (I can see it).’

The phenomenon of tense stacking is a particularly intriguing aspect of nominal TAM marking, and future research is needed to determine just how widespread this phenomenon is. While the stacking of independent and propositional tense on nominal predicates is clearly established by examples such as (37) from Guaraní, it would be desirable to have more conclusive examples of the stacking of two independent markers, as in Tupinamba. In particular, it is crucial to have data in which double independent TAM marking is found on a *dependent* nominal in a sentence, and can be clearly shown to be distinct from the propositional TAM. It remains to be seen whether future research into nominal TAM systems will reveal such tense stacking patterns.

## 2.6 Summary on Independent Nominal TAM

Table 4 summarises all of the core cases of independent nominal TAM discussed above:

Table 4: Languages with Independent Nominal TAM

Language	Family	Tenses	Mood/Evid	Prop TAM	Same Aff
Tariana	Arawak	Pst, Fut	-	Yes (clitic)	No
Guaraní	Tupí-Guaraní	Pst, Fut, IrrFut	-	Yes	No
Tupinamba	Tupí-Guaraní	Pst, Fut	-	No	N/A
Hixkaryana <sup>a</sup>	Carib	Pres, Pst, RemP	-	Yes	No
Iatê	Macro-Jê	Pst, Pres, Fut	Real, Poss	??	?? <sup>b</sup>
Nambiquara	Nambiquaran	RecP, MidP, Curr	Obser, Infer, Quot	Yes	No
Somali	Cushitic	Pst, NonPst	-	Yes	No <sup>c</sup>
Potawatomi	Algonquian	Pst, ??	??	Yes	Yes
Kwakw'ala	Northern Wakashan	RecP, FarP, Fut, ??	??	Yes	Yes
Halkomelem	Salish	Pst, Fut	-	Yes	Yes
Jarawara	Arawá	RecP, FarP, IP, Fut	Rep, Irr, Int, Hypoth	Yes	Yes
Wari'	Chapakuran	ImmP, RecP, FarP	-	Yes	No <sup>d</sup>

### Key:

Prop TAM = do sentences containing independent nominal tense also contain verbal tense?

Same Aff = are the same affixes used to encode independent TAM on nominals and propositional TAM in verbs?

?? = information not available in our source

### Notes:

<sup>a</sup> Also the other Carib languages Apalai (Koehn and Koehn 1986), Macushi (Abbott 1991), Wai Wai, Carib, Dekwana, Trio and Wayana (Derbyshire 1999), which appear to be similar in this respect.

<sup>b</sup> The tense suffixes *-sê* (PAST) and *-he* (FUT) are listed by Lapenda as appearing on verbs (Lapenda:105-106). However elsewhere in his description he distinguishes between the relative form of the verb (which he takes to be a pure verb) and the absolute form of the verb, which can function as a verbal noun and take nominal temporal suffixes. Further work is clearly required to determine the syntactic categorial status of the verbal forms in the examples he provides showing verbs and nouns with the same temporal affixes. In addition to these affixes, Iatê verbs may code a complex set of aspectual distinctions, not encoded by nominals.

<sup>c</sup> Attributive adjectives also inflect for tense, taking the same tense endings as the (irregular) verb 'be'.

<sup>d</sup> Clausal past tense can also be specified by one of three sentence-final particles which have the same form and function as the temporal proclitics used with demonstratives (Everett and Kern 1999:320).

From this table we can make the following observations.<sup>32</sup> Firstly, most<sup>33</sup> languages with nominal TAM also have verbal TAM, although the markers may or may not be the same. Furthermore, in no language does the nominal TAM system encode more distinctions than the corresponding verbal system. Thirdly, all languages with nominal TAM encode (at least) a tense distinction, and all tense distinctions encode (at least) past vs. non-past tense. Thus, it appears that if a language has independent nominal TAM at all, it will encode minimally a distinction between past and non-past tense. Finally, while this is certainly not a large sample of languages, it does contain languages from a range of genetic and areal groupings. This shows that the phenomenon of independent nominal TAM cannot be attributed to a quirk of a single language family or particular geographic region, but rather is a possibility (albeit unusual) for languages more generally.

### 3 Propositional TAM on Dependent Nominals

Cross-linguistically we find a second type of TAM-marking on nominals, whereby the nominal morphology contributes TAM information relevant to the clause as a whole. When attached to dependent nominals (i.e. argument and adjunct NPs in verb-headed clauses), propositional nominal TAM involves a non-local interpretation of the TAM marker. That is, it is not semantically interpreted with respect to the nominal to which it is attached (as in cases of independent nominal TAM), but rather with respect to the higher clause within which it is embedded. This type of nominal TAM marking is therefore quite distinct from independent nominal TAM, in which the TAM information encoded on the nominal is interpreted with respect to the nominal itself, independently of that of the proposition. The existence of propositional TAM on dependent nominals is particularly challenging for many

<sup>32</sup>These are necessarily tentative due to the small number of languages in the sample. However, we hope that they may be useful as the starting point for further research on the topic.

<sup>33</sup>Or possibly all languages – the only counter-example is Tupinamba for which we have very little information and no sentence examples.

theories of grammatical structure which assume that clause-level information (i.e. that which pertains to the whole clause or proposition) must necessarily be associated with clausal heads, not dependents (see Nordlinger and Sadler (2000, to appear), and section 4 for discussion).

The encoding of propositional TAM on dependent nominals takes various forms cross-linguistically. In some languages it works in conjunction with the verb to fully specify the TAM value for the clause (section 3.1) and in others it can be the sole exponent of the TAM distinction, showing that it is not necessary for such nominal TAM marking to be mediated through the verbal head at all (section 3.2). In a number of languages, propositional TAM is found on all types of nominal, while in other languages it is restricted to pronominals (section 3.3).

### 3.1 In conjunction with verbal TAM

In their discussion of tense marking on nouns, Lehmann and Moravcsik (2000) allow only for the independent function of nominal tense discussed in section 2.1, claiming that

“[w]hile there may be agreement between a nominal dependent and its verb in other categories, tense is not an agreement category. Even where both the noun and the verb have tense, tense is selected independently for a verb and its nominal dependents, as in *My ex-wife is visiting me, my future wife visited me*, etc.” (p. 742)

However, Evans (2003) shows convincingly that such tense agreement is in fact found in the Tangkic languages of northern Australia, particularly in Lardil and Kayardild. In these languages, case marking morphology is used to (partially) encode the TAM value for the clause, in conjunction with TAM marking on the verb. Consider the following examples from Lardil, in which objects (and other non-subject dependents, see below) are inflected with one of three possible objective case markers depending on whether the verb is in the ‘general non-future’ form (41), the marked non-future tense form (42),<sup>34</sup> or the future tense form (43) (Klokeid 1976, Hale 1997):<sup>35</sup>

- (41) *Ngada niween maarn-in wu-tha.*  
1SG.NOM 3SG.OBJ spear-OBJ give-GNF

<sup>34</sup>According to Klokeid (1976:475ff) the meaning differences between the general non-future form in (41) and the marked non-future form in (42) are fairly subtle; the main difference is that the general non-future form can be interpreted relative to a time already established in the discourse, whereas the marked non-future has only absolute time reference. Thus, the former is more appropriate in extended (non-future) discourse, for example (p. 476).

<sup>35</sup>Richards (2001) discusses the many grammatical differences that exist between present-day Lardil (his ‘New Lardil’) and the Lardil of the 1960s when Ken Hale did his early fieldwork (his ‘Old Lardil’). The case/tense properties discussed here are features of Old Lardil.

‘I gave him a spear.’ (Klokeid 1976:476, 56a)

- (42) *Ngada niwentharr maarn-arr wu-tharr.*  
 1SG.NOM 3SG.NFOBJ spear-NFOBJ give-NFUT  
 ‘I gave him a spear’ (ibid:476, 56b)

- (43) *Ngada bilaa wu-thur ngimbenthar diin-kur wangalk-ur.*  
 1SG.NOM tomorrow give-FUT 2SG.FOBJ this-FOBJ boomerang-FOBJ  
 ‘I’ll give you this boomerang tomorrow.’ (ibid:493, 91b)

These case markers also appear on other non-subject complements, following the regular semantic case inflection. These examples therefore involve a form of the case stacking well known in Australian languages (e.g. Dench and Evans 1988, Plank (ed.) (1995), Nordlinger 1998)). In (44) the instrumental NP ‘his wife’ is inflected with two case markers: first the instrumental case marker encoding its grammatical function within the clause, and then the future objective case in agreement with the future tense of the verb.

- (44) *Ngada marndi-thu niwenthath niwen-kur-u*  
 1.SG.NOM rob-FUT 3SG.FOBJ 3SG.GEN-INSTR-FOBJ  
*kerndi-wur-u.*  
 wife-INSTR-FOBJ  
 ‘I will steal his wife for him.’ (Hale 1997:201)

Nominal TAM in Lardil, then, is effected through the use of a particular set of case markers which interact with the TAM inflections of the verb. These case markers combine expression of temporal information with regular relational case for direct objects, and are placed outside semantic case inflections for other non-subject complements. Although, for the most part, the TAM-related case markers appear to simply copy the TAM inflection of the verb, the two can in fact be shown to operate independently of each other. Firstly, the verbal TAM markers have distinct forms marking negative polarity, while the corresponding nominal TAM/case suffixes appear in the same form irrespective of polarity:

- (45) *Ngada bule-thur yak-ur.*  
 I catch-FUT fish-FOBJ  
 ‘I will catch a fish.’
- (46) *Ngada bule-nengkur yak-ur.*  
 I catch-NEG.FUT fish-FOBJ  
 ‘I will not catch a fish.’ (Hale 1997:36)

Secondly, the same general non-future verb form is used with both non-future tense and imperative mood. The two are differentiated however, through the case marking of the object which is nominative for the imperative use (47) and (plain)

objective otherwise (41). Such examples show clearly that it is the interaction between the nominal and verbal morphology that fully specifies the propositional TAM in Lardil.

- (47) (*Nyingki*) *ne-tha kiinda*.  
 (2SG.NOM) hit-GNF that.person(NOM)  
 ‘(You) hit that person.’ (Hale 1997:21)

The existence of TAM as an inflectional category of nominals is even more evident in the related language Kayardild, which has an elaborate system of TAM-sensitive case marking.<sup>36</sup> Kayardild has five ‘modal’ cases (Evans 1995) which, as in Lardil, occur on objects and other non-subject NPs, and interact with different verbal inflections to encode the tense/mood value for the clause as a whole. This interaction is illustrated in the following examples:<sup>37</sup>

- (48) a. *Ngada kurri-nangku mala-wu (balmbi-wu)*.  
 1.SG(NOM) see-NEG.POT sea-M.PROP morrow-M.PROP  
 ‘I won’t be able to see the sea (tomorrow).’ (Evans 1995:404, 10-12)
- b. *Ngada kurri-nangku mala-y (barruntha-y)*.  
 1.SG(NOM) see-NEG.POT sea-M.LOC yesterday-M.LOC  
 ‘I could not see the sea (yesterday).’ (Evans 1995:404, 10-13)

In these examples the the verbal inflection remains constant, and it is through the different modal case inflections that the clausal tense/mood distinction is encoded. The ‘negative potential’ verbal inflection is used here with its meaning of ‘inability’: combining with the “future” meaning of the modal propriative case marker in (48a) places this inability in the future, while combining with the “instantiated” meaning of the modal locative in (48b) expresses that there was a real occasion, yesterday, when the inability existed (Evans 1995:404). Note further that the modal case is not just restricted to arguments, but is found on all non-subject NPs, including sentential adjuncts such as ‘tomorrow’ (48a) and ‘yesterday’ (48b). This indicates that it is not simply a VP-based phenomenon, nor selection by the verb for properties of its arguments.

The following examples with the apprehensive verbal inflection provide further exemplification of the role of the modal case category in determining clausal tense and mood features:

<sup>36</sup>This complex system is described and discussed in detail by Evans (1995, 2003), to which the reader is referred for further information. In the interests of space, we illustrate it only partially here.

<sup>37</sup>Following Evans (1995), we indicate that these cases are in modal function with an initial M. in their gloss. Thus, M.LOC stands for ‘locative case in modal function’ (these modal cases all have regular case functions as well which determines the choice of case name).

- (49) a. *Warrjawarri ngada barrbiru-tha manarr-iy, kurri-nyarra*  
 slowly(NOM) 1.SG(NOM) lift-ACT torch-M.LOC see-APPR  
*ngijin-inj, kala-nyarr, rabi-nyarr.*  
 1.SGPOSS-M.OBL fly-APPR arise-APPR  
 ‘Unhurriedly I lifted the bark torch, in case (the diver birds) should see me and fly off.’ (Evans 1995: 404, 10-14)
- b. *Nying-ka ngudi-na wangalk, ngada*  
 2.SG-NOM throw-NEG.IMP boomerang(NOM) 1.SG(NOM)  
*ngumban-ju burldi-nyarr.*  
 2SG-M.PROP throw-APPR  
 ‘Don’t you throw the boomerang, or I’ll throw one at you.’ (ibid:405, 10-15)
- c. *Thararra kali-nyarra wambal-iya, naa-nyarr.*  
 ember-NOM jump-APPR bush-M.LOC burn-APPR  
 ‘(Look out), the embers are jumping into the bush, it might burn.’ (ibid:405, 10-16)

The basic use of the apprehensive verbal inflection APPR is to express that the event is (or would be) unpleasant, and for this the oblique modal case is used, as with *ngijin-inj* (1.SGPOSS-M.OBL), the object of *kurri-nyarra* (see-APPR) in (49a). In (49b) on the other hand, the modal proprietive (which expresses “future” meanings) is used to stress the speaker’s certainty of being able to effect an unpleasant retaliation. Finally, in (49c), the unpleasant event is actually taking place, and so the modal locative is used to indicate the reality of the occurrence (Evans 1995:405).

The examples in (48) and (49) show clearly that there is not always a one-to-one relationship between the modal case category and the verbal tense/mood inflection that it co-occurs with. Here we have examples of both the same verbal inflection co-occurring with different modal case categories (as in the examples in (48) or (49)), and of the same modal case category co-occurring with different verbal inflections (e.g. the modal proprietive in (48a) and (49b)). Table 5 shows the various combinations illustrated here (see Evans 1995 for further possibilities).

Table 5: Modal Case and Verbal Inflection in Kayardild

	NEG.POT	APPR
M.LOC	past inability	real ongoing unpleasant event
M.OBL		pres/irr unpleasant event
M.PROP	future inability	certain (future) unpleasant event

Thus, the modal case category cannot be treated as simple concord with the verbal TAM inflection. Rather, the two are independent systems with different semantic values which work *in combination* to provide a composite tense/mood value for the whole clause (see Evans (1995: Chapter 10) for a full discussion).

Further evidence of the distinction between the verbal TAM system and that of the modal case markers is the fact that modal case can appear in clauses which have no verb at all, yet still encoding the same TAM information:

- (50) *Ngada dathin-kiring-ku kamarr-iring-ku.*  
 1.SG(NOM) that-ALL-M.PROP stone-ALL-MPROP  
 ‘I will (go) to that stone.’ (Evans 1995:403, 10-7)
- (51) *Jina-na darr-ina nying-ka jirrka-an-kina?*  
 where-M.ABL time-M.ABL 2.SG(NOM) north-FROM-M.ABL  
 ‘When did you (come back) from the north?’ (ibid:403, 10-8)

The fact that the modal case system in Kayardild is distinct from the system of verbal TAM inflection shows clearly that TAM (as encoded by modal case) is a meaningful inflectional category of nominals in this language.

The Pama-Nyungan Australian language Pitta Pitta shows a somewhat different type of interaction between the case and TAM system. In Pitta Pitta, nominal case marking on subjects, objects and instruments encodes a distinction between future and non-future tense (Blake 1979) while the verb itself makes a three-way distinction between present(-*ya*), past (-*ka*) and future (unmarked)(Blake 1979:201-2). Additionally, the case marking system itself differs according to the tense of the clause: future tense involves a nominative/accusative case distinction, and non-future a three-way distinction between intransitive subject (S), transitive subject (A) and object (O). The forms are shown in Table 6 (after Blake 1987:59).<sup>38</sup>

Table 6: Pitta Pitta case/tense suffixes

	S	A	O	Inst
Non-Future	-∅	-lu	-nha	-lu
Future	-ngu	-ngu	-ku	-ngu

The case alternations on subjects (52-53) and objects (54-55) and their interactions with the tense of the verb are illustrated by the following examples.

- (52) *Ngamari karnta-ya ngartu-nga kankari-marru.*  
 mother(NOM) go-PRES nardoo-PURP knife-having(NOM)

<sup>38</sup>Blake (1979) does however note that the non-future object form *-nha* is used by some of his language consultants for future tense also, alongside the specifically future tense form *-ku*.

‘Mother’s going for (to get) nardoo (edible plant sp.) with a knife.’ (Blake 1987:59, 4.11)

- (53) *Ngamari-ngu karnta ngartu-nga kankari-marru-ngu.*  
 mother-NOM.FUT go nardoo-PURP knife-having-NOM.FUT  
 ‘Mother will go for (to get) nardoo with a knife.’ (ibid:60, 4.13)
- (54) *Ngamari-lu ngunytyi-ka ngali-nha mangarni-marru-nga-nha*  
 mother-ERG give-PAST we.DU-ACC bone-having-GEN-ACC  
*kathi-nha.*  
 meat-ACC.  
 ‘Mother gave us the doctor’s meat.’ (ibid, 4.12)
- (55) *Ngamari-ngu ngunytyi ngali-ku*  
 mother-NOM.FUT give we.DU-ACC.FUT  
*mangarni-marru-nga-ku kathi-ku.*  
 bone-having-GEN-ACC.FUT meat-ACC.FUT.  
 ‘Mother will give us the doctor’s meat.’ (ibid, 4.14)

This interaction between case/tense marking and verbal TAM marking in Pitta Pitta is reminiscent of the well-known aspectually-based ergative systems of many South East Asian languages (e.g. Gujarati (Mistry 2001), Urdu/Hindi (Mohanan 1994, Butt and King to appear), Punjabi (Bhatia 1993)), in which the case of the subject may depend on aspectual properties of the clause. However, we do not consider these systems to be core cases of nominal TAM, since they differ from the nominal TAM systems discussed in this section in several respects. Firstly, in these aspectually-based ergative systems it is not the case that the *entire* clausal case marking system is affected (only (some) subjects show alternation in case marking). Secondly, the aspectually sensitive alternation is overridden for lexically specified classes of verbs, such as psych verbs in Gujarati which always require dative subjects irrespective of the clausal aspect (Mistry 2001). In contrast, Pitta Pitta case/tense marking does constitute a core case of nominal TAM: although the maximal set of temporal distinctions in the language is encoded in the verb, the interaction of case and TAM is reflected in the entire nominal case system, extending beyond subjects or even core dependents.

### 3.2 As the sole exponent

In some languages the TAM information encoded on an NP constituent can be the sole (or primary) exponent of a clause-level TAM category. Since the verb does not need to encode the relevant distinction at all in these examples, it is quite clear that the dependent NP may directly introduce propositional TAM information.

In Sirionó (Tupí-Guaraní, Bolivia), propositional temporal distinctions are expressed with a set of TAM suffixes, which can inflect nouns, adjectives (Fire-

stone's class of 'depictives') and verbs (Firestone 1965). Example (56) shows the use of these suffixes on the verb:

- (56) *Áe íí osó-ke-rv.*  
 he water go-PAST-PERF  
 'He went to the water.' (Firestone 1965:35)

In the following example, the subject NP and the verb are each inflected with a different TAM marker, the combination of which determines the TAM value for the clause as a whole:<sup>39</sup>

- (57) *jýkv-ke úke-rv.*  
 tiger-PST sleep-PERF  
 'The tiger slept.' (ibid:35)

For our purposes, the most interesting Sirionó examples are those in which the TAM affixes for the whole clause appear *only* on a dependent NP, and not on the verb at all, showing that the TAM value for the proposition as a whole can be encoded only on a nominal. Consider the following:<sup>40</sup>

- (58) *Ési-ke óso ñá í-ra.*  
 woman-PST go near water-to(LOC)  
 'The woman went near the water.' (Firestone 1965:37-8)
- (59) *Eygvúj-rv b́áe b́ukiacáq.*  
 tapir-PERF thing steal.not  
 'The tapir did not steal from others.' (ibid:33)

In all three of the examples of Sirionó nominal TAM above, the nominal with the temporal or aspectual affix is a subject NP. However nominal TAM marking is not limited to the subject, as shown by the following examples, in which the indirect object expresses the clausal aspect. In (60) this co-occurs with aspectual

<sup>39</sup>There are few examples of this phenomenon in Firestone (1965) beyond the ones we use here, and this is the only example we have of verb and noun contributing different TAM values.

<sup>40</sup>Firestone (1965) is clear that combinations of tense and aspect affixes can occur on nouns, but does not provide any examples of both types of affixes co-occurring on a *dependent* noun. There are, however, several examples of combinations such as PAST-PERF occurring on nouns in predicate function, such as the following:

- (1) *áe jýku-ke-rv*  
 he turkey-PST-PERF  
 'He was a turkey'

marking on the verb, while in (61) the indirect object alone encodes the aspect for the clause.<sup>41</sup>

- (60) *Áe osó-ke-rv íí-rv.*  
 he go-PAST-PERF water-PERF  
 ‘He went to the water.’ (ibid:35)
- (61) *kitóba eráo róo asésiq-rv*  
 Cristobal he-carry meat Ascension-PERF  
 ‘Cristobal took meat to Ascension’. (ibid:35)<sup>42</sup>

Example (60) demonstrates the possibility of doubling, whereby the same affix occurs on both the verb and a dependent nominal. This constitutes good evidence that these TAM markers are inflectional affixes, rather than syntactic clitics. We would not expect a syntactic clitic to occur simultaneously in multiple positions in the clause.<sup>43</sup>

A somewhat similar situation is found in the Arawak language Chamicuro (Peru), although here it is the definite article within the dependent NP that encodes the propositional tense distinctions (Parker 1999). There are two forms of the definite article: *na*, used in present and future tenses, and *ka* which marks past tense, as shown in (62a) and (62b).<sup>44</sup>

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<sup>41</sup>Regrettably, Firestone (1965) provides very little discussion of Sirionó syntax, and there are no clear examples that we can identify in his work of TAM-inflected objects. He does, however, provide some details on the interaction of indirect objects and TAM inflection, claiming that indirect objects may precede or follow the verb, but in the latter case must take the aspectual marker as in (60). Firestone does not specify whether aspectual marking on indirect objects is *limited* to the case where the indirect object follows the verb, but he notes that of the possible alternative word orders for sentences with both an indirect object (IO) and a direct object (O), that is, S-IO-V-O and S-V-O-IO, the latter order obligatorily requires the aspect marker to appear on the indirect object.

<sup>42</sup>For the typesetters: the e in the final word of this example should also have a forward pointing cedilla underneath it.

<sup>43</sup>Firestone (1965) also provides further evidence for considering these to be inflectional elements. He presents considerable phonological evidence for the establishment of words and word boundaries (pp. 9-20 passim) and establishes word classes in terms of the distribution of affixes: nouns, adjectives and verbs take tense and aspect affixes, but independent pronouns and particles do not. On verbs, TAM affixes may be prefixal or suffixal, and in each case they may appear closer to the stem than some other affixes. The same is true of nominal TAM (for example, the locative marker may follow the TAM suffix).

<sup>44</sup>The facts are complicated by the fact that these articles do not bear stress, and since all lexical words in Chamicuro must contain two syllables, they are not completely independent phonological items (see Parker 1999:556 and following). Parker (1999) shows that they encliticize phonologically to C final, but not to V final, preceding words. This behaviour is completely predictable on purely phonological grounds and he establishes that the definite articles are structurally part of the NP, even when encliticized to a preceding V. Parker notates encliticization by use of a morpheme boundary - we have used = instead.

- (62) a. *P-aškalaʔt-ís=na čamálo.*  
 2-kill-2.PL=THE(NPST) bat  
 ‘You (plural) are killing the bat.’ (Parker 1999:553, 7)
- b. *P-aškalaʔt-ís=ka čamálo.*  
 2-kill-2.PL=THE(PAST) bat  
 ‘You (plural) killed the bat.’ (ibid:553, 8)

In most examples, it is the definite marker alone which signals the tense information for the clause, the verb being unmarked for tense. There are however optional past and future verbal tense markers, the latter exemplified in (63).

- (63) *U-ʔ-yéʔ=na Pámpa Hermosa-šana.*  
 1-go-FUT=THE(NPST) Pampa Hermosa-LOC  
 ‘I will go to Pampa Hermosa.’ (ibid:554, 9)

That the tense-marked elements *na* and *ka* are indeed definite articles and not part of the verbal complex is shown by the fact that they appear within NPs:<sup>45</sup>

- (64) *anáʔ=na čmešóna*  
 this=THE(NPST) man  
 ‘this man’ (ibid:554, 13)
- (65) *Y-ahkašamustá-wa ka maʔpóhta ka maʔnáli.*  
 3-scare-1.OBJ THE(PAST) two THE(PAST) jaguar  
 ‘The two jaguars scared me.’ (ibid: 554, 14)

Finally, it should be noted that definite articles encoding temporal contrasts occur with all nominals in the full range of syntactic functions. The example below shows past tense marking by means of a definite article associated with a nominal in adverbial function.

- (66) *i-šak-kána ka likahpéʔta*  
 3-dance-PL THE(PAST) yesterday  
 ‘They danced yesterday.’ (ibid:555, 20)

### 3.3 TAM-inflected pronouns

In some languages, TAM distinctions are encoded only in pronouns. This is the case in the (now extinct) Gurnu dialect of Ba:gandji (Pama-Nyungan, Australia), in which pronouns are used to encode clause-level tense, showing a three-way distinction between unmarked (and present tense) (pronouns with an initial *ŋ*), future (marked with initial *g-*), and past (marked with initial *w-*) (Wurm and Hercus

<sup>45</sup>In (65), the definite article appears twice within the NP: once before the numeral and once before the head noun, as is typical for Chamicuro NPs containing numerals and demonstratives (Parker 1999: 554).

1976, Hercus 1982). As in Chamicuro, verbs have no obligatory tense marking, and usually show none at all, leaving the form of the pronoun alone to signal the tense for the clause.<sup>46</sup> Consider the following examples:

- (67) *Baridji-ri dani gaba.*  
 far.away-ALL go 1.SG.FUT  
 ‘I’ll go a long way off.’ (Wurm and Hercus 1976:40)
- (68) *Bami ŋadu.*  
 see 1.SG.A.PRES  
 ‘I (can) see.’ (ibid:41)
- (69) *Wilgawilga ŋadi.*  
 hungry 3.PL.PRES  
 ‘They’re hungry.’ (ibid:41)
- (70) *Gila dinga-ri waba.*  
 not rise-INC 1.SG.PAST  
 ‘I didn’t get up.’ (ibid:41)
- (71) *Wadu ga:ndi balu-balu.*  
 3.SG.PAST carry small.child  
 ‘It was him that carried the small children.’ (ibid:42)

In almost all of the examples provided by Wurm and Hercus (1976) and Hercus (1982), the tense-inflected pronoun is in subject function (although see (72)). While (tense-marked) subject pronouns usually follow the verb (67), it is also possible for them to follow other parts of speech (as in (69)) or appear clause-initially (71), showing that the tense marking (at least synchronically) is truly a property of the pronoun itself.<sup>47</sup>

Languages like Gurnu (and also Supyire and Yağ Dii – see below) which encode clause-level TAM information on subject pronouns, raise an interesting theoretical problem. Namely, how are we to distinguish between such TAM-inflected pronominals on the one hand and cases of pronominal incorporation into verbal auxiliaries on the other? That is, for each putative example of a *tensed pronominal* in a language we must rule out the analysis whereby these elements are not

<sup>46</sup>In the event that a sentence contains no pronominal forms to encode the tense, a verbal suffix *-dji* is available to mark past tense on the verb.

- (1) *Wi:mbadja ŋuɭardji duŋa-malɖa-dji.*  
 man many bury-REFL-PAST  
 ‘A lot of people buried themselves (in quicksand).’ (Hercus 1982:203, 550)

<sup>47</sup>Wurm and Hercus (1976) provide a number of phonological and morphosyntactic arguments supporting this analysis; details can be found therein.

independent pronominals inflected for tense, but are instead themselves pronominal affixes attached to a verbal (auxiliary) constituent. These two possibilities may be very difficult to distinguish, but at a theoretical level the distinction between a tensed pronominal and an incorporated pronominal is rather significant. The former involves the encoding of clause-level TAM information on dependents, while the latter simply involves the incorporation of a (pronominal) argument into a verbal (head) encoding TAM, and is therefore largely unproblematic for standard theoretical approaches. Likewise, in strictly morphological terms, the coding of (pronominal) argument features on verbal heads is both widely attested and well understood, while the relevance of clausal temporal properties to the inflectional morphology of nominal categories (such as nouns, adjectives and determiners) is rather less well-known.

In the case of Gurnu, this distinction can be made on the basis of examples such as (72), in which a tense-inflected (demonstrative) pronoun appears in genitive (NP-modifying) function.<sup>48</sup>

- (72) *Diga-la gadi gi:ra giḍi-ḍa miři.*  
 return-TOP 3.PL.FUT country this.FUT-GEN towards  
 ‘They’ll go back to their country.’ (Wurm and Hercus 1976:41)

The demonstrative pronoun in this example is both embedded within an NP constituent, and inflected with case, a clearly nominal category. Both of these facts constitute strong evidence that it is a tense-inflected NP constituent, rather than a verbal auxiliary.<sup>49</sup>

<sup>48</sup>The authors claim that while it is usually the subject pronoun that is tense-inflected, it is also possible for non-subjects to be tense-marked when the pronoun refers to the main topic (Wurm and Hercus 1976:40). We assume that this is the case in this example.

Note that the verbal suffix glossed TOP in (72) is a stem-forming affix which is called a ‘topicalising’ suffix by the authors because it focuses attention on the aims of an action, making it definite rather than haphazard (Hercus 1982:191). For example, from the verb *bami-* ‘to see’, it derives *bami-la* ‘to look at’. It therefore has nothing to do with the pragmatic topic of a clause.

<sup>49</sup>Languages with similar TAM-marked forms which seem best analysed as auxiliaries with incorporated pronominals, rather than tense-inflected pronouns, include Hausa (Burquest 1986) and Iai (Tryon 1968).

Similar issues have arisen in the literature regarding the analysis of English non-syllabic reduced auxiliaries such as *’ll* in the following:

- (1) *You’ll* [*/l/*, *\*/əl/*] *be leaving soon.*  
*Hugh’ll* [*\*/l/*, */əl/*] *be leaving tomorrow.*  
*I’ll* [*/l/*, *\*/əl/*] *be leaving tomorrow.*

The non-syllabic reduced pronunciation occurs only with a pronominal, raising the issue as to whether these forms should in fact be analysed as tense-inflected pronouns. This position has been argued for by a number of researchers (e.g. Spencer 1991, Sadler 1998, Barron 1998) on the basis of detailed morphological and phonological evidence suggesting a degree of fusion with the pronominal stem and an independent status consistent with taking them to be tense-inflections.

Tense-inflected subject pronouns are also found in Yag Dii, a Niger-Congo language spoken in Northern Cameroon (Bohnhoff 1986).<sup>50</sup> Subject pronouns of the *mí* series<sup>51</sup> may be inflected according to a future/non-future tense distinction, as shown in the following examples.

- (73) *Yóghó míń lúú sù'ú*  
tomorrow 1SG.FUT leave PERF  
'I (have decided to) leave tomorrow' (Bohnhoff 1986:108, 10)
- (74) *Míń làà kaalí*  
1.FUT leave town-to  
'I will go to town' (ibid, 11)
- (75) *Ba món laa tɛla?*  
PAST 2SG.NFUT go where  
'Where were you (recent past)?' (ibid:109,12)

Other TAM categories may be expressed with the use of separate particles (called 'construction markers' by Bohnhoff (1986)), for example the perfective marker *sù'ú* in (73). Crucially, however, these do not encode a future/non-future distinction, which is encoded only by the tense information associated with the subject pronominals. Examples (73) and (74) illustrate the combination of the future with the perfective and the (unmarked) imperfective respectively. Example (75) illustrates the combination of the non-future with the imperfective, this time with a past construction marker in initial position.<sup>52</sup>

Yag Dii pronouns may undergo further morphological processes to produce emphatic pronominals. Both the non-tensed basic *mí* pronominal set and the future *míń* pronominal set (but not the non-future set) may further inflect for emphasis.

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Thus, on this account *you'll* and *I'll* in the above examples are tense-inflected pronominals on a par with Gurnu *gimba* '2.SG.FUT' and *gaba* '1.SG.FUT'. Bender and Sag (2001), on the other hand, argue that in fact the subject pronominal has incorporated into the tense-marked auxiliary. On this view, these are not subject NPs at all, but auxiliary heads carrying both tense and subject information in a clause with no subject NP. Further discussion of this issue is beyond the scope of the present paper. However, the existence of such tense-inflected pronominals in the languages discussed above show them to be a typological possibility irrespective of whether or not they are attested for English.

<sup>50</sup>The pronominal system of Yag Dii is complex, and only the aspects relevant to our discussion have been presented here. The reader is referred to Bohnhoff (1986) for a more complete discussion of the pronominal system.

<sup>51</sup>A second set of pronouns – the *'àń* series – is used in hortative and some types of subordinate clauses and does not inflect for tense. The choice between the two series of pronouns for subjects itself encodes distinctions of mood and/or clause type. Pronouns of the *mí* series, without tense inflections, are also used in other non-subject functions, as objects, indirect objects and possessors.

<sup>52</sup>Although Bohnhoff's text and various tabulations imply that the combination of a non-future pronoun with the perfective is well-formed, no example of this combination is provided.





### **3.4 Summary on Propositional Nominal TAM**

The following table summarises all of the core cases of propositional nominal TAM discussed above.

Table 8: Languages with Propositional TAM on Nominal Dependents

Language	Family	Type	V TAM	Same Aff	NP type
Lardil	Tangkic	Tense	Oblig	No	non-subjs
Kayardild	Tangkic	Tense, Mood	Oblig	No	non-subjs
Pitta Pitta	Pama Nyungan	Tense	Oblig	No	subjs, obj, instr
Gurnu	Pama Nyungan	Tense	Opt Pst	No	mainly subj pronouns
Sirionó	Tupí-Guaraní	Tense, Asp	Opt	Yes	subjs, iobj, others??
Chamicuro	Arawak	Tense	Opt	No	all
Yag Dii	Niger-Congo	Tense	No??	No	subj pronouns
Supyire	Niger-Congo	Mood	N/A	No	1st,2nd pronouns
Gui	Central Khoisan	Mood	No??	No	subj pronouns
Iraqw	Cushitic	Tense	Oblig	No	topics??

**Key:**

V TAM: is the corresponding TAM marking obligatory, optional or unavailable (on either the verb or clausal particle)?

NP type: what is the function of the NP bearing TAM?

From this table we can make the following observations. Firstly, the propositional nominal TAM may work in conjunction with verbal TAM (either obligatorily or optionally), or may be the sole determiner of a particular TAM distinction. Secondly, if a language encodes propositional TAM on adjunct NPs, then it will also encode it on argument NPs. Thirdly, while the majority of languages with some form of propositional nominal TAM express distinctions of tense, this is not necessary as there are languages in which mood rather than tense is expressed in the nominal system. It remains to be seen whether the relative rarity of mood (and indeed aspect) marking is maintained as further languages with propositional TAM are encountered. Fourthly, in only one language (Sirionó) is the same inflectional morphology used to encode propositional TAM on both dependent nominals and on verbal heads. This contrasts with Jarawara in Table 4, for example, in which the same inflectional morphology encodes independent nominal TAM on nominal dependents and propositional TAM on clausal heads (be they verbs or predicate nominals). An interesting question for further research, then, is to determine whether this pattern is attested in other languages. Finally, while the sample is again small, it includes languages from a number of different language families and geographic regions, suggesting that the phenomenon of propositional nominal TAM must be considered a genuine possibility for language structure.

## 4 Further Implications

The purpose of this paper has been to explore in some detail the phenomenon of tense, aspect and mood marking of nominal constituents, bringing together a substantial body of data from a wide range of languages. Although the existence of nominal TAM is noted in many descriptive grammars, the significance of such facts has generally gone unremarked, and to our knowledge we present here the first detailed crosslinguistic survey of nominal TAM. We propose a basic distinction between two types of nominal TAM: *independent* nominal TAM, in which the nominal itself is temporally situated independently of the proposition as a whole; and *propositional* nominal TAM, in which nominal dependents are inflected for clausal TAM features in conjunction with, or instead of, TAM marking on the verb.

This discussion has highlighted a number of issues for further research. With respect to independent nominal TAM, we have found languages that encode both tense and mood, but no languages (as yet) which encode aspect. We have also found some languages which allow ‘tense stacking’, whereby a single nominal may be inflected with two tense markers, each one having a different scope relation. The phenomenon of tense stacking has, as far as we’re aware, not been reported elsewhere in the literature.

With respect to propositional nominal TAM, we have found languages in which the nominal TAM system supplements the TAM information on the verb and others in which the particular TAM distinction is (or can be) encoded *only* on the dependent NP. In one language (Sirionó), the same set of TAM affixes may appear on either nouns or verbs or even on both in the same clause. A particularly important question for future research, and one which we have not addressed at all in this paper, is by what diachronic processes such varied and unusual systems may arise.

Nominal TAM inflection has wide-ranging implications for many aspects of linguistic theory. Firstly, the recognition of tense as a possible inflectional category for nouns has implications for theories of word class categorization which treat nouns as inherently time-stable, manifesting stactic concepts that change little over time (Givón (1979: 320-322), (2001: 51-54)). The analysis of nouns as inherently time-stable leads to the prediction that it should not be possible for them to be temporally modified independently of the verbal predicate. This, however, is exactly what we find in languages with independent nominal TAM inflection (discussed in section 2.1). While it is certainly true that nouns are less prototypically marked for tense than verbs cross-linguistically, their being more inherently time-stable than verbs can not be interpreted as precluding them from being temporally modified at all.

The treatment of nouns as time-stable is contradicted by work in semantics which has argued that nouns, being semantic predicates, are time sensitive and therefore need to receive a temporal interpretation independently of that of the

verbal predicate (Enç (1981, 1986), Musan 1995, Lecarme (1996, 1999), Tonhauser (2000, 2002)). The majority of this work has centred on languages (like English) in which tense is not encoded morphologically on nouns (with Lecarme's work on Somali a notable exception). The existence of languages with explicit tense marking on nominals would appear to be overt morphological evidence for these semantic approaches, although it remains to be seen how easily such overt morphological systems can be integrated with semantic theory in this respect.

A further implication related to the issue of word class typology is the fact that tense (and to a lesser extent, aspect and mood) must now be seen as a possible inflectional category for nouns as well as for verbs. Traditionally, inflectional categories are partitioned between the two major word classes: nouns are inflected for categories such as case, gender and number and verbs for those like tense, mood, aspect and person/number agreement (e.g. Lyons (1968: Ch. 7), Hopper and Thompson (1984:703), Givón (2001: Ch. 2)). In fact, the categories of tense, aspect and mood may be categories of nouns also (Evans 2000, Lehmann and Moravcsik 2000). Furthermore, the data on propositional nominal TAM shows that tense may even be an agreement category (Evans 2003, *contra* Lehmann and Moravcsik 2000).

Such inflection of dependent nominals for propositional TAM properties also has significant implications for a number of grammatical architectures. According to the standard notion of headedness, clausal properties (including propositional TAM) must be associated with clausal heads (i.e. verbs and auxiliaries). Dependent nominals, especially subject nominals (which are not even part of the VP), are not clausal heads and therefore (according to such formal theories), cannot encode clausal properties. Thus, the data that we have presented in section 3 poses real challenges for a number of formal theories of grammatical structure.<sup>55</sup>

In this paper we have focussed solely on the expression of TAM on nominal constituents. In fact, there are also languages in which tense is encoded on other parts of speech, such as adverbs and prepositions (e.g. Malagasy (Sabel 2002), Maori and Tagalog (Haspelmath 1997:43-47)). The extent of TAM inflection on these (and other) word classes remains to be seen, and we leave the investigation of its properties and its relationship to the typology of nominal TAM inflection as a topic for further research. Clearly, however, the breadth of data from languages which encode TAM information on their nominals and other NP constituents shows that TAM can no longer be thought of as an inflectional property solely of verbs.

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<sup>55</sup>For fuller discussion of this issue, the reader is referred to Nordlinger and Sadler (in press).

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