

Tense, But in the Mood: Diachronic Perspectives on the Representation of Time in Ao*

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Ao demonstrates some typologically intriguing characteristics that shed light on the diachronic development of its tense marking morphology. The paper proposes that the language originally had a binary mood system contrasting a zero-marked realis with an overtly marked irrealis mood. It then extended the functions of two of its nominalizers to encoding temporal distinctions, and the old zero-marked realis mood became integrated into the newly grammaticalized system of temporal deixis as the zero-marked past tense category. The irrealis marker occurs in paradigmatic opposition with these newly grammaticalized tense markers, but continues to encode an independent category of mood that is not constrained to any particular temporal deictic setting. Drawing on additional evidence from other languages, it is demonstrated that nominalizing morphology turns out to be a rather commonly exploited source for the grammaticalization of tense markers.

Key words: mood, tense, nominalization, purposive, grammaticalization, Ao, Tibeto-Burman

1. Introduction

Tense, aspect and mood are three major categories of grammar that are exploited by languages for characterizing the nature of events and states in the domains of time and actuality. **Tense** is concisely defined by Comrie (1985) as the grammaticalized location of an event in time relative to a deictic centre; in the case of absolute tense, this plots the event with respect to the moment of speech. The deictic centre can also be shifted to a point prior to or after the moment of speech to encode a relative tense, such as is found with future or past perfects, e.g. *{By next January we will have been married for 18 years.}* or with reported speech, e.g. *{Morticia will say that she was close to*

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death at the time.}. Independent of the grammaticalized location of an event in time is **aspect**, which encodes the status of the predicated event or state with reference to the time period over which it occurs. Lastly, **mood** was originally used to refer to an inflectional category of classical languages that encoded the illocutionary force of an utterance (i.e. indicative, interrogative, imperative, subjunctive), but has been reinterpreted as essentially referring to the binary contrast between actualized and non-actualized events (Chung & Timberlake 1985, Mithun 1999, Palmer 2001). Of these three, only tense and mood can be considered deictic categories.¹

Mithun (1999:173) views the realis-irrealis contrast in terms of what is knowable through direct perception, versus what exists within the realm of thought and thus is only knowable through imagination. She reports that the irrealis category is usually (though not consistently) the overtly marked member of this opposition in Native American languages. In modern linguistic theory, irrealis mood is subsumed by different types of propositional modality, including but not limited to obligation, necessity, possibility, conditionality, counterfactuality and various other hypothetical states of affairs. Chung & Timberlake (1985:241) account for the profusion of irrealis sub-categories by proposing that while the actualization of an event must be straightforwardly absolute, there are degrees to which an event can be portrayed as being relatively non-actual.

Despite the fundamental differences identified between tense, aspect, and mood, some inherent correlations hold between the three grammatical categories, and it is these correspondences that facilitate translations from an aspect-oriented language such as Mandarin Chinese (Li & Thompson 1981: Ch.6, Xiao & McEnery 2004), to a tense-oriented language such as English, or to a mood-oriented one such as Burmese (Comrie 1985:50-52, Vittrant 2005) or Caddo (Chafe 1995). The categorial equivalences of tense, aspect and mood are captured in the following observations by Chung & Timberlake (1985:256).

An event that will occur after the speech moment is non-actual and potential. Hence there is a correlation between future tense and non-actual mood and, by implication, between non-future tense and actual mood. An event that is ongoing at the speech moment has not been completed. Hence there is a correlation between present tense and incompletive (imperfective or progressive) aspect and, by implication, between past tense and completive (perfective or non-progressive aspect). A consequence of these correlations is that temporal distinctions may be expressed by morphosyntactic categories that have wider modal or aspectual functions.

¹ Mushin (2001), citing Jakobson (1957), argues that the evidential category of modality is also deictic, in that it indexes the speaker's degree of commitment to the truth of their proposition.

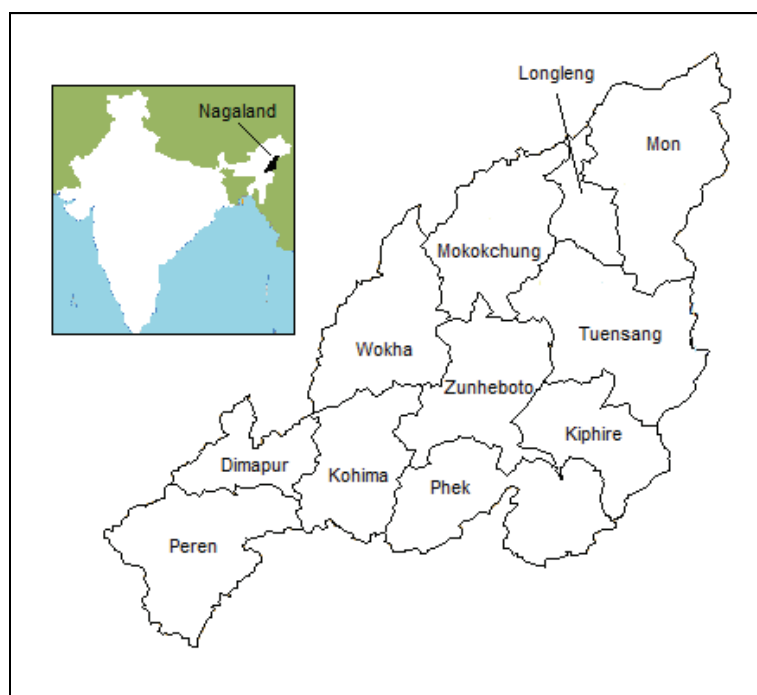
Absolute time reference is traditionally conceptualized as forming a tripartite system in which events are located anterior to, concurrent with, or posterior to the present moment, which usually coincides with the moment of speech. However, languages differ markedly in how temporal deixis is grammatically encoded, and grammaticalized tripartite tense systems are actually quite rare in the world's languages. Perhaps this is what has led Lyons (1977:677-678) and Comrie (1985:43-48) to address the controversy surrounding the definition of the temporal category of future, and both question whether such a category of 'tense' is valid. A major objection raised by both authors is based on conceptual grounds. Whereas events that have unfolded in the past are immutable, the future is completely speculative, so it can never be simply a temporal deictic category. Comrie therefore suggests that while the difference between past and present is one of tense, the difference between future on one hand, and past and present on the other, is in fact a difference of mood.

The observation that tense and mood share an intertwined relationship is highly relevant to the topic of this paper, because it helps to explain the genesis of a tense marking system in Ao. Using data from the Mongsen dialect, it will be shown that functional correlations between tense and mood categories are precisely what could have facilitated the reinterpretation of an original system contrasting realis and irrealis mood as a hybrid tense/mood system following the grammaticalization and integration of new temporal marking morphology from nominalizing sources. The analysis will be supported with analogous data from a selection of genetically-related and unrelated languages. This will show that nominalization is by no means an uncommon source of tense-marking morphology, albeit one that has hitherto received insufficient recognition in the typological literature.

The paper has the following structure. Section 2 provides a brief overview of the typological features of Mongsen Ao and background information on the language's speakers. Section 3 outlines the encoding of the realis-irrealis mood contrast, considers manifestations of the fuzzy boundary between past tense and realis mood, and describes sub-categories of irrealis in verbal clauses. Section 4 then describes the tense marking system. This builds on the hypothesis that the grammaticalization of tense-marking morphology from nominalizers resulted in the incorporation of the old realis mood in a new system of temporal deixis. Section 5 identifies correlations between morphological forms of the present and immediate future tense markers and two nominalizing suffixes of Mongsen Ao, and concludes that they must respectively derive from the same nominal sources. Section 6 presents data from other languages that have developed a temporal marking function from nominalizing morphology via a similar pathway of historical development. Lastly, Section 7 considers cognitive and structural factors that might be responsible for types of nominalizers extending their functions to the marking of tense.

2. Thumbnail typological profile of Mongsen Ao

Ao is a Tibeto-Burman language of the Angami-Ao subgroup (Coupe 2012) predominantly spoken in the Mokokchung district of Nagaland, northeast India, by approximately 232,000 people.² The Ao recognize two major dialects of the language. Chungli is the prestige dialect and is currently taught in schools up to the tenth grade. It also has a Bible translation and a locally published newspaper that now boasts an online presence.³



Map 1: Districts of Nagaland, northeast India. Mokokchung District in the northwest of the state is the principal location of Ao villages.

Mongsen is an unwritten dialect spoken as a mother tongue by approximately forty per cent of the Ao community in villages situated in the south and west of Mokokchung district. Most Mongsen speakers also speak Chungli because of its prestige status, but the converse is not necessarily true; Chungli speakers generally have substantial difficulty

² This figure is taken from the Census of India, 2001.

³ See <http://tiryimiyim.com>.

understanding Mongsen without extensive prior exposure. This is attributable to the considerable divergences found in the forms of the two dialect's grammatical morphemes. Both dialects continue to be acquired by younger generations, and monolingual speakers can still be found living traditional subsistence lifestyles in villages.

Despite the fact that Ao continues to be acquired by new generations of speakers, it appears that some specialized domains, such as the poetic language of ballads and song, are gradually becoming lost. This is particularly apparent for those who leave their community in order to receive an English-medium education in the larger towns of Nagaland, such as Kohima and Dimapur, or further afield in Greater India. Understandably, a speaker's knowledge of farming and hunting practices, traditional cultural activities and local flora and fauna will gradually be forgotten if they are isolated from the environments in which a familiarity with these semantic domains is critical for survival. The attrition of traditional knowledge in the younger generations becomes particularly obvious when one attempts to enlist native speakers in their late teens or twenties to act as translators of their elders' traditional texts.

The following typological features briefly characterize the grammatical structure of Mongsen (see Coupe 2007 for a comprehensive grammatical description):

- agglutinative morphology, predominantly suffixing;
- dependent marking at the clausal level, with noun phrases case-marked by postpositional clitics;
- pragmatically motivated agentive case marking of actor NPs in both bivalent and monovalent clauses, with agentive marking only obligatory on the causer argument of a causativized predicate and on the actor NPs of generic statements characterizing a class of referent;
- absence of a syntactic pivot, therefore the cross-clausal coreferentiality of elided NP arguments is determined by contextual pragmatics;
- no voice distinctions, but virtually any bivalent verb can be used with a single core NP that corresponds to the undergoer argument of its bivalent use;
- ubiquitous zero anaphora;
- three lexically contrastive tones subject to extensive tone sandhi alternations;
- use of overriding intonation contours to mark phrasal and clausal boundaries;
- morphologically complex verbs with eleven possible positions in the template and stems inflected for tense/aspect/modality;
- numerous 'lexical' suffixes on verb stems that have grammaticalized predominantly from verb roots and express a range of directional and resultative meanings, plus other types of derivational affixes;
- consistent head-final constituent order, with the order of NP arguments before the verb pragmatically-determined;

- absence of a native conjunction word class, with the consequence that clause linkage is almost exclusively achieved via converbs or grammaticalized collocations involving converbs that serve as discourse connectives.

Table 1 below demonstrates the structure of the verb stem. The tense and mood markers occur right where one might expect to find inflectional morphology — at the outermost edge of the verb stem (Bybee 1985) — and it could be significant for reasons that will become apparent that nominalizing suffixes share the same slot as the tense marking suffixes.

Table 1: Morphological structure of the Mongsen Ao predicate⁴

1.	Prohibitive mood prefix, admonitive mood prefix, negative prefix, nominalizing prefix
2.	Root
3.	*Lexical suffix zone
4.	Reciprocal/collective suffix
5.	Directional suffix
6.	Aspectual suffixes
7.	*Modality suffix zone
8.	Resultant state suffix
9.	Perfective aspect suffix
10.	Causative suffix
11.	Negative suffix, positive imperative suffix, converb suffixes tense/mood suffixes, nominalizing suffixes

In (1a-d) a selection of examples from texts demonstrate the potentially complex structure of Ao verb stems. The numbers in the third tier of interlinearization respectively correspond to the particular slot in the predicate in which their verbal grammatical categories occur, as listed above in Table 1.⁵

⁴ An asterisk * denotes a “zone” (after Kari 1989). These are distinguished from other slots in the verb template by the fact that more than one morpheme belonging to the same grammatical category can occur syntagmatically in the zone. All the other positions only permit the paradigmatic occurrence of a single morpheme.

⁵ Except where duly acknowledged by citation, the data in this paper derives from my personal fieldwork in northeast India between 1996 and 2012. The Mongsen Ao examples are taken from a collection of 40 published and unpublished narrative texts (unless explicitly stated to be elicited) and predominantly represent the variety spoken in Mangmetong village, Mokokchung district; a few examples represent the Mongsen variety spoken in Waromung village — these

- (1) a. məzuk-sa-jak-iʔ-Ø
 crumple-SPREAD-RS-CAUS-PST
 2 3 8 10 11
 ‘caused to be left in a crumpled state’
- b. khiʔ-təp-ja-əɪ
 give-RECIP-CONT-PRES
 2 4 6 11
 ‘giving to each other’
- c. mə-tʃəm-tʃhà-i
 NEG-drink-CHANCE-IRR
 1 2 7 11
 ‘will not have the opportunity to drink’
- d. tʃãʔ-ma-juk-pànə
 consume-COMPL-PFV-CAUSAL.CVB
 2 6 9 11
 ‘because it was completely eaten’

3. Tense/Mood categories of Mongsen Ao

It is appropriate to identify the past tense as the zero-marked category in a synchronic description of Mongsen Ao, because that is how native speakers consistently translate into English the tense of the bare verb roots of examples (2)-(4) and every other finite, morphologically-unmarked verb serving as a matrix clause predicate.

- (2) *təsa.ə̀ nuksənsaŋpaʔ əhlú nə wa.*
 tə-sa-əɪ nuksənsaŋ-pàʔ a-hlú nə wa-Ø
 thus-say-SEQ pers.name-M NRL-field ALL go-PST
 ‘And having said that, Noksensangba went to the field.’ (Coupe 2007:460)

are accordingly noted as such. The texts were narrated by seven speakers aged 40 to 70 years, of which two were women and the rest were men. Examples from unpublished texts are notated with ‘text’. In addition, I have included a small amount of elicited material (notated as ‘elicited’) and things that were uttered to me or which I overheard while in the company of Mongsen speakers and transcribed at the time (notated as ‘field notes’). A list of abbreviations used in glosses is provided at the end of the article. High and low tones are respectively distinguished by acute and grave diacritics over vowels, and the mid tone is distinguished by the absence of a diacritic. Because of the frequency and potential complexity of morphophonological alternations, four lines of interlinearization are henceforth used to represent the language examples.

- (3) *níʔ, áhɣáʔ təpəti à asət tʃu nə za.*
 níʔ a-hɣáʔ tə-pəti à asət tʃu nə za-Ø
 one.day NRL-fish NZP-be.big one fishing.weir DIST ALL enter-PST
 ‘One day, a big fish entered the fishing weir.’ (Coupe 2007:477)
- (4) *khən hmapaŋ à ku lítǎpàʔ nə álima zaŋlujpàʔ tənlaŋ.*
 khən hmapaŋ à ku lítǎ-pàʔ nə á-líma zaŋlu-i-pàʔ tənlaŋ-Ø
 once time one LOC pers.name-M AGT NRL-world make-IRR-NR start-PST
 ‘Once upon a time, (the god) Lichaba began to make the world.’ (Coupe 2007: 294)

These three examples demonstrate how a zero-marked matrix verb stem encodes the temporal location of an event that takes place prior to the moment of speech. Each of the zero-marked stems also makes reference to an actualized event, so a decision has to be made as to whether the zero morpheme could be marking a tense or a mood category. As it will be subsequently demonstrated, this zero morpheme neatly corresponds to one slot in a paradigm of tense marking morphology that includes an overtly marked present *-ǎ* and an overtly marked immediate future *-u*. If not for this fact, it would be expedient to treat *-Ø* as representing a mood rather than a tense category.

Bybee et al. (1994:81) remark that in their survey of 76 languages, the past tense is the most frequent category to be expressed by overt grammatical means. This makes a zero-marked past tense a typological rarity when considered from a cross-linguistic perspective. If any temporal category is expressed by a zero morpheme in a system of temporal deixis, then it is generally more common for the present tense to be the morphologically unmarked member of the paradigm, according to Dahl & Velupillai’s (2011) typological study of past tense marking in 222 languages.

This anomaly naturally leads one to construct plausible explanations for how a zero-marked past might have grammaticalized in a system of tripartite tense marking, and one of the aims of this paper is to demonstrate that the most likely historical source for the zero-marked past tense is an older binary mood opposition. It will be argued that this mood system originally contrasted a zero-marked realis category with an overtly marked irrealis, prior to undergoing a reanalysis of its original function in a newly grammaticalized system of tense marking.

The absence of overt morphological marking for the past tense/realis mood of Ao is consistent with Mithun’s (1999:173) observation that realis is typically the unmarked category of the realis~irrealis mood contrast. Furthermore, an event that is actualized must be temporally located prior to the time at which it is reported. This accounts for the functional equivalence of realis mood and the past tense, and further suggests a possible explanation for why a mood category could be reinterpreted as a tense category.

We now turn to a consideration of irrealis mood marking. The defining characteristic of the irrealis marker *-i* of Mongsen Ao is that, unlike a future tense, it can be used to depict non-actualized events that are temporally situated prior to the moment of speech. This is demonstrated in the folkloric textual examples of (5)-(6) below, in which non-actualized events located in the past receive the same morphological encoding as events that are predicted to occur after the moment of speech, as contrastively shown in (7)-(8). The non-actualization of the event in the past is necessarily captured by *would* in the free translations of examples (5)-(6).

- (5) *təɬ təzəmpa? nə ɬakəɬ, tuŋnət nə à nə kà? pa tʃuphà tʃhàjù?*
 tə-əɬ tə-zəm-pa? nə ɬak-təp-əɬ
 thus-SEQ NZP-be.senior-COMP AGT tussle-RECIP-SEQ
 tuŋnət pa nə à nə kà? tʃuphà tʃhà-i-ù?
 3DU 3SG AGT one AGT also king COP-IRR-DECL
 ‘And arguing over who was the more senior, one-by-one each (asserted that) he would become the king.’ (text)
- (6) *pa tsəpà? ku atsə mətʃəmàjù?*
 pa tsəpà? ku a-tsə mətʃəm-i?-i-ù?
 3SG well LOC NRL-water NEG-drink-CAUS-IRR-DECL
 ‘They would not let her drink at the well.’ (Coupe 2007:469)
- (7) *inət la nì? tuŋpaŋ tshətəpjà?*
 inət la nì? tuŋpaŋ tshətəp-i-ù?
 1DU:INCL TOP one.day war meet-RECIP-IRR-DECL
 ‘One day we will meet each other to do battle.’ (text)
- (8) *tsəŋ.ʉtshəla tʃu tshəj.*
 tsəŋ.ʉtshə-la tʃu tshə-i
 pers.name-F DIST take-IRR
 ‘(I) will take Tsengrutsela.’ (Coupe 2007:349)

The semantics associated with *-i* in these sentences logically precludes analyzing this morpheme as a future tense marker, because by definition a future makes reference to an event that is located temporally after the time of speech or some other reference point. This constitutes the fundamental difference between future tense and irrealis mood, as the irrealis mood marking is not constrained to a particular temporal setting.

In addition to these verbal categories of mood, at a higher level of constituency a declarative sentential mood clitic *-ù?* optionally attaches to the last word of the clause — its host may be any clause-final constituent (in addition to verbs, this can also be a noun

or nominal adjunct, or a derived adjective functioning as a verbless clause complement). When the declarative clitic is used, it identifies the utterance as an assertion. This means that *-i?* cannot occur in interrogative or imperative clauses under any circumstance, and it never occurs on the non-finite clausal constituents of clause chains. A comparison of examples (7)-(8) above demonstrates its optionality in declarative sentences. The declarative sentential mood marker also appears to have fused with a copula and is used in the expression of epistemic modality; a discussion of this construction is postponed until §3.2.

3.1 Irrealis marking in citation forms of verbs

A feature of citation forms of Mongsen Ao verbs is that they are usually uttered with the irrealis marker *-i* and the general nominalizer *-pà?* suffixed to the root. Some examples of citation forms are *lanli-táp-i-pà?* (reply-RECIP-IRR-NR) ‘to reply, to argue’, *lan-sá-i-pà?* (cut-SEPARATE-IRR-NR), ‘to cut’ and *tsəŋ-i-pà?* (bark-IRR-NR) ‘to bark’. Citation forms of verbs thus share an identical morphemic structure with nominalized stems taking irrealis marking and functioning as relative clauses, viz. $\sqrt{\text{VERB-IRREALIS-NOMINALIZER}}$. Examples of the relative clause structure are provided in (13) and (15) below. This structure also happens to be identical to one form of verbal marking used to express a purposive meaning, about which more will be said in §5.2.

Haspelmath (1989:288) proposes that the infinitival forms of verbs of many European languages, which are also commonly used as citation forms, have diachronic origins in purposive nominalizations. While Tibeto-Burman languages generally lack a form of verb that might be identified as infinitival, the correlation with citation forms is nevertheless noteworthy, because it suggests that they too may have originated from purposive nominalizations.

3.2 Deontic and epistemic modality marking

Not unexpectedly, the irrealis marker is also a component of verb forms expressing deontic and epistemic modal meanings. Furthermore, the deontic modal form has an identical structure to the purposive nominalization and the citation forms of verbs discussed in the preceding section, viz. $\sqrt{\text{VERB-IRREALIS-NOMINALIZER}}$. This form of the verb is productively used to express an obligation.

- (9) *ami? hùŋtəpəɬ aɦju pentəŋ thùŋku tʃəjpá?. alà hənsətəɬ, tʃəjukipà?*
 a-mi? hùŋ-təp-əɬ a-ɦju pentəŋ thùŋ-ku
 NRL-person fight-RECIP-SEQ NRL-word judgement reach-LOC.CV

tʃãʔ-i-pàʔ alà hənsət-əɪ tʃãʔ-juk-i-pàʔ
eat-IRR-NR CONJ kill-SEQ eat-PFV-IRR-NR

‘When people fight with each other, upon (the village council) reaching judgement (a pig) must be eaten. And, after it is killed, (it) must be eaten up.’
(Coupe 2007:350)

A non-finite form of verb is twice used as a matrix clause predicate in the paratactic clauses of (9). This is a significant observation, because it provides a clue as to how a non-finite nominalized stem may have developed the ability to function as a matrix clause predicate despite its being a nominalization.

Such non-embedded or ‘stand-alone’ nominalizations are widely reported in Tibeto-Burman languages (e.g. Matisoff 1972, Watters 2002, Coupe 2007, Coupe 2008 and papers therein, Yap et al. 2011 and papers therein) and possibly originate from what were originally equational clauses, because the event represented by this type of verbal marking can also be situated in the past or the future when a copula is used to carry the tense marking. The omission of a copula in order to express a habitual meaning, as demonstrated by (9), plausibly resulted in non-finite nominalizations becoming reinterpreted as matrix predicates. Although Matisoff (1972:247) explicitly discounts the possibility of a higher verb being unexpressed in Lahu non-embedded nominalizations, this explanation conceivably accounts for the deontic modal verb forms of Mongsen Ao — compare (10), in which an obligation is located in the temporal past by a suppletive past tense form of copula serving as the higher matrix verb of the clause.

(10) *mətʃatshəŋ nə tsəŋpaʔ áwk sə, sati ni ku tsəjpaʔ tʃhà.*

mətʃatshəŋ nə tsəŋ-pàʔ a-úk sə
pers.name AGT stab-NR NRL-pig ANAPH
sati ni ku tshə-i-pàʔ tʃhà
wedding day LOC take-IRR-NR COP:PST

‘And then, the aforementioned pig that Mechtseng speared had to be taken on the day of the wedding.’ (Coupe 2007:350)

The irrealis marker can be used alone for expressing obligation, such as when giving instructions for performing procedures, as demonstrated in the example of (11). Matisoff (1972:245) reports that the general nominalizer *ve* of Lahu is also sometimes deleted from its verb stem in simple clause structures.

- (11) *muli tʃu phàtshəŋi atə.*
 muli tʃu phà-tshəŋ-i atə
 drug DIST sprinkle-ATTACH-IRR PTCL
 (Speaking of making rice beer:) ‘The drug (i.e. yeast) should be sprinkled
 (on the fermented rice).’ (Coupe 2007:349)

The expression of epistemic modality requires a verb root to be suffixed by the irrealis marker; this is used in tandem with an auxiliary *liw?*, which in turn may be historically related to a copula *li* that has fused with the declarative marker *-ù?*.⁶ Bybee & Pagliuca (1987:111) observe that copulas are common verbal sources of futures, but correlate their grammaticalized use with a sense of obligation rather than with root possibility. In Mongsen Ao, this construction expresses the epistemic modality of non-actualized events that will possibly occur after the moment of speech, e.g. *wa-i liw?* (go-IRR MIGHT) ‘might go’, but the irrealis suffix is not used for expressing the negated possibility of an event having occurred before the moment of speech, e.g. *mə-wa-la liw?* (NEG-go-NEG.PST MIGHT) ‘might not have gone’. At present, the reason for this constraint is not understood.

3.3 Mood marking in relative clauses

A further noteworthy characteristic of the verbal mood categories of Mongsen Ao is that they can be used to encode the (non-)actuality of events represented by the notional predicates of non-finite relative clauses. Although it might be assumed that mood marking results in a finite verb form able to anchor matrix clauses, it is also the case that an irrealis/realis contrast can be signalled in the nominalized stems of relative clauses by the presence or absence of overt mood marking.⁷

By default, any relative clause’s nominalized verb stem that is not suffixed by the irrealis marker is interpreted as encoding either a habitual or a realis meaning. Alternatively, an irrealis interpretation can be encoded by the addition of the irrealis marker to the nominalized stem. The elicited examples of (12)-(13) demonstrate this possibility of marking an actualized versus non-actualized contrast in relative clauses, and examples (14)-(15) present naturally uttered textual examples of this formal opposition.

⁶ Diphthongization of *i+u* as */iw/* is a common outcome of the collocation of these vowels in Mongsen Ao word formation processes.

⁷ Interestingly, Vittrant (2005) reports the same possibility of using mood marking morphology in Burmese to contrast actualized versus non-actualized events in relative clauses. Like Mongsen Ao, these Burmese mood markers are also used to express the realis and irrealis moods of matrix clause verbs.

- (12) [a-tʃak [mələn-pàʔ] tʃu]_{NP}
 NRL-paddy transfer-NR DIST
 ‘The paddy (they) transfer (habitually)’; ‘The paddy (they) transferred’ (elicited)
- (13) [a-tʃak [mələn-i-pàʔ] tʃu]_{NP}
 NRL-paddy transfer-IRR-NR DIST
 ‘The paddy (they) will transfer’ (elicited)
- (14) *tʃəʔ nə tʃʊŋkuli tʃu zəŋlu, metʃatshəŋ nə tsəŋpəʔ khùma paŋ ku zətshəŋiʔ.*
 tʃəʔ nə tʃʊŋku-li tʃu zəŋlu-əɪ
 3DU AGT clay-soil DIST make-SEQ
 [[metʃatshəŋ nə tsəŋ-pàʔ] khùma paŋ]_{NP} ku zə-tshəŋ-iʔ-Ø
 pers.name AGT spear-NR wound mouth LOC spread-ATTACH-CAUS-PST
 ‘They (two) made a clay poultice and spread it on the opening of the wound
 that was inflicted by Mechatseng’s spearing.’ (text)
- (15) *“atʃu kúták thùŋipàʔ miwʔ.”*
 a-tʃu [[kúták thùŋ-i-pàʔ] miʔ-ùʔ]_{NP}
 NRL-DIST heaven reach-IRR-NR person-DECL
 ‘“They are the people who will reach heaven” (said Noksensangba).’ (Coupe
 2007:469)

Given that relative clauses are non-finite clausal constituents, it is clearly apparent that mood falls outside of any constraint that prohibits its marking in this type of dependent clausal constituent, and furthermore, that the suffix *-i* cannot be encoding an absolute tense category.

3.4 Interim summary

To summarize the observations thus far, it is found that the verbal clauses of Mongsen Ao present a basic contrast between realis and irrealis mood, and that the expression of irrealis mood is overtly encoded by a suffix, whereas realis mood is encoded by the absence of overt marking. In addition to denoting unrealized events of matrix clauses, the irrealis suffix also occurs in the citation forms of verbs, in matrix verb stems expressing deontic and epistemic modality, and in the nominalized stems of non-finite relative clauses. All these uses of irrealis marking are homogeneously characterized by the non-actualization of the event represented by the irrealis-marked verb. In contrast, zero-marking on verb stems consistently corresponds with actualized events that are also necessarily located in the temporal past.

In the next section it will be shown how the original unmarked realis mood came to be reinterpreted as a paradigmatic category of a temporal deictic system following the reanalysis of nominalizers as markers of absolute tense. This logically accounts for the typological peculiarity of a past tense being encoded by a null morpheme.

4. Absolute tense categories of Mongsen Ao

From a synchronic perspective, the absolute tense category of Mongsen Ao presents what could be analyzed as a tripartite system contrasting past, present and immediate future tenses. Together with the irrealis mood marker and the anterior marker, these morphemes occur in paradigmatic opposition in the stem-final slot of finite verbs (see Table 1). The morphological forms of the entire tense/mood marking system are listed in Table 2, and examples (16)-(19) respectively demonstrate the marking of past tense, present tense, immediate future tense and anterior tense in verbal clauses. Some negated verb forms demonstrate divergent marking patterns, and these are discussed in greater detail in the following sub-sections. The unmarked realis/past and the irrealis categories have already been dealt with in §3, therefore the focus here will fall mainly on the uses of the present and immediate future tense marking, and more briefly on anterior marking.

Table 2: Mongsen Ao tense and mood marking suffixes

-Ø	Past	-ì	Irrealis
-ə̀ɿ	Present	-ukù	Anterior
-ɿù	Immediate Future		

(16) Past tense:

tə̀ɿ, tʃünipitʃunə, hənsəlila sə nə ahən təpuŋla mə̀tsəphala
 tə̀ɿ tʃünipitʃunə hənsəli-la sə nə
 thus-SEQ from.that.day leopard.cat-F ANAPH AGT
 a-hən tə-puŋ-la mə̀-tsəpha-la
 NRL-chicken RL-male-F NEG-fear-NEG:PST
 ‘And, from that day, Leopard Cat did not fear Rooster.’⁸ (text)

⁸ NPs whose referents are animals in Mongsen Ao folklore tales are always assigned feminine gender by means of the feminine gender suffix *-la*, paradoxically even when the referent is conceptually masculine.

- (17) Present tense:

tʃāmi.ɿ, təpākukà? khatsəpha áŋ məpʊŋtsəŋə.ɿ.

tʃāʔ-mi-əɿ tə-pākukà? kha-tsəpha-a áŋ mə-pʊŋtsəŋ-əɿ
consume-DESID-PRES thus-CONCESS be.bitter-fear-SIM just NEG-jump-PRES
'(Leopard Cat) wants to eat Rooster, but even so, being bitterly afraid (she)
doesn't dare pounce.' (text)

- (18) Immediate future tense:

nì nə mùŋsənəɿ hjutsə sà.ù.

nì nə mùŋsən-əɿ hjutsə sa-ù
1SG AGT Mongsen-ANOM story say-IMM
'I'll tell a Mongsen man's story.' (text)

- (19) Anterior tense:

“ajà! tʃùku nì kà? jah.ɿtʃukukù.”

ajà tʃùku nì kà? jah.ɿ-tʃuk-ukù
EXCLM consequently 1SG also be.one's.fill-PFV-ANT
'Ayaa! I'm completely fed up with this.' (Coupe 2007:476)

4.1 Present tense

Example (20) demonstrates the use of the present tense suffix -əɿ to encode an event that overlaps with the time of utterance.

- (20) *tʊŋət mətəja.ù?*

tʊŋət məʔ-təp-ja-əɿ-ù?
2DU slap-RECIP-CONT-PRES-DECL
'They (two) are slapping each other.' (field notes)

The present tense suffix is also used for expressing timeless habitual activities (Waromung Mongsen, thus *na* agentive).

- (21) *nì na mənaŋ tʃā.ɿ.*

nì na mənaŋ tʃāʔ-əɿ
1SG AGT first eat-PRES
'“I eat (the grain) before (anyone else)”, (said Rat).' (text)

Identical stem structures can be used to denote either present or past tense settings in negated verbal clauses for some verb classes, as suggested by a comparison of the verb stems of (22) and (23) below. In the situated contexts of their narratives, the negated

verb stem of (22) conveys a past tense meaning, whereas in (23) a stem of identical structure conveys a present tense meaning. This suggests that a conflation of these two tense categories takes place in negated declarative clauses.

- (22) Negated past declarative:

thaŋtsəla nə “wa! nì məmətətlàw?”

thaŋtsə-la nə wa nì məmətə-la-ù?

tree.shrew.sp.-F AGT EXCLM 1SG NEG-know-NEG:PST-DECL

‘Squirrel said “Wa! I didn’t know!”’ (Coupe 2007:347)

- (23) Negated present declarative:⁹

tətʃhàku, “wa mà.nulàw? mà.nulàw?, pùkphula nàŋ mà.nulàw?”

tətʃhà-ku wa mà-a.u-la-ù?

thus-do-LOC.CV EXCLM NEG-good-NEG:PST-DECL

mà-a.u-la-ù? pùkphu-la nàŋ mà-a.u-la-ù?

NEG-good-NEG:PST-DECL owl-F 2SG NEG-good-NEG:PST-DECL

‘Upon (Owl) doing that (they all said) “Wa, Bad! Bad! Owl — you’re bad.”’

(Coupe 2007:483)

One other negated present tense structure is fairly frequently encountered in narrative texts, e.g. *mə-philà-àɿ* (NEG-separate-PRES) ‘not separate’, *mə-wa-tʃhət-àɿ* (NEG-go-ABIL-PRES) ‘not able to go’ — note that their verb roots all depict activities. Verbs of this class that are inflected by the present tense suffix do not have the temporal flexibility of the NEG-√-NEG.PST stem structure and thus are restricted to expressing a present tense meaning only under negation.

It appears that a considerable number of Mongsen Ao verbs encoding states, possession, existence, and attributes neutralize the contrast between past and present under negation. This may be a wider characteristic of languages of the Angami-Ao group, as Giridhar (1994:284-286) reports a similar neutralization of the temporal contrast in Mao for certain classes of stative verbs, although in Mao the conflation is not restricted to verb stems of negative polarity. Conflations of tense categories are reported to be a widespread typological phenomenon. In a study of dependencies between grammatical systems, Aikhenvald & Dixon (1998:64) propose that languages are likely to contrast more tense oppositions in clauses expressing positive polarity than in those expressing negative polarity.

⁹ To avoid a profusion of different glosses for the same morpheme, it is expedient (although not entirely satisfactory) to gloss the negative suffix *-la* as NEG:PST in all contexts in which it is used, as this is the basic meaning that the suffix encodes in affirmative clauses.

Similarly, what could be either the agentive nominalizer *-əɿ* or the isomorphic present tense marker *-əɿ* is obligatory in past/present polar questions, so the contrast between these two tenses also appears to undergo neutralization in this type of interrogative clause.

- (24) *atʃa tʃuŋəɿ pà.*
 a-tʃa tʃuŋ-əɿ pà
 NRL-cooked.rice eat.meal-ANOM/PRES QPTCL
 i. ‘Are you eating your meal?’
 ii. ‘Did you eat / have you eaten your meal?’
 iii. *‘Will you eat your meal?’¹⁰ (field notes)

In a survey of the functions of nominalization in Kiranti and Central Himalayish languages, Watters (2008:30-31) notes that nominalized interrogatives are more polite than their non-nominalized counterparts in Newar, and this is why interrogative clauses are reported to have the form of non-embedded nominalizations in that language. He also cites Ebert (1997:57), who reports that all questions are nominalized in Athpare, and ponders if this is motivated by similar principles of politeness. However, there is nothing to suggest that Mongsen Ao encodes politeness via nominalization in a similar fashion in polar questions like (24) above.

In contrast to polar questions, the verb stems of content questions formed with interrogative pronouns can be formally marked for both past and present tense.

- (25) *nàŋ tʃǎpá? nə wa / waɿ.*
 nəŋ tʃǎpá? nə wa-Ø / wa-əɿ
 2SG what ALL go-PST go-PRES
 ‘Where did you go?’ / ‘Where are you going?’ (field notes)

4.2 Immediate future tense

There are some intriguing constraints on the use of the immediate future marker. Firstly, a verb stem inflected by this suffix cannot be negated, so a future event that is predicted not to occur must instead be encoded by a negated stem marked with the irrealis suffix. The past negative suffix *-la* cannot occur on verb stems depicting events that are non-actualized and inflected by either the irrealis suffix or the immediate future

¹⁰ Interpretation (iii) is not possible, as questioning the possibility of an unrealized event occurring requires the matrix verb to be inflected by the irrealis prefix (cf. (27) below for an example of a reply in the negative).

suffix. It was shown above that a similar constraint does not apply to the present or past tenses, both of which can be directly negated.

- (26) *nì nə hjuʦə à { *məsà.ɪ̀ / mə-sajùʔ }.*
 nì nə hjuʦə à { *mè-sà-ɪ̀ / mə-sa-i(-ùʔ) }
 1SG AGT story one NEG-say-IMM NEG-say-IRR(-DECL)¹¹
 ‘I won’t tell a story.’ (elicited)

It may be redundant to specify that one is immediately not going to perform an activity when this could alternatively be expressed by the negated irrealis form, as in (27). A similar constraint is found with verb stems containing the continuative aspect suffix — these also cannot be negated, possibly also because of redundancy.

- (27) *nì mət/ăj.*
 nì mət-ʈăʔ-i
 1SG NEG-consume-IRR
 ‘I won’t eat.’ (response by a native speaker when she was offered fruit) (field notes)

A further remarkable constraint on the use of the immediate future marker is that it can only be used with first person actor arguments. This suggests that a speaker using the immediate future tense inflection requires the epistemic authority to predict an immediate future intention, otherwise the irrealis marker must be used. The contrast in choice of marker is illustrated by (28a), which demonstrates a lack of epistemic authority on the part of the questioner, and the consecutive response of (28b), in which the speaker does demonstrate the required epistemic authority.

- (28) a. *wàʒaʔ ʈʃu nə təpətípàla ʈʃu nə, “isa kàʔ pi sápaʔ nə ajimì,” tə səmtsə.*
 wàʒaʔ ʈʃu nə tə-pəti-’-pàʔ la ʈʃu nə
 bird DIST AGT NZP-big-SUP-NR TOP DIST AGT
 isa kàʔ pi sápaʔ nə ajim-i tə səmtsə-Ø
 1PL.INCL also PROX who AGT cry.out-IRR thus ask-PST
 ‘The bird that was the leader asked “Who among us here will make a proclamation?”’ (Coupe 2007:482)

¹¹ As noted above in §3, the declarative marker is optional in all declarative clauses.

- b. *təku, pùkphula sə nə “nì nə ajim.ù àw,” tə sa.*
 tə-ku pùkphu-la sə nə nì nə ajim-ù àw
 thus-LOC owl-F ANAPH AGT 1SG AGT cry.out-IMM PTCL
 tə sa-Ø
 thus say-PST
 ‘Upon asking that, (aforementioned) Owl said “I will make a proclamation.”’

Miller (1999:70-71) reports a similar restriction on the use of a future tense marker in the Desano language of Colombia (Tucanoan family). This particular future marker (one of three) encodes the greatest degree of certainty of a predicted event eventuating, therefore its restriction to the first person suggests that the possession of epistemic authority is obligatory for its use.

If it is indeed the case that use of the immediate future suffix requires epistemic authority on the part of the speaker, then the reply of (29b) below seems to provide contradictory evidence. However, in the narrative text, Tiger (referred to in the example as ‘Grandfather’) is sitting weaving and has just been asked by Fox if she may also help with the weaving. So it might be the case that Tiger is merely echoing what Fox has just stated, as he now possesses the epistemic authority that is an obligatory requirement for the use of the immediate future.

- (29) a. *pa nə “aj aw, nì nə kà? tàk.ùk.ù ní,” tə səmtsə.*
 pa nə aj a-u nì nə kà? tàk-ùk-ù
 3SG AGT INTJ VOC-grandfather 1SG AGT also weave-ASSIST-IMM
 ní tə səmtsə-Ø
 QPTCL thus ask-PST
 ‘Hey, Grandfather! Will I also weave along with you?,” (Fox) asked.’
 (Coupe 2007:352)
- b. *akhu nə “wa səmtfã, nəŋ táŋ nə məluŋəla tàk.ùk.ù kəwa.”*
 a-khu nə wa səmtfã-əI
 NRL-tiger AGT EXCLM grandchild-ANOM
 nəŋ táŋ nə məluŋ-əI-la tàk-ùk-ù kəwa
 2SG just AGT be.willing-ANOM-COND weave-ASSIST-IMM PTCL
 ‘Tiger replied “Ah, grandchild, just weave with me if you are willing, alright?”’

The immediate future can also be used with non-singular first person actors, providing that the referents possess the epistemic authority to predict the occurrence of

a future event. Such conditions are met, for example, by members of a group laying plans to jointly perform an activity in the immediate future and then reporting on this plan of action.

4.3 Anterior tense

The meaning of the anterior tense of Mongsen Ao is very similar to that of the English perfect and pluperfect: it encodes that the predicate's event has taken place in the past, but retains current relevance either to the present moment or to a point of time located in the past. It similarly combines characteristics of temporal and aspectual specification, given that it locates an event in time while simultaneously indexing the telicity of that event relative to the temporal location.

- (30) *ɹənəmukù — sà.ɹù ná.*
 ɹənəm-ukù sa-ɹù ná
 prepare-ANT say-IMM PTCL
 '(I'm) ready — (I) will tell (the story), OK?' (Coupe 2007:458)

Like the other tense markers, it demonstrates some constraints on its use — a verb stem inflected by the anterior tense cannot be directly negated. If one were to decline an invitation to eat, as represented by the earlier question of (24) and repeated as (31a) for convenience, then the response would require a verb inflected by the anterior suffix in order to reply in the affirmative, as in (31b).¹² A reply in the negative requires a verbal structure identical to a negated past tense verb stem, as in (31c). Negating a verb stem inflected for the anterior tense results in an ungrammatical construction (e.g. (31d)).

- (31) a. *atʃa tʃuŋəɪ pà.*
 a-tʃa tʃuŋ-əɪ pà
 NRL-cooked.rice eat.meal-ANOM/PRES QPTCL
 'Have you eaten your meal?' (field notes)
 b. *tʃuŋukù.*
 tʃuŋ-ukù
 eat.meal-ANT
 '(I've) eaten.'

¹² This is used as a form of greeting in Ao, as in many languages of South and Southeast Asia, but it is also a sincere invitation to partake of a meal if one is visiting an Ao household at the time.

- c. *mətʃuŋlā*
 mə-tʃuŋ-lā
 NEG-eat.meal-NEG:PST
 ‘(I) have not eaten.’
- d. **mətʃuŋukù*

A further restriction applying to the anterior suffix is that it cannot occur on a verb stem functioning as the head of a polar interrogative sentence. The interrogative of (31a) demonstrates how this type of question must instead be structured. A cogent explanation for the historical reasons behind the interesting restrictions affecting verbs inflected by the anterior suffix awaits further investigation.

5. Nominalizers as sources of tense marking

We now consider the relevance of isomorphism observed between a polyfunctional morpheme with its source in an agentive nominalizer and the present tense marker on one hand, and isomorphism shared by a purposive nominalizer and the immediate future marker on the other. It will be useful to first illustrate the various functions of these morphemes before discussing the grammaticalization trajectories that have led to their innovating temporal marking functions.

5.1 Agentive nominalization

The Mongsen Ao present tense marker and the agentive nominalizer/genitivizer/relativizer/sequential converb marker share an isomorphic form in -əɿ, as noted earlier in §4.1, and the tense marking function differs only in carrying a low tone. The various non-temporal uses of this polyfunctional morpheme are provided in (32)-(35) below. These examples respectively demonstrate lexical and phrasal nominalization, genitivation, relativization, and the marking of sequential converb clauses.

- (32) Lexical and phrasal nominalization:

<i>tənisɿ</i>	<i>awŋ ku liɿ</i> (field notes)
[tə-nì-si-əɿ] _N	[awŋ ku] li-əɿ] _{NP}
NZP-lead-RPET-ANOM	NRL-jungle LOC stay-ANOM
‘leader’	‘insurgent’ (literally: ‘in-jungle-staying one’)

- (33) Genitivization (Waromung Mongsen, thus *na* allative):
nì aku ki na tsəŋsaŋ katə̀nku,
 nì a-ku-əi ki na tsəŋsaŋ ka-tə̀n-ku
 1SG VOC-uncle-ANOM house ALL dance ascend-WHEN-LOC.CV
 ‘When I go up to Uncle’s family’s house to dance, ...’ (Coupe 2007:253)
- (34) Relativization:
mətʃhənə luŋ sə nə...
 [[mətʃhən-əi] luŋ sə]_{NP} nə
 NEG-flee-ANOM group ANAPH AGT
 ‘The group that didn’t flee ...’ (field notes)
- (35) Sequential converb clause linkage:
təi, áśá? sə thuku táŋ ləp-lakəi, hɛəi, hənəi zək.
 tə-əi a-sá? sə thuku táŋ ləp-lak-əi hɛə-əi
 thus-SEQ NRL-meat ANAPH nine just cut-TERM-SEQ perforate-SEQ
 hən-əi zək-Ø
 carry-SEQ send-PST
 ‘And then, (Lichaba) finished cutting the meat into just nine (pieces), threaded
 (it on a bamboo skewer) and sent (Mechatseng) carrying (it).’ (field notes)

5.2 Purposive nominalizations

There are four ways that verbs can be used to form non-finite purposive clauses: by the root alone, e.g. (36); by derivation using the nominalizing prefix *tə-*, e.g. (37); by suffixing the purposive nominalizer *-u*, e.g. (38); or by suffixing the irrealis marker *-i* plus the general nominalizer *-pá?*, e.g. (39). Consultants confirm that these purposive clause-forming strategies are essentially equivalent and allow all to be freely exchanged in textual examples without this incurring a change of meaning. To encounter such variation in purposive coding strategies is not all that unusual. Haspelmath (1989:296) points out that English offers speakers the choice of choosing between *to*, *in order to*, *so that* or a causal complement to express a purposive meaning.

Purposive clauses are identified in the following examples by square brackets.

- (36) *wàzà? təlu? la tsəpà? məsəm wa.*
 wàzà? təlu? la [tsəpà? məsəm] wa-Ø
 bird all TOP well clean:PURP go-PST
 ‘All the birds went to clean a well.’ (Coupe 2007:455)

- (37) *təku litfápá? nə kìmətshə à təhni zəkù? tàɿ.*
 tə-ku litfǎ-pà? nə kìmətshə à [tə-hni]
 thus-LOC.CV pers.name-M AGT dove.sp. one NZP-follow
 zək-Ø-ù? tàɿ
 send-PST-DECL REP
 ‘And then, Lichaba sent a Spotted Dove to spy on him.’ (Coupe 2007:266)
- (38) *tə ahizala tɕu ləmsi.ɿ tɕhà.ɿu hlàw?*
 tə a-hi?-za-la tɕu [ləmsi.ɿ tɕhà.ɿu] hlà-Ø-ù?
 thus NRL-rat-DIM-F DIST comb pick.up-PURP descend+go-PST-DECL
 ‘So, Rat Pup went down to pick up the comb.’ (Coupe 2007:266)
- (39) *nuksənsaŋpá? tɕu m̀̀nphu ku áhlù tsəjpa? áhlù nə wa.*
 nuksənsaŋ-pá? tɕu m̀̀nphu ku [a-hlú tsə-ì-pá?]
 pers.name-M DIST winter LOC NRL-field clear-IRR-NR
 a-hlú nə wa-Ø
 NRL-field ALL go-PST
 ‘In the winter, Noksensangba went to the field to clear it (in preparation for cultivation).’ (Coupe 2007:465)

Note that the purposive nominalizer *-ɿu* is identical to the immediate future marker with the exception of the latter carrying low tone (in common with the grammaticalized function of the present tense marker), and that the purposive meaning can additionally be encoded by *-ì-pá?*, a collocation of the irrealis marker and the general nominalizer previously discussed in §3.2 with respect to deontic modality.

5.3 Discussion

Is it mere coincidence that two nominalizers are isomorphic with two of the synchronic tense markers of Mongsen Ao, or do nominalizers provide a diachronic source for yet another extended function in this language, namely the marking of tense categories? Given the recognized versatility of nominalization in Tibeto-Burman languages, the correlation is certainly suspicious. A purposive nominalizer is conceptually a very good candidate for encoding a future prediction, since a purposive similarly makes reference to a non-actualized event.

As for the agentive nominalizer and the present tense marking function, we might draw an analogy with English, which uses a nominalized verb form (i.e. a participle) in a copula clause for expressing events like *the child is sleeping*. It is not unfeasible that an equivalent expression once required a nominalized verb stem and a finite copula in

Mongsen Ao, as this type of structure is widely reported in Tibeto-Burman. The loss of the clause-final copula from this construction could have led to the reanalysis of a nominalizing suffix as a tense marker, resulting in what appears to be a stand-alone (i.e. non-embedded) nominalization. This is suggested by the observation that if one wishes to situate an equational clause in a temporal setting other than the default present tense, then a copula must obligatorily be used to carry the non-present tense marking. This is demonstrated in (40a). Deleting the copula from this clause results in a meaning of ‘I am the leader’, as in (40b), and results in the nominalizer occurring in the end of the clause. This is exactly where one would expect to find the tense marker of a finite verb stem.

- (40) a. *nì tənisiɿ tʃhà.nù.*
 nì tə-nì-si-əɿ tʃhà-nù
 1SG NZP-lead-RPET-ANOM COP-IMM
 ‘I’ll be the leader.’ (field notes)
- b. *nì tənisiɿ*
 nì tə-nì-si-əɿ
 1SG NZP-lead-RPET-ANOM
 ‘I’m the leader.’ (elicited)

To give support to the proposition that nominalizing morphology is the diachronic source of the present tense marker and the immediate future marker, it is necessary to look for evidence of isomorphism between nominalizers and tense/mood markers in other languages, because this would suggest a common grammaticalization pathway for this type of morpheme. As it turns out, examples prove to be relatively easy to find in closely- and distantly-related Tibeto-Burman languages, as well as in unrelated languages.

6. Nominalization and purposive/tense marking syncretism in other languages

A nominalizer is found to occur clause-finally on non-embedded verbs that encode the future tense in Manange, a Bodish language of central Nepal.

- (41) Manange (Tibeto-Burman, Bodish)
 ¹*khi* ⁴*nu-pɿ*
 3SG sleep-NR
 ‘He will sleep.’ (Hildebrandt 2004:83)

An identical nominalizing suffix is integral to the desiderative and purposive complement constructions of Manange. In purposive complements, the nominalizer occurs in tandem with an adverbial suffix *-ri* to express the purposive meaning. The most likely pathway through which a nominalizing suffix develops a tense marking function is via a non-embedded nominalization that undergoes a reanalysis of function, as suggested above for Mongsen Ao.

- (42) Manange (Tibeto-Burman, Bodish)
¹*ŋa* ⁴*nu-pa* ³*saŋ* ¹*kha* ¹*mo*
 1(SG) sleep-NR want come COP
 ‘I want to sleep.’ (Hildebrandt 2004:101)
- (43) Manange (Tibeto-Burman, Bodish)
¹*na* ¹*shen* ³*ti-pa-ri* ¹*ya-tse* ¹*mo*
 1(SG) rice pick-NR-PURP GO-CONT COP
 ‘I am going to pick rice.’ (Hildebrandt 2004:83)

In Chang, a Konyak language of eastern Nagaland, a general nominalizer *-puí* is involved in the marking of deontic modality and irrealis mood, as in the following pair of textual examples. As previously discussed in §3.2, obligation in Mongsen Ao is encoded by a verb stem inflected for irrealis mood and nominalized by the general nominalizer *-pàʔ*. A similar structure is attested in Chang.

- (44) Chang (Tibeto-Burman, Konyak)
súŋ khò hái kəmàn sà-n-lápuí.
 trap that like.this manner place-IRR
 ‘The trap should be placed in this manner.’ (text)
- (45) Chang (Tibeto-Burman, Konyak)
ŋèi nó hò tʃě sù-n-lápuí
 1SG.ERG 2SG.ABS this TOP swallow-IRR
 ‘“I’ll swallow you” (said the elephant to the boy).’ (text)

Yimchungrü is another language of the Ao sub-group in which realis mood/past tense is the morphologically unmarked category. That is, bare verb stems are used in this language to encode that an event is actualized/located prior to the time of speaking. Whether this is best analyzed as part of a deictic tense system or as representing the realis mood in a binary mood marking system is a question that cannot be answered until further research is done on this poorly understood language.

- (46) Yimchungrü (Tibeto-Burman, Ao sub-group)
sàŋtuŋ khjak saŋaso h.ɔ-ɔ putuŋ-pu? nə səŋaso
 tree LOC1 fruit pluck-NR owner-NR AGT fruit
a-khjuku tʃhiŋ h.ɔ-a jòʔ-Ø
 3SG.POSS-bag LOC2 pluck-SEQ put-PST
 ‘The owner who was plucking the fruit on the tree put the fruit into his bag.’
 (text)

The form of the Yimchungrü irrealis marker *-paʔ* in (47) below is suspiciously similar to a widely attested nominalizer that is thought to have its lexical source in Proto-Tibeto-Burman **p^(w)a* ‘man, father, husband’ (Benedict 1972:19, Matisoff 2003: 608), and an identical form is also used as the general nominalizer of Ao. Incidentally, the Yimchungrü genitive marker *-ɔ* also appears to be cognate with the nominalizer/relativizer/genitivizer/sequential converb marker *-a* of Mongsen Ao.

- (47) Yimchungrü (Tibeto-Burman, Ao sub-group)
i nə tʃākəɬ tʃi-ɔ pu-ɔ jukhian khian-paʔ.
 1SG AGT now g’mother-ANOM g’father-ANOM story say-IRR
 ‘I will tell the story of the ancestors.’ (text)

Many Yimchungrü villages share borders with Chang villages in the Tuensang District of Nagaland, and some are reported to have bilingual speech communities. This may be relevant to the observation that the Chang nominalizer *-pu*, used for marking deontic modality and irrealis mood, has an identical segmental form to the Yimchungrü purposive nominalizer *-pu*.

- (48) Yimchungrü (Tibeto-Burman, Ao sub-group)
moʃi ɲak-poʔ nə [ápi moʃi ɲimkip-pu] phjak-à tho-pàʔ tso-Ø
 cow watch-NR AGT 3SG cow feed-PURP drag-SIM pull-SEQ go-PST
 ‘A cowherd was dragging and pulling his cow to feed it.’ (text)

Preliminary fieldwork on Sangtam, another language of the Ao sub-group, reveals that the purposive nominalizer and the future/irrealis marker share an identical form in *-nuŋ*.

- (49) Santam (Tibeto-Burman, Ao sub-group) tense-marking morphology
 a. *ʃiŋ-tʃho* ‘blow-PST’
 b. *ʃiŋ-ɬe* ‘blow-PRES’
 c. *ʃiŋ-nuŋ* ‘blow-FUT/IRR’

- d. *i* [miʔ fĩŋ-nuŋ] .ɔo-ɛ (elicited)
 1SG fire blow-PURP come-PRES
 ‘I’m coming to blow (on) the fire.’ (elicited)

In Lahu, a morpheme *tù* is described by Matisoff as having a number of interrelated functions. Firstly, it is used to encode unrealized events in finite clauses:

- (50) Lahu (Tibeto-Burman, Lolo-Burmese)
nə kàʔ qay tù lá
 2SG also go IRR QPTCL
 ‘Will you go too?’ (Matisoff 1973:335)

Secondly, the same morpheme is used to nominalize an embedded clause that expresses a purposive meaning. These usages relate to the irrealis meaning of *tù*, in that they all refer to an unactualized state of affairs that represents an intention.

- (51) Lahu (Tibeto-Burman, Lolo-Burmese)
ŋə [məʔ-paw=ʃĩ ca hō tù] là ve yò
 1-PL coconut sell PURP come NR DECL
 ‘(I’ve) come to sell my coconuts.’ (Matisoff 1972:239)

The nominalizers of many Tibeto-Burman languages can be demonstrated to grammaticalize out of constructions involving nouns with inherently generic meanings, such as ‘place’, ‘person’, and ‘man’, among others (e.g. see LaPolla 2003:223-227 for a description of this diachronic process in Qiang) — an illustrative example in Mongsen Ao is the derivation of the noun *jipʔən* ‘bed’ from the verb *jip* ‘sleep’ and the locative nominalizer *-ʔən*, literally ‘sleeping place.’

In a parallel case, Epps (2008:151-152, 594-597) lucidly describes an historical process in Hup (Nadahup (Makú) family, Brazil/Colombia) by which a noun *těg* meaning ‘stick, tree’ developed a secondary nominalizing function as *-teg* with the meaning of ‘thing’, and then grammaticalized as a morpheme encoding purpose in dependent clauses. In a further development, *-teg* was generalized to main clauses with the semantics of a future marker. Lastly, a variant of the morpheme underwent phonological erosion to *-te*, which can only be used with the semantics of a future marker.

- (52) Hup nominalization (Epps 2008:151)
 a. *púp=teg* b. *pəpád=teg*
 paxiuba=STICK roll=STICK
 ‘paxiuba tree’ ‘rolling thing’ = ‘automobile/tractor’

- (53) Hup purposive/future (Epps 2008:152)
- | | | | |
|----|-------------------------------------|----|---------------------------|
| a. | <i>dóʔ=d'əh mũhũ-tég</i> | b. | <i>tih ham-tég ʔũhníy</i> |
| | child=PL play-FUT/PURP | | 3SG go-FUT maybe |
| | ‘(It’s) for the kids to play with.’ | | ‘Maybe he will go.’ |
- (54) Hup future (Epps 2008:152)
- | |
|-----------------------------|
| <i>tán ʔāh næn-té-h</i> |
| fut.contr 1SG come-FUT-DECL |
| ‘I’ll come later.’ |

Epps proposes that purposives are ideal targets for the grammaticalization of future grams, because they allude to an intention. This correlation is convincingly attested in the typological literature, e.g. Bybee et al. (1991, 1994).

7. Pathways of grammaticalization: how nominalizers become tense markers

This paper has proposed that Mongsen Ao originally had a binary mood system contrasting a zero-marked realis with an overtly marked irrealis mood. It then extended the functions of two of its nominalizers to encoding temporal distinctions, and the old zero-marked realis mood became integrated into the newly grammaticalized system of temporal deixis as the zero-marked past tense category. The irrealis marker occurs in paradigmatic opposition with these newly grammaticalized tense markers, but continues to encode an independent category of mood that is not constrained to any particular temporal deictic setting. Figure 2 below summarizes the grammaticalization of tense marking morphology and its incorporation into the older mood marking system according to this analysis.

mood system	nominalizing morphology	reanalyzed absolute tense system
Realis mood -Ø	→	Past tense -Ø
Irrealis mood -i	→	Irrealis -i
	Agentive nominalizer -əɿ →	Present tense -əɿ
	Purposive nominalizer -ɿu →	Immediate future tense -ɿu

Figure 2: Historical development of the absolute tense marking system of Mongsen Ao

The exact mechanism by which the agentive nominalizer -əɿ comes to be reanalyzed synchronically as a present tense marker is something of a challenge to account for on conceptual grounds, and I know of no comparative cases of this in the literature — no examples of it are reported in Heine & Kuteva (2002), for instance. In the absence of an

explanation appealing to cognitive influences, it might instead be proposed that it is copula deletion that creates the necessary structural conditions required for the reanalysis of a nominalizing suffix as a present tense marker.

Non-embedded nominalizations are widely reported in Tibeto-Burman languages (e.g., Matisoff 1972, Watters 2008, Doornenbal 2008, DeLancey 2011) and the overwhelming consensus of opinion is that these constructions historically originate from the deletion of a copula from a nominalized clause. Such a deletion would leave the nominalized verb stem at the end of the clause, precisely where one expects to find matrix verbs in languages with predicate-final constituent order. Irrealis/future and past tense settings obligatorily require a copula to carry the tense marking in this type of clause, but the absence of a copula denotes a present tense setting by default. It therefore stands to reason that speakers might come to reinterpret a nominalizer now at the end of the clause as encoding present tense in these copula-less clauses, then generalize this marking to other clause types.

The grammaticalization of a future marker out of a purposive nominalization is more easily accounted for conceptually, because the intention that is inherent to purposives provides a plausible explanation for the development of new future tense categories. The constraint on the use of the immediate future of Mongsen — that one must have the epistemic authority in order to be able to predict an immediate future intention — also appears to be consistent with the purposive source of this tense-marking morpheme.

One anonymous reviewer of this paper questioned why it could not be the case that the nominalizers of Mongsen Ao instead developed out of tense markers. This is implausible on the basis of cross-linguistic and historical considerations. Evidence from a growing collection of papers on nominalization (e.g. Coupe 2008, Yap et al. 2011 and papers respectively therein) reveals that the most frequent direction of grammaticalization is from a referential function to various non-referential functions. This is demonstrated by nominalizers developing out of generic (or “light”) nouns into subordinators (especially converb markers) and complementizers, or into tense, aspect, and mood markers, or into markers of speaker stance (Yap et al. 2011:xii). Notwithstanding this overwhelming cross-linguistic evidence, we are also faced with the problem of first explaining the origin of the Ao tense system, as such a system cannot even be reconstructed back to the level of Proto-Ao.

Clearly, the grammaticalization of tense marking morphology must follow the earlier grammaticalization of nominalizing morphology. It is relatively straightforward to show that nominalizers have developed out of generic nouns in Tibeto-Burman languages and, as I have argued in this paper, another extension of their many functions in Ao is the marking of new tense categories superimposed upon an older system of mood-marking contrasts.

Abbreviations

AGT	agentive case	PURP	purposive nominalizer
ALL	allative case	QPTCL	interrogative particle
ANAPH	anaphoric demonstrative	RECIP	reciprocal
ANOM	agentive nominalizer	REP	reported speech evidentiality
ANT	anterior	RL	relational noun prefix
ASSIST	‘ASSIST’ lexical suffix	RS	resultant state marker
ATTACH	‘ATTACH’ lexical suffix	RPET	repetitive aspect
CAUS	causative suffix	SEPARATE	‘SEPARATE’ lexical suffix
CAUS.CV	causal converb suffix	SG	singular number
CHANCE	chance modality	SIM	simultaneous converb suffix
COMP	comparative derivation	SEQ	sequential converb suffix
COMPL	completive aspect	SPREAD	‘SPREAD’ lexical suffix
CONCESS	concessive converb suffix	SUP	superlative derivation
COND	conditional converb suffix	VOC	vocative prefix
CONJ	conjunction	TERM	terminative aspect
CONT	continuative aspect	TOP	topic marker
CONTR.FUT	contrastive future		
COP	copula		
DECL	declarative mood clitic		
DESID	desiderative mood		
DIM	diminutive		
DIST	distal demonstrative		
DU	dual number		
EXCLM	exclamation		
F	feminine gender		
IMM	immediate future tense		
INCL	inclusive		
INTJ	interjection		
IRR	irrealis mood		
LOC	locative case		
LOC.CV	locative converb suffix		
M	masculine gender		
NEG	negative prefix		
NR	nominalizer/relativizer		
NZP	nominalizing prefix		
NRL	non-relational noun prefix		
PFV	perfective aspect		
POSS	possessive		
PRES	present tense		
PROX	proximal demonstrative		
PST	past tense		
PTCL	illocutionary force particle		

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Ao 語時體標誌的歷史發展

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印度東北部的 Ao 語呈現一些從類型學的角度來說很有意思的特徵，我們從這些特徵可以看到 Ao 語時標誌歷史發展的一些線索。作者認為 Ao 語原來有二元的語氣系統：實然 (realis) 和非實然 (irrealis)，前者無標誌，後者有標誌。Ao 語把其中兩個名物化標誌的作用延伸到標記時的不同範疇，而原來的無標誌的實然範疇卻被歸納到標記時範疇的系統中，用來標記過去時範疇。非實然標誌雖然與這些後期語法化的時標誌體系上是對立的，但其功能仍然是標記獨立而不限於某種時段的語氣範疇。參看其他語言的現象，作者發現名物化標誌通常是時標誌語法化的普遍來源。

關鍵詞：語氣，名物化，語法化，Ao 語，藏緬語，目的標誌