The Diversity of Maa (Nilotic) Adverbs:
Speed, Time, Modality, Intensity and Nominal-Tense/Aspect

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Maa linguistic varieties (Maasai, Parakuyo, Chamus, Samburu, among others), of the Eastern Nilotic family (Nilo-Saharan phylum), have words which can modify a predicate or predication and have the function of what cross-linguistically are called adverbs. While these words can be considered a single class due to this shared function and distribution, there are nevertheless morphosyntactic and usage distinctions. This is partly due to disparate historical origins, but also to semantics and different typical collocations. Among other distinctions, some adverbs can function as nominal tense/aspect markers within a determined nominal phrase (DP). Though the origins of all adverbs cannot be traced, the paper documents sources in oblique prepositional phrases, relational nouns, adjectives, relative clauses, and perhaps infinitive verbs, involving a wide range of lexical roots, such as 'little', 'paint, mark', 'be abundant (with grass), be generous', and others. Some synchronic adverbs do not have evident sources in other word classes, including the most frequently used word for 'previously, before', and the modal adverb 'probably not, unlikely' which is also an attenuative adverb. Maa adjectives and nouns largely overlap in their morphosyntax, but the ability to be modified by certain adverbs distinguishes them.

Keywords: lexicalisation, grammaticalisation, attenuation, intensification, nominal tense

1. Introduction

A source of enduring interest is how the human mind creatively stretches or adapts lexemes for new functions, both lexical and grammatical. The cognitive processes involved include metaphor, metonymy, semantic broadening, etc., sometimes followed by morphosyntactic and phonological adjustments (Meillet 1912; Lehmann 1982; Heine and Reh 1984; Matisoff 1991, among many others). Such processes have given rise to a disparate set of adverbs in Maa varieties (Maasai, Arusha, Parakuyo, Chamus, Samburu, and others), of the Eastern Nilotic family (Nilo-Saharan phylum). One challenge in identifying nearly any part-of-speech category is that items which participate in one function may have only partially overlapping distributional or morphosyntactic properties.[1] Maa adverbs are no exception. Partially differing morphosyntactic properties may exist due to disparate origins, or to the fact that even items which had structurally identical morphosyntax at one point may have different discourse usage patterns and collocational frequencies, leading to divergence.

This paper looks at Maa items which modify predicates and/or predications but which are not auxiliary or lexical verbs (i.e. they are not serial-verb like in function). Hence, they have the function of what cross-linguistically are called adverbs. While Maa adverbs can be considered a single class due to this shared function, they nevertheless display some morphosyntactic distinctions. Many Maa adverbs can be considered lexical even when they have undergone semantic

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[1] See Bolinger (1980) for an insightful study of English modal auxiliaries in this regard.

shifts from their source; others verge on grammatical functions. Some adverbs can be used as nominal tense/aspect/modality markers within DPs. I will not aim to determine whether a given adverb (or particular use) is more grammatical versus lexical, as this is clearly a cline. The origins of all adverbs cannot be traced, but sources include oblique prepositional phrase complexes, relational nouns, adjectives, relative clauses, and possibly infinitive verbs. In addition to modifying predicates and predications, some Maa adverbs can also modify adjectives. In fact, the ability to be modified by adverbs distinguishes adjectives from nouns, which otherwise largely overlap in morphosyntax.

The study is based on a corpus of 125 texts, elicited data, and dictionary materials. The paper is organized as follows. Section 2 introduces selected properties of Maa major parts of speech, in particular verbs, those that express property concepts (adjectives and stative verbs), and nouns. Subsequent sections are organized according to approximate semantic type of adverb: locative (Section 3), speed and manner (Section 4), lexical temporal adverbs or adverb expressions (Section 5), semantically broader temporal adverbs (Section 5), and modality, degree, and intensity adverbs (Section 7). Section 7 especially elaborates on *pɛnyɔ́*, *olêŋ* and *naléŋ,* which are semantically coherent in the sense that *pényɔ* can attenuate property-concept terms, while *olêŋ* and *naléŋ* can intensify them; but they almost certainly have disparate origins and modernly have asymmetric frequency in text. Section 8 addresses nominal aspect/tense uses. Throughout, I comment on historical sources of adverbs, though a complete analysis of origins cannot be undertaken here and the sources of many are unknown. Section 9 concludes the paper.

2. Background on Maa parts of speech

As background for discussing adverbs, this section briefly describes major properties of (lexical) verbs versus adjectives/nouns.

Maa verbs, including many but not all auxiliaries, inflect for person or carry an infinitive prefix. Lexical verbs have their own lexical meaning and arguments. In (1), I consider the infinitive forms *aás* 'to do' and *aɪsóm* 'to study, read' to be verbs – not adverbs, as they still have their lexical meaning even though they elaborate different aspects of a single event, much like verbs would within a serial verb construction (Hamaya 1993); I will call this pattern an infinitive-serial construction. *Tɔn*, on the other hand, could mean either literal 'sit' or function as a 'continuous aspect' auxiliary in this context.[2]

(1) n-í-t⁺ɔ́n   íy⁺íé   a-ás   a-ɪsóm   biblia   polepole
     CN1-2-sit   2SG.NOM   INF.SG-do   INF.SG-read   bible   slowly
     'you sit/continue to read the Bible slowly' (lit. 'you sit to do to read the Bible slowly')
     (Camus1.016a)

Tucker and Mpaayei (1955) and Schneider (1998) show that a number of Maa property-concept terms are lexicalized as stative verbs. This is true for *pɪ(j)* 'be brave, be sharp (pointed)' and *bɛbɛk* 'be light, be flimsy'. In (2) and (3), these roots are inflected for person by a prefix and for main verb status by tone (this is not glossed).

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[2] This paper uses a modified IPA-based orthography, where <y> = /j/ and <j> = /dʒ/. An acute accent marks High tone, Low tone is unmarked, a circumflex marks Falling tone, and a raised arrow indicates Downstep High. Codes in parentheses at the end of free translations of examples indicate line numbers from texts; other examples are from elicitation. Examples reflect the Maasai (Southern Kenya/Northern Tanzania) variety of Maa unless otherwise specified.

(2)   óre   ɛlé   mʊrraní,   náa   k=ɛ́-**p˧í**   apá   olêŋ
      DSCN   this.M.NOM   warrior.NOM   it.is   CN2=3-be.brave   before   very
      'Now this warrior, he was very brave' (arinkoi.002)

(3)   ɛ-**bɛbɛ́k**   ɛná mábáti
      3-be.light this.F.NOM   corrugated.iron.sheet.NOM
      'This iron (roofing) sheet is light/flimsy.'

With rare exception, verbs can inflect for perfect(ive) aspect.[3] *Pɪ(j)* 'be brave/sharp' and *bɛbɛk* 'be light/flimsy' can also inflect for perfect(ive) aspect. With stative verbs, the perfect(ive) form yields an inchoative sense, seen in (4).

(4)   **á-tí-píj-a**
      1SG-PF-be.brave-PF
      'I became brave.'

Stative and active verbs must take relative clause morphology to modify nouns. For instance, if *pɪ(j)* 'be brave/sharp' and *bɛbɛk* 'be light/flimsy' are to be used as nominal modifiers, then relative clause prefixes (or prefix complexes) must occur that vary for gender and number of the modified item, as in (5) and (6).

(5)   ɔl=tʊŋáni   **ɔ-pí**
      MSG=person   REL.M.SG-be.brave
      'a/the person who is brave'

(6)   é-íshóp-ó   ɛn=kɪlâ   **ná-bɛ́bɛ́k**   amɔ̂   k=é-írówua   táatá
      3-wear-PF   FSG=cloth   REL.F.SG-be.flimsy   because   CN2=3-be.hot   today
      'She has put on a flimsy cloth because it is hot today.'

What we might initially consider to be nouns vary for case (nominative versus unmarked absolute) and number (Tucker and Mpaayei 1955). Example (7) shows the full set of forms for 'kraal'.

(7)   ɛm=bɔɔ́   'kraal' (singular, absolute case)
      ɛm=bɔ́ɔ   'kraal' (singular, nominative case)
      ɪm=bóóítíé   'kraals' (plural, absolute case)
      ɪm=booitíé   'kraals' (plural, nominative case)

However, there are challenges in identifying a syntactic category of nouns as opposed to adjectives. Both vary for case and number. Further, the stems may be used either to modify lexical arguments of verbs and referring forms, or they may stand as arguments of verbs and referring forms with no morphological change other than just putting a determiner (a gender+number proclitic or a demonstrative) before the stem (Schneider 1998; Shirtz and Payne 2013; Payne 2020). To see this,

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[3] A few verbs apparently lack perfect(ive) counterparts, including *tii* 'be at' and *ata* 'have'. Schneider (1998) shows there is some variation in the ability of non-verb property-concept terms ("adjectives") to inflect for aspect (and causative morphology and imperative affixation), but this does not detract from the observation that nearly all verbs by other criteria can inflect for perfect(ive) aspect.

consider the lexemes *sapʊk* 'big' and *botor* 'senior' in (8) – (12). The tone variations on *botor* and *sapʊk* in (8) – (12) mark case differences.[4] In (8) – (10) these lexemes modify argument and referring forms with no additional (e.g. relative clause) morphology, and hence function like adjectives.

(8)   n-é-tum   kʊna   kɛ́râ   ɔ=sɪná   **sápʊk**   olêŋ
           CN1-3-get   these.F.NOM   children.NOM   MSG=poverty   big   very
           'These children get a lot of poverty.' (Arusha-enkongu 2.10)

(9)   óre   ɛná   titó   **botór**
           DCSN   this.NOM   girl.NOM   senior.NOM
           'now this older girl' (divorce.008)

(10)   ɛn=tásat   **bótór**
           FSG=elder.person   first/senior
           'the first (i.e. who has seniority) elderly wife'

      But in (11) and (12), *sapʊk* and *botor* function as argument/referring forms simply by taking a determiner.

(11)   m-ɛ-táa   táatá   nɪnyɛ́   **ɛ=sapók**
           OPT-3-become.SBJV   now   3SG   FSG=big.NOM
           'so that now the big one will become it' (i.e. so it will become the one that is better known) (embul.089)

(12)   k=é-tí⁺í   **em=botór**
           CN2=3-be.at   FSG=first/senior.NOM
           'The senior one is there.' (Camus2.123b)

      Whether as modifiers or as argument/referring forms, the plural stems of 'big' would be *sapúk⁺í(n)* in the absolute case and *sápukí(n)* in the nominative. The plural stems of 'senior' would be *botóro(k)* in the absolute case and *bótoro(k)* in the nominative. Case and number variation also occur on most other elements of DPs including demonstratives, pronouns, possessive particles, and some relative clause prefixes (depending on tone properties of the relativized verb). For instance, in contrast to the nominative forms of 'these (feminine)' and 'children' in (8) , the absolute forms would be *kʊnâ* and *kéra*. The nominative counterpart to the absolute 3rd singular pronoun in (11) would be *nínyɛ*.

      In contrast with all these elements, Maa verb stems, both stative and active, do not display case, with rare exception do not vary for number, nor can they take determiners (unless they are relativized). We conclude that property-concept stems with morphosyntactic properties like those of *pɪ(j)* and *bɛbɛk* are lexicalized as verbs, while property-concept terms like *sápʊk* 'big' and *bótór* 'senior/seniority' have lexicalized as what (for the moment) we can call an "adjective/noun". The hedge "adjective/noun" is used because, as noted just above, all that is required to turn an "adjective" into a "noun" is to put a determiner before the stem; and vice-versa, many "nouns" can be used in modifying function just by omitting a determiner. Nevertheless, in subsequent sections we will see

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[4] Nouns/adjectives fall into myriad tone classes for case (Tucker and Mpaayei 1955). The system is "marked nominative" (König 2008), in which subject DPs after the verb and after the oblique preposition *tɛ* are nominative (NOM). (Elements of) DPs in most – though not all – other syntactic functions are in the absolute (unglossed) form, including subjects before the verb (except those following conjunctions which historically derive from verbs).

that certain adverbs can modify some "adjectives/nouns" but not others; hence, adverbs differentiate a class of adjectives from nouns.

With this brief background on verbs versus noun/adjectives, we turn to various semantic subgroups of adverbs. I briefly comment on locative and speed adverbs, and then focus the discussion around temporal, modal, and degree adverbs.

3. Locative adverbs

Maa relational nouns are (erstwhile) noun forms that do not carry determiners and which indicate locational, spatial, temporal, and other relations. Relational nouns can still vary for case, as seen by *dʊkóya* 'ahead, front' versus *tɛ dókʊya* 'at the front/before' (from *ɛn=dʊkóya* 'head' [of animate being]). They sometimes function akin to what are called locative adverbs in other languages, such as *áŋ* 'home' in (13), *bɔɔ́* 'outside' in (14) from 'kraal', *shómátá* 'above, over' from 'summit, heaven', *abór⁺í* 'down(ward)' from 'lower side, bottom', etc. When functioning as bare adverbs (without *tɛ*) they do not vary for case (or number), but correspond to the absolute form of the noun. Compare *bɔɔ́* 'outside' in (14) with the forms for 'kraal' in (7) above.

(13) n-é-r⁺ík-ú   ɛn=tásat   ɛnyɛ́   **áŋ**
      CN1-3-lead-VEN   FSG=elder   3SG.PSR+SG.PSD   home
      'He brought his old woman (first wife) home.' (divorce 030)

(14) n-ɛ́-b⁺árn-í,   n-é-p⁺úk   ɛn=tɔmɔnɔní   **bɔɔ́**
      CN1-3-shave-IMPS   CN1-3-emerge   FSG=postpartum.woman.NOM   outside
      'She is shaved [after giving birth], and the woman goes out' (from the house).
      (KisonkoRites.0073)

I will have little more to say in this paper about locational adverbs (nor do I discuss locational demonstratives or locational interrogative words, which are pronominal).

4. Adverbs of speed and manner

The concept of fast speed can be expressed by verbs such as *sioki* 'do quickly, do early, do easily'. I consider these to be verbs which can combine with other verbs in the type of infinitive-serial construction seen in (1) above. Compare the use of *sioki* in (15), where it is the only verb, with (16) where it is in an infinitive-serial construction.

(15) tá-**siokí**   taá   iyíé   ɛn=dáa
      SBJV-do.quick   EMPH   2.NOM   FSG=food
      'Eat quickly.' (lit. 'you quickly do the food.') (girls.050)

(16) n-ɛ́-⁺ákó   naá   apá   é-ísík-íé   ol=ów⁺úárú   kér⁺í
      CN1-3-become   focus   before   3-escape- INST   msg=carniverous.beast.nom   spotted. NOM

      ɪna=á-dúóó   kíy⁺íóítín   ɛnyɛ́ná   **a-siokí**
      those.F=EP-previous offspring   3PL.PSD+3PSR   INF.SG-do.quick
      'so the leopard escaped with those children of his quickly' (leohyena.082-083)

Fast speed can also be expressed by an ideophone construction involving the verb *jo* 'say'. In (17), it is understood that the man ran away quickly, though there is no verb for 'run'. I consider the SAY+IDEOPHONE pattern to be a specific construction which does not involve adverbs.

(17) n-é-**j⁺ó**   ɔl=tásât   **ŋâm**
      CN1-3-say   MSG=elder.NOM   IDEO
      'The elderly man ran away.' (lit. 'The elderly man said "*ŋâm*".') (ilmurran.073)

Table 1 lists Maa adverbial forms for 'slowly'.[5] These adverbs also have senses in the domain of manner and degree. The 'slowly' terms derive from the singular and plural adjectival property-concept stems *kítí* and *kʊtít⁺í(k)* 'small, little (size, amount)'.

Table 1. Speed and manner adverbs

	Selected Variants	Gloss
akítɪ	a kítɪ, akíni (Samburu)	'slowly, gently, quietly; short time'
áákʊ́tɪtí	áá kʊ́tɪtí	'slowly, little-by-little'

These adverbs can modify the predicate or an entire predication.

(18) ɛ́n-chɔm   taá   **akítɪ**,   lɛ́ɪlɔ̂   ol=owuarú
      PL.IMP-go.SBJV   EMPH   slowly   EXIST   MSG=beast.of.prey
      'Go slowly, there is a beast of prey (e.g. lion, enemy).' (errancoi.031)

(19) kɪ-lâk   ɪ=sayíéta   **m-áákʊ́tɪtí**
      1PL-pay.PL   FPL=payments   OPT-slowly
      'We will pay the bride wealth little-by-little (in installments).' (Wuasinkishu Maa)

Interestingly, in their adverbial function, the tone patterns on the 'slowly' stems correspond to the nominative adjectival stems; compare the adverb *akítɪ* with the nominative and absolute adjective stems in (20) – (21), and *áákʊ́tɪtí* with the nominative and absolute stems in (22) – (23).

(20) óre   áâ   kúmok   náa   k=é-tí⁺í   ɛn=**kítɪ**   wúéjî ...
      DSCN   be   many   COP   CN2=3-be.at   PLACE.SG=small.NOM   place.NOM
      'Now being many (clans), there is a little place…' (enkashe.035)

(21) n-ɛ́-jɪŋ   ɛn=**kɪtí**   gúmótó
      CN1-3-enter   FSG=small   hole
      'She entered a small hole.' (elephare.030b)

(22) ɛ-gíra   ɪn=kɛrâ   **kʊ́tɪtí**   áa-irrug-o
      3-PROG   FPL=children.NOM   small.PL.NOM   INF.PL=bend-NPF.MID
      'The small children are bending down.'

(23) n-é-l⁺ó   a-iŋuaá   kʊnâ   **kʊtít⁺í**   kɛ́ra
      CN1-3-go.SG   INF.SG-leave these.F   small.PL   children
      'It went leaving these small children.'

'Slowly' in (19) carries the optative prefix *m-*, which can occur on verbs. Indeed, we might hypothesize that *áákʊ́tɪtí* developed from *áâ* 'be' plus the plural of 'small'. This is the construction found in (20) with *áâ kúmok* 'be many'. However, it is unknown why the nominative melody of 'small (plural)' would surface in *áákʊ́tɪtí* if BE+ADJECTIVE is the constructional source of the plural

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[5] *Polepole* 'slowly' in (1) above is a code-switch into Swahili.

adverb, since predicate complements occur in absolute melodies: in (20), *kúmok* is the absolute of 'many' (the nominative would be *kumók*). It is also not evident what the *a-* in the singular *akítɪ* might be. *Akítɪ* does not appear to be formed from the singular infinitive *a-* plus singular 'small' as the singular infinitive would be expected to be *akɪtí.

5. Lexical temporal adverbs

We now turn to temporal adverbs. Table 2 lists selected expressions which have fairly specific temporal meaning.

Table 2. Lexically specific temporal adverbs

	Selected Variants	**Corpus Instances**	**Gloss**
áík⁺átá		32	'never, ever' (lit. 'another time')
kát	kátá	80	'time, period, instance'
lɪkâî		0	'day-before-yesterday, alternate day,
kékún			distal past'
ŋolé		30	'yesterday'
tááisére	táisére, teísíére (Samburu)	24	'tomorrow'
táatá		581	'today, nowadays; at this point' (temporally or in flow of ideas)
tádɛkɛnyá	tédɛkɛnyá (Wuasinkishu)	6	'(in) early morning light'
tárá		3	'late evening'
teípa		9	'(in) late afternoon, early evening'
tɛsɪrán	taserán (Purko)	2	'(at) dawn'

These adverbs come from a variety of constructional sources. *Lɪkâî kékún* 'day-before-yesterday, alternate day, distal past' follows a DEMONSTRATIVE+NOUN constructional pattern.[6] *Kékún* '(alternate) day' involves a semantic shift from *ol=kékún* 'river bank, side of valley'. *Kát(á)* patterns like relational nouns in not taking a gender+number proclitic, though it can still take modifiers, as in (24).

(24) e-tó-ósh-ó   ɛn=kítɛ́ŋ   **kát**   nabô.
      3-PF-hit-PF   FSG=bovine   time   one.F
      'He/she hit the cow one time (once).' (Wuasinkishu Maa)

In adverbial function, the types of expressions in Table 2 do not show case alternations. Adverbial *kát(á)* 'time', which comes from a relational noun, has the absolute melody of the corresponding noun. In contrast, temporal expressions or words that historically involve *tɛ* would have an invariant tone pattern corresponding to the nominative of whatever (relational) noun or other element is part of the expression. This is because *tɛ* governs the nominative case form (Tucker and Mpaayei 1955). Contrast the absolute form *síran* 'morning, earliest light of dawn' with the tone pattern in *tɛsɪrán* '(at) dawn', seen in the variant *taserán* in (25).

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[6] This is also a common pattern with *ɔlɔ́ŋ* 'day'. Various demonstrative and non-demonstrative determiners combine productively with time-related nominal roots.

(25)   **Taserán**   taá   kí-mpaŋ-ie   in=kíshú
       (at.)dawn   COP.SBJV   1PL-exit-INST   FPL=cattle
       'It is at dawn (that) we are moving the cows.' (Purko of Kajiado Maa)

This adverb contains a nominalization of the verb root *sɪr* 'mark, paint', which metonymically describes the streaked and colored sky at dawn. It is striking that a number of lexicalized temporal adverbial expressions begin with /t/. Possibly some other *t-* initial adverbs involved the preposition *tɛ* or *ta*, though the etymologies remain to be worked out.

Table 2 adverbs can have scope over the entire predication. In (25) and (26), 'at dawn' and 'in the evening' are the times when the entire cattle-moving events happen. The situation surrounding (27) is that a girl was promised in marriage to another family but ran away to go to school; so when the man's family arrives to take the bride home, early the very following morning the younger sister is prepared for marriage in her sister's place, by being shaved. In (28) a, 'yesterday' is when the entire event of 'I thought something' (namely, that you might ask me words like these the next day) happened. In (28)b 'today' concerns the entire event of 'you ask me words like these'. However, some Table 2 forms can also have scope just over the predicate notion. For example, (24) expresses one hit, not that there was one occasion when someone hit a cow.

(26)   óre   adé   **téípa**,   n-é-p⁺ón-ú   in=kíshu
       DSCN   later   evening   CN1-3-go-VEN   FPL=cattle.NOM
       'Later in the evening, cows came' (emutata.014a)

(27) a.   óre   en=titó   n-á-sʊj-ɪta   ɛndâ,
           DSCN   FSG=girl.NOM   REL.F-REL.FSG.NOM-follow-prog   that.F
           'Now the girl who is following that one (in birth order),

      b.   n-ɛ́-b⁺árn-í   ínâ   kátá   aké   **tádɛkɛnyá**
           CN1-3-shave-IMPS   that.F   time   just   **early.morning**
           was immediately shaved in the early morning (omon.0035-0036)

(28) a.   á-jó   **ŋolé**   sana   sana⁷   ɛ́-táá
           I-think yesterday   very   very   3-COP.SBJN
           'I really thought yesterday it would be (that)'

      b.   tɛ   ní-kí-nkílíkuan   **táatá**   ɪl=ɔmɔ́n   ánaa   kʊlɔ̂ …
           OBL   CN1-INV-ask   today   MPL=words   like   these
           'if you would keep asking me words like these today …
           [they would be wasted because you wouldn't understand]' (aibartisho.035)

Expressions like those in Table 2 can occur in various positions. When modifying the predicate, they typically occur after, though not necessarily contiguous to the predicate, as seen by comparing (24) and (28) above. Even those which have scope over the entire predication may occur at the end of the predication, as with *táaisére* in (29). If before the main predicate, they often co-occur with discourse structuring elements like *óre* 'discontinuous' or *néakʊ* in the sense of 'so, therefore' (from 'and it becomes'), seen in (30) and in (26) above.

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⁷ *Sana* 'very' is an instance of code-switching into Swahili.

(29)   n-έ-manıkí   ol=mórúo   ɪn=kέra   **táaisére**
        CN1-3-suddenly.see   MSG=old.man.NOM   FPL=children   tomorrow
        'the following day the man suddenly saw the children' (olaturoni.029)

(30)   n-έ-⁺ákɔ́   óre   **táata**   e-pon-ú   áa-puo   mórúáó, ...
        CN1-3-become   DSCN   now   CVB.3-go.PL-VEN   INF.PL-go.PL   elderhood
        'So now as they come to (reach) elderhood, ...' (murrano.0120)

Using the oblique preposition *tɛ* with temporal phrases is a productive way of expressing temporal adverbial concepts. Example (31) has the same lexeme as (absolute case) *kát(a)* 'time' in (24), but in a non-lexicalized DETERMINER+NOUN PHRASE embedded under *tɛ*. Here we find the nominative case form *katá*.

(31)   óre   ta=ná=**katá**   ɛn=kɔ́p   oó   Kısɔ́nkɔ   náa   Púrka
        DSCN   OBL=this.F=time.NOM   FSG=land   of.PL   Kisonko   COP   Purka
        'Now at this time the Kisonko land is Purka (land)' (enaidurra.035)

The corpus figures in Table 2 show that, for the most part, even lexicalized temporally-specific expressions do not have particularly high frequency. The obvious exception is *táatá* 'today, now'. It can mean the specific 'day' period that includes the speaker's temporal reference point, as in (28)b above; or 'nowadays' which encompasses more than a single day. But it very commonly has the function of indicating 'at this point in time' or 'at this point in the development of the speaker's exposition'. For the sense 'at this point in time', consider (32). The situation is that someone is up in a tree uriniating, and the anti-hero muses (in a direct quote) about what is wrong with this tree that otherwise does not normally leak. Here *táatá* does not refer to the time period of roughly 'a day', but to a particular time when the anti-hero is musing below the tree.

(32)   ámaâ   k=é-o   **táatá**   ɛlέ   sháni   né-m-é-ó   **oshî**   aké?
        well!   CN2=3-leak   now   this.NOM   tree.NOM   CN1-NEG-3-leak   normally   just
        'Well, (why) does this tree leak now and it does not normally leak?' (konyek.114)

The use of *táatá* in (30) above refers to a temporal change-point in the typical Maasai male lifespan and not to a temporal point anchored to the speaker's time of utterance. In a further extension, *táatá* functions as a discourse marker to show stages in the speaker's exposition. In (33), the speaker wraps up a description of how young boys are taught to take care of cows, and then as young men are also taught to care for people in the society. He summarizes this section of his exposition with (33); here *táatá* refers to a discourse-internal point in the flow of ideas.

(33)   né⁺ákɔ́   **táatá**   ɛ=rámátarɛ   ɔɔ́   l=tóŋáná
        so   now   FSG=husbandary   of.PL   M=people
        ɛndá   n-á-ídɪp-á   a-to-límu,
        that.NOM   REL.F-1SG-finish-PF   INF.SG-PF-TELL.ABOUT
        'So now husbandary of people (is) what I have finished describing.'   (murrano.0144a)

From these examples we see that *táatá* has broadened semantically beyond literal 'today'. We now turn to another group of adverbs which can also have temporal meaning, but which are generally broader or less specific to a particular time period in their meaning.

6. Less specific temporal adverbs

Lexical specificity is a matter of degree, but Table 3 lists adverbs with temporal content which are generally less specific to particular time points or periods, compared to Table 2 forms. Some Table 3 adverbs also have modality and information structure functions (Section 7).

Table 3. Semantically broadened temporal adverbs

	Selected Variants	Corpus Instances	Gloss
adé	adák⁺é (<adé+aké)	78	'later'
ánaa aké	ánaaké	9	'daily, always'
apá	ɔpá	940	'before, former, prior'
dɛ́t		1	'recently'
dúóó	dúó	981	'earlier, previously; aforementioned'
kɛnyá		60	'eventually, someday, distant indefinite future'
naárr⁺í		0	'recently, long ago'
oshî		251	'always, usually, normally'

The corpus frequencies in Table 3 show varying usage profiles, but several are high frequency forms, such as *dúóó* in (34). This reflects their broader and more grammaticalized tendencies. The other very high-frequency form is *apá*. Maa has no grammaticalized tense, but in its discourse distribution, *apá* is close to a grammatical marker of past time.

(34) n-ɛ́-⁺ím   ínâ   óítóí n-ɛ́ítʊ   **dúóó**   e-jo-kin-í
      CN1-3-pass   that.F   path   REL.F-NEG.PF   earlier   CVB.3-say-DAT-IMPS
      'He passed the way that he had earlier not been told (to go).' (Ilmurran 010b)

Distributionally, *oshî* 'usually, normally, always' is a fairly typical member of this group. Even when modifying the whole predication, it may occur directly before or after a verb, as in (35) – (36); or later in a clause, as in (37) where it occurs between the subject and the object.

(35) ínâ   ɔlɔ́ŋ   **oshî**   e-te-j-ók-i
      that   day   always   3-PF-say-PF-IMPS
      'that (was the) day they always said…' (aibartisho.022b)

(36) k=ɛ́-íbɔrr   **oshî**   in=tápuka   ó   l=t⁺épésí
      CN2=3-be.white   always   FPL=flowers.NOM   of.MSG   M=acacia.tree
      'The flowers of an acacia tree are always white.'

(37) é-júŋ   il=áyiok   **oshî**   aké   in=kíshú   ɔɔ́   ményɛ
      3-inherit   MPL=boys.NOM   always   just   FPL=cattle   of.PL   their.father
      'Boys always inherit cows from their fathers.'

The sources of these adverbs are generally unknown. Most appear to be old or have old elements in them. *Ánaa aké* is a transparent combination of 'like' in the sense of 'similar to', plus *aké;* but *aké* is quite abstract and its source is unclear (Section 7). *Apa* has a cognate *afi* in the related language Lopit (Eastern Nilotic) so it is old as an adverb. *Naárr⁺í* has the appearance of a possible relative clause beginning with the relative complex *naá-* (plural feminine absolute case form for

Class I verbs). If this is the constructional source, it is unclear what the prior verb root would have been.[8] This adverb does not appear in the text corpus, but surfaces in elicitation and in Tucker and Mpaayei (1955) and Mol (1996), so its existence as an adverb is clear.

(38) í-dɛ́mʊ́   **naárr⁺í**   kí-nyá-ítá   in=kulukuók?
     2-remember   long.ago   1PL-eat-PROG   FPL=soils
     'Do you remember those days that we used to eat soil?' (Wuasinkishu Maa)

The source of *kɛnyá* 'eventually, someday, distant future' seems more transparent. It is likely related to the verb *a-kɛnyʊ́* 'to rise (of the sun)', the noun *ɛnk=akɛnyá* 'dawn', and the Table 2 form *tádɛkɛnyá* '(in) early morning', though with clear semantic divergence from these other forms. Compare (27) above with (39). The latter is taken from a description of how children grow up in typical traditional Maasai society. The 'small' one refers to the last-born son of the family. The entire text is about children, and the death of a young child's mother is not presented as something imminent or which will happen at any particular (e.g. early) time of day.

(39) óre   **kɛnyá**   aké   peê   ɛ-yɛ́   en=tásât,   náa   ɛlê   kɪtí
     DSCN   eventually   just   when   CVB.3-die   FSG=elder   COP   this.M   small
     'Now when the old lady (mother) eventually dies, it is this small one' (who will be in charge).'
     (embul.140-141)

As the highlighted forms in (40) and (41) show, semantically specific and broader temporal adverbs may co-occur, with each other or with non-temporal adverbs like *doí* (Section 7).

(40) óre   **adé   téípa**,   n-é-p⁺ón-ú   in=kíshu
     DSCN   later   evening   CN1-3-go.PL-VEN   FPL=cattle.NOM
     'In the early evening, cows came' (emutata.014a)

(41) amʊ̂   k=é-tó-ísh-íé   **doí   dɛ́t**
     because   CN2=3-PF-give.birth-INST.PF   indeed   recently
     'because she has indeed given birth recently' (KisonkoRites.0022)

7. Modality, degree, and intensity adverbs

We now turn to adverbs which, as a group, roughly express intensity, degree and some modality concepts. These are listed in Table 4. (Some items in Table 4 were included in earlier tables as they also have temporal senses.) *Náají* is listed in Mol (1996) only with the temporal sense 'recently', but dominantly occurs with the modality sense of 'possibly' in the texts.

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[8] The final high-toned *-í* is characteristic of the impersonal suffix. If this is part of the etymology, it would leave just *rr* as a remnant of the unknown verb root.

Table 4. Modality, degree and intensity adverbs

	Selected Variants	**Corpus Instances**	**Gloss**
ajó (Arusha Maa)		1	'almost, nearly'
aké		1636	'again, still; just, only (contrast)'
Other aké combinations:			
akéy⁺íé		42	'just'
adák⁺é		14	'later today, just later'
ánaa aké, ánaaké		5	'daily, always'
doí	toí, déí (Samburu), réí (Laikipia)	524	'indeed, urgency, certainty, actually'
katókôl	tókôl	62	'completely'
náají		178	'possibly, maybe, might'
naléŋ		23	'very'
olêŋ		160	'very'
ópɛny		12	'alone, only'
pényɔ	pénɛʊ, péno	17	'improbably, slightly; attenuative'
péshɔ		3	'uselessly, nonsensically, impossible'
pî	píi	86	'completely, quite
pít⁺ó		0	'absolutely nothing'
siî		426	'also, just; indeed'

Section 7.1 discusses meaning and distribution of these adverbs, elaborating particularly on the attenuative and 'very' adverbs. Section 7.2 addresses potential sources of Table 4 adverbs.

7.1. Meaning and distribution of modality, degree and intensity adverbs. *Ajó* in the sense of 'almost, nearly' has a low frequency and may be dialect restricted.

(42)   abór⁺í   **ajó**   í-nyík-ákɪ   ɛnk=óhɔkɛ
       down   almost   3-be.close-DAT   FSG=stomach
       'down almost/nearly approaching the stomach' (Arusha-eng'ob23.1)

Aké, doí, and *siî* are particularly high-frequency forms. All have what we might call emphatic or intensity functions. *(Ka)tókôl, oléŋ,* and *naléŋ* are also intensifiers. Differences in degree of intensity, as well as information focus functions among these forms need further exploration.

(43)   n-ɛ́-⁺ákʊ́   táatá   ɛ-ta-gol-ík⁺í-ó   **doí**   iyíóók   naá   **aké**
       CN1-3-become now   3-PF-be.hard-DAT-PF indeed us   FOCUS still
       'So now, it has indeed troubled us often' (aibartisho.031a)

(44)   óre   **siî**   en=kitojó   náa   ɛn=kɪtí   ŋûês,   kɪtí   **katókôl**
       DSCN indeed FSG-hare   COP FSG=small animal small completely
       'and a hare is also/indeed a small animal, very small' (leohyena.017)

(45)   a.   ná⁺á   óre   amõ   á-tá-gór-⁺é   **oléŋ**
            and   DSCN   because   1SG-PF-be.hard-INST.PF   very
            'and since I was very angry with it [a scorpion],'

       b.   n-á-ár   ɪna=**kátá** **aké**   ɔ=m-ɛ-túá,
            CN1-1SG-hit   that=time   just   until=OPT-3-die.PF
            'I immediately (lit. just that time) hit it until it died'

       c.   n-á-pʊrd-ʊ́-p⁺ʊ́rd   **katókôl**.
            CN1-1SG-smash-EP-smash   completely
            'and I crushed it completely.' (mapk01.048-049)

(46)   k=á-l⁺ó   **aké**
       CN2-1SG-go.SG   just
       'I WILL go.' [insisting]

Some Table 4 adverbs extend into modal functions. These include at least *aké* 'just, only; contrast' as in (46), *náají* 'possible, maybe, might' as in (47), and *pényɔ* 'unlikely, improbably'.

(47)   k=á-jo   í-naúr-u   **náají**
       CN2=1SG-think   2-be.tired-INCHO   possible
       'I think you will/may/might become tired' (enaidurra.125)

As a modifier of an entire predication, *pényɔ* indicates 'unlikely, improbably'. As a modifier of adjectives and verbs, it has an attenuative function, often translatable as 'a bit, a little, somewhat'. Attenuation communicates a reduced degree of a quality (Segerer and Treis 2018), or a lower degree of approximation or imprecision regarding the normal interpretation of a category (Anderson 2016). Some prior cross-linguistic research suggests that attenuation may be one of the more frequent adjectival derivational categories (Bauer 2002: 42). Maa has no morphology on adjectives to indicate attenuation, but if this is one of the most likely adjectival modifications cross-linguistically, it might be that *pényɔ* as an adverbial attenuative is old. I first examine its syntactic distribution, and then briefly explore its semantics.

Syntactically, *pényɔ* distributes similarly to *oshî* 'always, normally', except that *pényɔ* is not known to directly modify nouns (see Section 8). Thus, *pényɔ* can help differentiate adjectives from nouns. It can modify a wide variety of predicates, occurring either before or after the predicate, to indicate 'somewhat X', 'slightly X', or a 'a little bit X'. The predicates in (48) – (49) are dynamic, and in (50) – (51) they are stative.

(48)   n-ɛ́-ílɛp-ʊ   **pényɔ**
       CN1-3-climb-VEN   ATN
       'and it climbs up slightly' (iloikop2.0046)

(49)   ńtáshó   **péneu**;   m-a-yíéu.
       PL.IMPER.stand   ATN   OPT-1SG-come
       'Wait a little bit; let me come.' (North Samburu Maa)

(50)   **pényɔ**   n-é-risíó
       ATN   CN1-3-be.equal
       'they are somewhat (un)equal' [referring to the fact that the number of young men who went for warriorhood outnumbered those who went to school] (omon.0329)

(51) kimaasâî   ánaa   k=ɛ́-paash-ári   **pɛ́nyɔ**?
      Maa.language   like   CN=3-differ-ITV.MID.NPF   ATN
      'Maasai language [varieties], like they differ a bit from each other?' (ilomon 24.1)

In (52) – (53) it modifies inchoative stems, and in (54) it modifies a perfect(ive)-inchoative predicate built on a stem that otherwise functions as a descriptive modifier.

(52) N-é-m⁺úé-yú   **pɛ́nyɔ**
      CN1-3-be.sick-INCHO   ATN
      'they became slightly sick' (smallpox.016)

(53) amɔ̂   ki-púo   áa-iko   njí   **pɛ́nyɔ**   áa-iropij-u
      because   1PL-go.PL   INF.PL-do   this ATN   INF.PL-be.cold-INCHO
      'because we will go to do this to cool down a bit' (osinkisonk.094)

(54) e-ti-síd⁺án-á   doí   **pɛ́nyɔ**
      3-PF-good.PL-PF   indeed   ATN
      'he has become a little better.' (ilangeni.0034)

Similarly to *oshî*, *pényɔ* can also modify terms that function as descriptive adjectives, as in (55).

(55) kɪtí   **pɛ́nyɔ**!
      little ATN
      'a little smaller/less!' (Mol 1996: 200)

Despite his example (55), Mol (1996: 328) defines *pényɔ* as an adverb of time meaning 'a little while'. This fits with the use of *pényɔ* in (49). With translational motion verbs, one might argue that the motion also occurs for a small amount of time, with the metonymic interpretation that the motion occurs over a short spatial distance, yielding interpretations like those in (48) and (56). Regardless, (51) – (52) and (54) – (55) clearly show that *pényɔ* is not specific just to time and its metonymic extensions. It can indicate attenuated degrees of stative property-concepts like degree of sickness, temperature, goodness, size, equality, difference, etc. Altogether, it is a very productive adverbial means of attenuating concepts.

(56) kʊlɔ̂   ɔ-íg⁺ʊ́t   **pɛ́nyɔ**
      these.M   REL.MSG-shift.position   ATN
      'those ones (cows) that move a little bit' (enkashe.046)

Corpus data reveal that *pényɔ* has another modal adverbial function, 'improbably', 'probably not', 'unlikely'. In its modal function, *pényɔ* tends to precede the verb, as in (57) – (58).

(57) **pɛ́nyɔ**   doí   n-ɛ́-tɔn   ɛ-ɛtá-⁺í   ɔl=tʊŋáni …
      improbably   indeed   CN1-3-still   3-have-IMPS   MSG=person
      'It is unlikely there will be a person …' (dictionary materials)

(58) éé   **pɛ́nyɔ**   n-ɛ́-ɛta   lélɔ̂   il=ɔíkɔp
      yes improbably   CN1-3-have   those.M   MPL=murder.penalty
      'Yes probably they do not have those murder penalty [customs]' (iloikop2.0122)

The free translations, provided by fluent Maa-English bilinguals, involve negative notions; but there is no negative morpheme in these clauses besides *pényɔ*. Though most of the earlier examples in (52) – (56) may not, at least at first glance, seem to have negative ideas or connotations, in (50) it is presumably *pényɔ* that communicates any idea of '**in**equality'. Indeed, (50) could be analyzed as an instance of the 'improbable, unlikely' modality sense of *pényɔ*.

In (59)b, *pényɔ* is verbalized with the prefix *ɪ-*. The derived stem is then inflected for third person, while the semantically main verb *ɪshɔr* 'allow' is inflected for first person object. A more literal translation could be 'it is doubtful/improbable (that) I will be allowed (to see them)'. There is again no negative morpheme other than *pényɔ*; but the text line was clearly rendered with a negative translation rearding the speaker's expectation or belief about the situation.

(59) a.   náa   tɛ=n-á-l⁺ó   sɪí   nanó
           it.is OBL=CN1-1SG-go.SG   also 1SG.NOM

      b.   náa   ɛ́-í-**pɛ́nyɔ**   doí   n-áa-ɪshɔr-î
           it.is 3-VBLZ-improbably   indeed CN1-3>1SG-allow-IMPS.PL
           'and (even) if I go, I don't think I will be allowed (to see them)' (sairowua.0754)

I sugggest that across all of its uses, the general meaning of *pényɔ* could be rendered as 'not quite [X]'. This encompasses both 'less than typical amount/quality/degree [of X]' in the physio-temporal domain, from which attenuation arises; and 'not quite [X situation]' in the reality domain, from which 'probably not' or 'unlikely' arises. The diachronic direction of semantic shift or extension is unclear at this point; but the modality and attenuation meanings are likely related.

Anderson (2016: 151-154) argues that there are different subtypes of attenuation involving "imprecision" or "pragmatic halos." Given this, we may ask how Maa speakers have conceptualized the notion of and developed a marker for attenuation. Does it appear to have arisen from conceptualizing a situation, quality, or category as "approaching" the prototype of some quality, akin to the English morpheme *like* in *childlike, plastic-like*, or other morphemes with similative meanings (cf. Masini, Micheli, and Huang 2018; Anderson 2016: 17)? Or has it arisen from conceptualizing a situation, quality or category as "departing from" or being negatively related to the prototype concept of a quality or category? If we accept the hypothesis that the core meaning of *pényɔ* involves negative polarity, then it appears Maa speakers would have developed the attenuative sense via conceptualizing a situation or quality as being "unlike" or "departing from" the prototype designated by a verb or adjectival lexeme.

In opposition to *pényɔ* 'attentuative' the reader may have noticed two intensifying adverbs for 'very' in Table 4, namely *olêŋ* and *naléŋ*. *Olêŋ* is by far more common: there are 160 instances of *olêŋ* but only 23 of *naléŋ* in the corpus, suggesting that the latter is perhaps innovative with the meaning of 'very'. What modernly accounts for the choice of *olêŋ* versus *naléŋ* as adverbs appears to be idiolectal.[9] In terms of collocation, both *olêŋ* and *naléŋ* can modify dynamic predicates, as in (60) – (61), and stative predicates, as in (62) – (63).

(60) kí-gɪrá   oshî   áa-omon   **olêŋ**
      1PL-PROG always INF.PL-pray very
      'we have been praying very much' (Camus1.085a)

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[9] Three additional instances of *naléŋ* 'very' occur in the corpus, all from Parakuyo Maa. These may be the result of H-tone spreading from a preceding word, but dialect variation and tone processes in this southern Tanzanian variety need more study.

(61) áy⁺íá,   sére,   mí-kí-tá-máyían-a   ɛnk=aí   **naléŋ**
      all.right   goodbye   OPT-3>2-SBJV-bless-SBJV   FSG=God.NOM   very
      'It is OK, goodbye, and may God bless you very much. (Camus4.226)

(62) ní-kɪ-shɪpá   **olêŋ**
      CN1-1PL-be.happy   very
      'and we are very happy' (Camus1.084a)

(63) ɛ-pí   taá   ɪl=mórrân   l-ɔɔ   l=máásâî,   ɛ-pí   **naléŋ**
      3-be.brave   EMPH   MPL=warriors.NOM M-of   MPL=maasai   3-be.brave very
      'Maasai warriors are brave, they are very brave.' (osinkisonk.053)

As a modifier of the predicate, *olêŋ/naléŋ* can be immediately adjacent to the predicate or further out in the sentence, just as we have seen for other adverbs. The adverb *olêŋ* is after the subject in (61), and after (part of) the object in (64).

(64) k=á-ny⁺órr   ɛlê   kítéŋ   l-áí   **olêŋ**   sapúk⁺í   ɪ=mowuarák.
      CN2=1SG-love this.M ox   M-my   very   big.PL   FPL=horns
      'I love this bullock of mine very much (whose) horns are long.' (dc.014)

In (65), *naléŋ* modifies a predicate complement formed on the relational noun *siadi* 'behind' (from a body-part term).

(65) náa   ínâ   peê   e-tií   ɪnâ   kɔ̂p   síádí   **naléŋ**
      it.is that reason CVB.3-be.at that.NOM land.NOM   behind   very
      'that is why that land is quite behind [in addressing problems]' (Camus4.221)

In (66) – (68), *olêŋ* modifies descriptive adjectives. In (69), it modifies a quantifier.

(66) ɔ=sɪná   sápʊk   **olêŋ**
      MSG=poverty   big   very
      'a lot of poverty' (Arusha-enkongu 2.10)

(67) amɔ̂   é-tíú   ánaa   ɛn=kɛɛ́ya   tɔrrónɔ̂   **olêŋ**   ...
      because 3-resemble like   FSG=disease bad   very
      'because it is like a very bad disease …' (smallpox.025)

(68) n-ɛ́-⁺ákó   ɔl=tʊŋáni   yiolóti   **olêŋ**
      CN1-3-become   MSG=person   famous   very
      'and he became a very famous person' (sairowua.0011)

(69) kúmok   **olêŋ**!
      much/many   very
      'very many' (Camus1 1.31)

Naléŋ can also modify descriptive adjectives and quantifiers, seen in (70) – (71).

(70) amɔ̂   kiní   **naléŋ**
      because little   very
      'because (it is) very small' (KisonkoRiddles.0090)

(71)   n-áa-pɪk-í   ɪl=báak   kúmok **naléŋ**   áa-pɪk   o=sésên
        CN1-3>1SG-put-IMPS   MPL=wounds   many   very   INF.PL-put   MSG=body
        'they made very many wounds in (my) body.' (eure 3.7)

Finally, they can modify adjectives used without an accompanying head noun, as in (72) – (73).

(72)   sídáí   **olêŋ**
        good   very
        'very good.' (said at the beginning of a personal narrative) (Camus1.001)

(73)   Náa   á-í-tɔrrɔ́nâ   naá   ɪnâ,   tɔrrɔ́nô   **olêŋ**
        and   3-VBLZ-bad   FOCUS   that   bad   very
        'And that is bad, very bad' (iloikop.097-98)

Like the attenuative adverb *pényɔ*, *naléŋ/olêŋ* 'very' can help differentiate nouns from adjectives, as they cannot directly modify nouns (Payne 2020). This is shown in (74) – (75).

(74)   *ɔl=tásat   olêŋ
        MSG=ancient   very
        (intended: 'a very old one')

(75)   *ɔl=payíán   olêŋ
        MSG=elder   very
        (intended: 'a very elder/man')

Since intensification is semantically opposed to attenuation, it is interesting to find that these two notions are very asymmetrical in frequency. Based on Bauer's (2002:40) typological study, one might hypothesize that, if grammaticalization and morphologization arise from high frequency of a lexical item collocating with something else, even adverbial attenuation of adjectives might be more common than adverbial intensification. Against this hypothesis, it is interesting to find that adverbial *olêŋ/naléŋ* 'very' is far more frequent than *pényɔ* (Table 4).

But in the corpus, the adverbs could be modifying predicates/predications or adjectives. So to probe this hypothesis further, linear contiguity of the attenuating and intensifying adverbs with descriptive modifiers was evaluated. If an adverb modifies a descriptive modifier, it occurs immediately after the modifier. Table 5 shows that in the corpus, this linear arrangement is infrequent for both *olêŋ/naléŋ* and *pényɔ* (Table 5 does not directly probe consituency). Given the low incidence of immediate post-modifier order in Table 5, we conclude that the vast majority of instances of both *olêŋ/naléŋ* 'very' and *pényɔ* are modifying the predicate/predication. Futhermore, the linear positions of *olêŋ/naléŋ* and *pényɔ* are not statistically different. Though it is certainly grammatical for *pényɔ* to modify an adjective, its absence immediately after adjectives in the corpus is not unexpected given its overall low incidence, at least relative to *olêŋ/naléŋ*.

Table 5. Linear distribution of adverbial *olêŋ/naléŋ* and *pényɔ*

	Immediately after Adj	**Elsewhere**
olêŋ/naléŋ	12	173
pényɔ	0	17

I thus leave it as a question for further typological research as to whether derivational attenuation is indeed more common than derivational intensification; and if so, why this should be so. I would venture to guess that Maa speakers are not exceptional in the higher frequency with which they use intensifiers compared to attenuators.

7.2. Sources of modality, degree and intensity adverbs. We now consider potential sources for adverbs in Table 4. It must be said from the outset that we cannot identify sources for all. Some of them, as well as *adé* 'later' in Table 3 begin with a Low-tone /a/ and end with a High tone on the final mora. This is exactly the form of singular infinitive verbs, seen in (1) above. The form *ajó* 'about, almost, nearly' may have developed from the 'try' sense of *jo* 'say, tell, think, try'. If *aké* 'just, only' and *adé* 'later' developed from infinitive verbs, it is uncertain what the historical roots might have been. However, *aké* and *akéyíé* 'just, only' are conceivably related to Samburu Maa *kéyíére* 'it is best/suitable', which Wagner (n.d.) calls "an adverb from a verb" (see also Dahlbacka, et al. forthcoming).

Several Table 4 adverbs begin with /p/. Their etymology is unknown. For *pî* 'completely'*,* there is something iconic or idiophonic in the way it is often pronounced with extra aspiration and loudness, and may be reduplicated or repeated in a single clause, as in (76), or across clauses, as in (77). *Pít⁺ó* 'absolutely nothing' might be related to *pî* 'completely', but this is speculative.[10]

(76)   ní-kɪ-ɪsh-ʊ   **pî**   **pî**
        CN1-1PL-finish-VEN   completely   completely
        'we finish (a course of study) completely.' (Camus1.005a)

(77)   a.   ɛk=ɛ́-ŋás-⁺á-í   áa-ɪm-aa   in=kíshómítie
              CN2=3-do.first-ITV-PL   INF.PL-pass-ITV   FPL=clans

              ɔ́ɔ́   l=mámasítan   **pî**
              PL.PSR   M=Mamasita.PL   completely
              '(All) the (sub-)clans of the Mamasita (a major clan) will first exhaustively pass by' (to choose the next leader)

        b.   m-é-ítiŋ-ó   **pî**
              OPT-3-finish-SBJV   completely
              'until they are completely exhausted/finished (being examined),'

        c.   o-m-é-ítiŋ-ó   **pî**
              until-OPT-3-finish-SBJV completely
              'until they are completely exhausted/finished.' (intokin.029-031)

The adverb *ɔ́pɛny* 'alone, only' has the same form as the stem of *ɔl=ɔ́pɛny* 'owner (NOM)'.[11] The stem for 'owner' is also attested with the sense of 'exclusive self' (particularly in combination with overt emphatic pronouns). Possibly the adverb developed from this, first with the exclusive meaning as in (78), and then 'alone' as in (79). If they are connected, why the nominative stem

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[10] The usual idiophone construction in Maa contains the verb 'say' plus an idiophone (see Section 4). This construction is not used with *pî* or *pít⁺ó*.

[11] The shapes of the singular and plural stems for 'owner' suggest they are relative clause forms based on a no-longer extant verb root *pɛŋ*. Relative clauses can behave as nominals just by preceding them with a determiner, which could be the history of *ɔl=ɔ́pɛny* 'owner (NOM)'. The adverb might be a further development from the relative clause (without a determiner).

would generally be used as the adverb is unclear, but in all available examples, the participant who does something 'alone' is a subject.

(78)   n-é-l⁺ót-ú   táatá   **ɔ́pɛny**   a-wɔr-ɪkí
          CN1-3-go-VEN   now   alone   INF.SG-distribute-DAT
          'He (the oldest son) alone/only will come to distribute (the deceased father's cattle)' (embul.131)

(79)   óre   taá   aké   peê   i-ló   **ɔ́pɛny**
          now   EMPH just   when CVB.2-go alone

          amɔ̂   k=é-íkurrúkurr   m-í-irut   aké
          because CN2-3-thunder   NEG-2-be.frightened just
          'Now when you go alone, don't be frightened because it just thunders.' (enamuke2.084-086)

The origins of the modal and attenuative adverb *pényɔ* are unknown.[12] In contrast, the intensifiers *olêŋ* and *naléŋ* 'very' almost certainly derive from the verb *leŋ* 'be generous, abundant'. The adverbs begin in a way suggestive of feminine and masculine relative clauses, namely with *n-* and *o-*, respectively. However, *o-* is also the expected allomorph of the masculine gender+number proclitic on a noun beginning with /l/. As adverbs, *olêŋ* and *naléŋ* do not have the agreement behavior of synchronic relative clauses, and the tone difference between *olêŋ* and *naléŋ* is also mystifying if both are historical relative clause forms. In what follows, I contrast relative clause behavior with the adverb forms, and suggest that *naléŋ* is likely from a relative clause, but *olêŋ* may have a nominalization source.

As a verb root, *leŋ* can indicate the human-propensity concept of 'be generous'; but it also saliently refers to land that displays an abundance of green grass. In (80), 'very green with a lot of grass' is understood just from *leŋ* applied to a geographic feature. Examples (80) and (81) show that *leŋ* inflects like a normal Class I verb for person and main verb status (by tone).

(80)   **e-léŋ-óo**   kʊlɔ́   doinyó
          3-be.plentious-ITV   these.M.NOM   mountains.NOM
          'These mountains are very green with a lot of grass.' (Kisonko Maa)

(81)   peê   ɛ-dɔl   pɔ́⁺ɔ́kí   ŋâî   ajó   **k=é-l⁺éŋ**
          purpose CVB.3-see every.NOM who.NOM COMP CN2=3-be.plentious
          'so everyone sees that he is generous.' (elengon2.034b)

Since it is a verb root, *leŋ* cannot modify a noun unless it is relativized. Relativized forms vary for gender, number and case of the DP (Section 2). The examples in (82) – (84) show agreement of the relativized verb with masculine, feminine, and place, respectively. The first line of (85) contrasts with (82) to show number agreement in the masculine forms, and the second line of (85) shows a negative relative clause which carries a special relative prefix *l-* (Tucker and Mpaayei 1955: 22, 122-224).

(82)   a.   n-ɛ́-⁺ákó   k=ɛ́-ny⁺ɔ́k   apá   pɔ́⁺ɔ́kí   ŋâî   olêŋ
               CN1-3-become CN2-3-work.hard before each   anyone very
               'So everybody used to work very hard'

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[12] Neither the noun/adjective *(ɛm=)pényɔ* 'piercing', from the verb *pɛny* 'pierce', nor *ɔl=ɔpɛ́ny* 'owner' (nominative *ɔl=ɔ́pɛny*) seem compelling sources.

b.　peê　　ɛ-akɔ́　　　　ɔl=tʊŋáni　　**o-léŋ**
　　purpose　CVB.3-become　MSG=person　REL.M.SG-be.generous
　　'to become a generous person.' (lit. 'person who is generous') (elengon2.011)

(83)　ɛn=kɔ́p　　**na-léŋ**
　　FSG=land　　REL.FSG-be.plenteous
　　'land with lots of grass' (translation provided by a native speaker)

(84)　peê　　ɛ-ɪdɔ́rr　　　á⁺á-ɪ́ɲúáa　　i=wuejitîn　　**nee-lêŋ**
　　purpose　CVB.3-migrate　INF.PL-leave　PLACE=places　REL.PLACE.PL-be.plenteous
　　'(they said the Maasai) should move to leave places that are fertile' (jo.006)

(85)　a.　óre　　ɪl=máásâî　　náa　　ɪl=tóŋáná　　apá　　**oo-léŋ**　　　　　　olêŋ
　　　　DSCN　MPL=Maasai　COP　　MPL=people　before　REL.MPL=be.plenteous　very
　　　　'Now the Maasai were people who used to be very generous.'

b.　óre　　ɔl=tʊŋáni　　**lé-m-é-léŋ**　　　　　　náa　　ɛ́-í-tɔrrón⁺ɔ́
　　DSCN　MSG=person　REL.NEG-NEG-3-be.plenteous　COP　　3-VBLZ-bad
　　'Now a person who is not generous is bad.' (elengon2.007-008)

In contrast to relative clause forms, the adverbs *olêŋ* and *naléŋ* do not show agreement with any particular element in the clause. In (86), the noun before *olêŋ* is feminine so we would expect *naléŋ* if it were a modifying relative clause; but this does not occur.

(86)　n-ɛ́-ata　　ɛ=sʊ́mash　　**olêŋ**
　　CN1-3-have　FSG=hunger　　very
　　'and they were very hungry' (divorce.009b)

In (87), *l=Máásâî* is plural, shown by the stem form (cf. singular *Máásaní* 'Maasai person') and by *ɔɔ́* 'of.PL' (cf. singular *ɔ́*). Observe that *olêŋ* in (87) differs from the plural relative form *ooléŋ* in (85) above. The nominalization *eleŋón* indicates 'generosity' in (87), but in other contexts it could indicate 'abundance' (prototypically connoting land abundant with food for grazing animals), 'greenness of land', or 'season of plenty'.

(87)　e-isur-óki　　apá　　e=leŋ-ón　　　　ɔɔ́　　l=máásâî　　**olêŋ**
　　3-criticize-DAT　before　FSG=be.plenteous-NMLZ　of.PL　M=Maasai.PL　very
　　'The generosity of the Maasai has been criticized.' (elengon2.040)

In (88)b, there would be case, gender, and number discrepancies if *olêŋ* were considered a relative form. *Inkutukíé* is the nominative feminine plural form for 'languages, mouths'. A modifying nominative plural relative should have the prefix *náa-* on *leŋ*; the absolute plural relative form would have the prefix form *naá-*. *Olêŋ* in (88) does not correspond to either.

(88)　a.　óre　　lekûâ　　n-ɛ́-ítɔbɪr-ákɪ　　　　ɛn=chal-án
　　　　DSCN　those　CN1-3-make-DAT　　　　FSG=be.weak-NMLZ:STATE
　　　　'Those do make (show well) the weakness/lightness of (their) languages,'

b.　oó　　n=kútúkíé　　áa-shal　　　　　in=kutukíé　　**olêŋ**
　　of.PL　F=languages　INF.PL-be.weak　FPL=languages.NOM　very
　　'(their) languages are very weak/light.' (enaidurra.115)

Adverbial *naléŋ* also does not show the agreement that a relative form would. In (89), *ɪnâ kɔ̂p* 'that land' is nominative feminine singular. The agreeing relative form would be *náleŋ*; but we find *naléŋ* instead. The text corpus also shows many cases of what looks like an ostensibly masculine form *olêŋ* where the only nouns in the context are grammatically feminine.

(89)   náa   ínâ   peê   e-tií   ɪnâ   kɔ̂p   síádí   **naléŋ**
       COP   that   reason CVB.3-be.at that.NOM   land.NOM   behind   very
       'that is why that land is quite behind [in addressing problems]' (Camus4.221)

In sum, as adverbs, the 'very' forms have broadened in meaning to indicate intensity of anything, but the lexical source concerns what most prototypically sustains life among these traditionally pastoralist people. The adverbial forms do not show agreement with preceding nouns, while relative clause forms do. Nevertheless, it is likely that at least *naléŋ* has its origin in a relativized form, identical to what we find in (83).

Ferreting out the source of *olêŋ* is more challenging. While *o-* is the shape of a masculine singular relative prefix, the falling tone pattern on the root is not expected for a singular relativized verb.[13] A final Falling verb tone is sometimes associated with a plural participant (see (84) above); but an alternative hypothesis is that *olêŋ* possibly developed from a noun/adjective formation. Maa has a minor and perhaps unproductive verb – noun/adjective alternation involving a final Falling tone on the latter. The verb words in Table 6 are presented with a "L+final-H" tone melody, which is a feature of the singular infinitive morphological construction. The noun and adjective words in Table 6 have a final Falling tone. Regarding the proclitics on the noun/adjective words, it is a completely regular process for gender+number proclitics to drop their final nasal (for feminine) or lateral (for masculine) before sonorant-initial stems; thus, we find the masculine singular form *o=lôm* 'jealousy' related to the verb *a-lóm* 'to be jealous'. This is exactly parallel to the difference between the forms *olêŋ* versus *a-léŋ*. It is thus conceivable that *olêŋ* 'very' developed historically from a nominal derivation of the verb root *leŋ*; but that this hypothesized noun function of *olêŋ* has now been pre-empted by the nominalization *e=leŋ-ón* 'generosity'.

Table 6. Verbs and related noun/adjectives with Falling tone

verb		noun/adjective	
a-bák	'to crack'	ɔl=bâk (Kisonko)	'(M.SG) crack'
a-ɪkɔ́ny	'to seize'	ɔl=kɔ̂ny	'(M.SG) force'
a-ɪláp	'to hold a grudge'	ɛ=lâp	'(F.SG) grudge'
a-lóm	'to be jealous'	o=lôm	'(M.SG) jealousy'
a-rós	'to hit over large a area'	arôs	'spotted' (e.g. of a cow)
a-gɪrá	'to be quiet'	girût	'quiet, silent'
a-ŋél	'to deviate'	ŋɛlêsh	'lopsided'

Another adverb that might have its origins in a relative clause is *náají* 'possibly, maybe'. This adverb come from an extension of an impersonal passive plural relative clause involving *jo* 'say, think, try'. The meaning 'what are said/called' is evident in the relative clauses in (90) and

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[13] Tucker & Mpaayei also (1955: 266, 269) attest to the tone difference between *naléŋ* and *olêŋ*. It is worth pointing out that not all of the relative clause tone facts described by Tucker and Mpaayei (1955) hold throughout our data, due to tonal subclasses of verb stems which they did not discuss, and likely some dialect/idiolect variation.

(91). In (90)a,b, 'cattle' and 'tree' are in the absolute case, and the relative clause prefix-complex *n-aá-* is expected as the absolute case of a plural relative Class I verb.

(90) a. n-ɛ́-ɛta-î   in=kíshú   **n-aá-j-î**
          CN1-3-have-IMPS FPL=cattle   REL.F-REL.PL-say-IMPS

          apá   in=ó=l=toó   lɛ=ményɛ.
          before   FPL=OF.MSG=M=chest   of=his.father
          'There are cattle called "those of the chest" of his father".' (embul.132)

      b. kí-ata   ɪn=kʊtítí   keék   **n-aá-j-î**   in=konér⁺én
          1PL-have   FPL=small.PL   trees   REL.F-FPL.REL-say-IMPS   inkoneren
          'we have small shrubs that are called inkoneren.' (osinkisonk.049)

The adverb *náají* 'possibly, maybe' is potentially an extension from the sense(s) 'what are thought/tried'. Example (91) involves the adverb, and concerns the time of an elderly man's death. The man has put bracelets on his son's arms and an ox is slaughtered. Note that *náají* occurs right after the absolute noun *kítéŋ*. However, the adverb has the non-agreeing tone pattern *náa-*, which would correspond the nominative case of a plural relative Class I verb.

(91) amô   ílô   kítéŋ   **náají**   apá   e-pik-iék-i
      because that.MSG bovine possible   before 3-put-INST-IMPS
      'because that could be the ox they put them (bracelets) on with.' (enkeeya.038b)

Why the nominative tone pattern occurs for the adverb remains unexplained, except to note that some other adverbial forms also have nominative tone patterns of source forms.

8. Use of adverbs for nominal tense/aspect

Some adverbs can occur immediately after the determiner within a DP, to modify or restrict the referent. Due to their semantics in this function, this use can be characterized as a type of nominal tense/aspect (Nordlinger and Sadler 2004; Bertinetto 2020). The particular type is what Nordlinger and Sadler call "independent" nominal tense/aspect in that the adverbs say something about the nominal referent rather than about the tense/aspect of the whole proposition. What perhaps differentiates the Maa situation from other languages with nominal tense/aspect is the degree to which the system in Maa is (not) grammaticalized.

Adverbs found in our data in this DETERMINER+ADVERB construction are in Table 7. Several are high-frequency forms from Table 3, but *ŋolé* 'yesterday' is from Table 2, and *náají* 'possible' was included in Table 4 for its dominant modal sense. The corpus frequences in Table 7 are based only on adverbs after gender+number proclitic determiners; but these items can also occur after demonstrative determiners. Even though the demonstratives and nouns vary for case in (92) – (93), note that the adverb melody does not vary.

(92) ɛ́nâ   dúóó   kɛ́ráí
      this.F   previous   child
      'that previous(ly-mentioned) child' (eishoi.022a)

(93)   ɛná   dúóó   tásât
        this.F.NOM   previous   ancient.NOM
        'this previous(ly-mentioned) old woman' (emutata.042a)

Table 7. Adverbs that may immediately follow a determiner within a DP

	Corpus instances after gender+number proclitics	**Gloss**
apá, ɔpá	57	'before, former'
dúóó	85	'earlier, aforementioned'
ŋolé	2	'yesterday'
oshî	13	'always, usually, normally'

When a Table 7 adverb occurs immediately after a proclitic determiner, a vowel occurs between the determiner and adverb root. Apparently the vowel may be inherent to the adverb or an /a/ can be added. Note that no /a/ is inserted with the demonstrative determiners in (92) – (93), which end in vowels themselves. But one is inserted in the form *ma=á-dúóó* in (16) above. If the intrusive /a/ is morphological, its function is not clear. In this paper I gloss it as epenthetic (EP). Though not found in the corpus used here, Mol (1996: 63, 102) also shows the adverbs *doí* 'indeed', *naárr⁺í* 'recently' and *náají* 'possibly, quite recently' in the DETERMINER+ADVERB construction with an intrusive /a/. (He does not note the 'possibly' sense of *náají*, which is dominant in the corpus used for this study and illustrates only the 'recently' sense in combination with a determiner.)

In the DETERMINER+ADVERB construction, *oshî* communicates habitual or gnomic nominal-aspect (cf. Bertinetto 2020). *En=oshî ŋɔny* 'usual vein' in (94) indicates the vein from which one normally draws blood from a cow (i.e. the juglar vein). In (95), *il=oshî* reflects that old men often forsee their approaching death. A more exact English translation might be, 'There are the typical/proverbial old men who see their death coming.' In (96) the speaker is narrating a dramatic series of events and expects the hearer knows about the nature of suds from Omo soap powder. In both (94) and (96), the speakers are evoking the hearer's presumed background knowledge, and do not spell out details of how situations or things typically are.

(94)   n-é-ŋor   en=**oshî**   ŋɔny
        CN1-3-pierce   FSG=always   vein
        'He pierced (it) at the usual vein.' (letabo2.007)

(95)   e-tíí   il=**oshî**   mórúâk   ɔɔ-dɔl-ʊ́   ɛn=kɛɛya
        3-be.at   MPL=always   elders.NOM   REL.M.PL-see-VEN   FSG=death
        'There are normally/typically men who see (their) death coming.' (enkeeya2.011)

(96)   a.   óre   ínâ   kátá   aké   peê   e-osh   ɛn=kɔ́p
              DSCN   that   time   just   when   CVB.3-hit   FSG=ground
              'Immediately when he hit the ground,'

        b.   nét⁺íú   ánaa   ol=**oshî**   sabún⁺í   li=ómo
              CN1-3-be.like like   MSG=always   soap   M.of=omo
              'he became like soap (foam) of Omo always (is) ' (sairowua.0344)

In the DETERMINER+ADVERB construction, *apá* and *ŋolé* are like nominal-tense forms. In (97), *ɛn=apá* indicates that generosity was a former characteristic, which may or may not be so

evident in modern society. In (98), *ɪl=aŋolé* serves a participant clarification function while also being a nominal-tense form.

(97)   K=ɛ́-nár⁺ɛ̀   náa   k=ɛ́-ítʊ-bʊl-áa   ɪl=maasáí
        CN2=3-be.fitting   COP   CN2=3-CAUS-grow-ITV   MPL=Maasai.NOM

        ɛn=**apá**   leŋ-ón   ɛnyê   apá⁺ké   n-aá-ta.
        FSG=before   be.plenteous-NMLZ:STATE   their   before.just REL.F-REL.F.PL-have
        'It is fitting that the Maasai keep making their former generosity flourish.' (lit. 'It is fitting that the Maasai cause to grow their former generosity that they had.') (elengon2.061)

(98)   Ɛ-shɔmɔ́-ítɔ   ɪl=a-**ŋolé**   páyiani.
        3-go.PF-PL.PF   MPL=EP-yesterday   men.NOM
        'Yesterday's men (e.g. the men we met yesterday) left.' (Purko Maa)

In (99), *ol=adúóó* helps clarify which warrior out of a group of warriors stabbed the enemy. *Dúóó* 'previous(ly)/previously-mentioned' has a kind of discourse anaphoric function, similar to a "recognitional" demonstrative (Himmelmann 1996) which signals to hearers that they should already be familiar with the referent. It is of interest to note that Maa collapses into a single paradigm what has been observed as a type of demonstrative function for some languages and what have been called tense/aspect functions for yet others.

(99)   N-ɛ́-pɪk   ol=a-**dúóó**   mʊrraní   e=rem-ét.
        CN1-3-put   MSG=EP-aforementioned   warrior.NOM   FSG=SPEAR-NMLZ:INST
        'the aforementioned warrior put the spear (in) him.' (arinkoi.063a)

It is noteworthy that reasonably high-frequency intensifiers like *olêŋ/naléŋ* 'very' are not attested in the the DETERMINER+ADVERB construction. This suggests the construction may have a cognitively "pointing-out" function, helping guide the hearer to cognitively find the right referent within the mental world they have been building, and not all adverbs are semantically suited to this. However, it is not clear that *oshî* has this "find the right referent within the discourse world" when in the DETERMINER+ADVERB construction, but it still calls on the hearer to search their knowledge store for relevant presupposed information.[14]

9. Conclusions

This study has helped refine the understanding of part-of-speech categories in Maa. In terms of major category distinctions, roots like *pɪ(j)* 'be brave/sharp', *bɛbɛk* 'be thin/flimsy', *sápʊk* 'big', *bótór* 'senior', *kɪtɪ* 'small', etc. differ in their morphosyntactic distribution from adverbs like *oshî* 'usual(ly), normal(ly), always', *pényɔ* 'improbably, attenuative', *olêŋ/naléŋ* 'very', *apá* 'earlier, before', and so on. Attenuating *pényɔ*, intensifying *olêŋ/naléŋ,* as well as other adverbs help differentiate adjectives from nouns.

The paper has defined the Maa adverb as a roughly lexical word that modifies a predicate/predication, and which do not inflect for person or case. At the same time, the study has identified challenges regarding this definition of adverb. However, the issues are basic facts about

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[14] The size/amount adjectives *kɪtɪ* and *kini* 'little' can occur directly after the determiner within a DP, as in (20) – (21). Unlike consonant-initial adverbs, *kɪtɪ* does not take a leading *a* in this environment, though it does take one in the adverbial form 'slowly, gently' (Section 4).

the nature of all languages – they are not difficulties for languages, only for approaches to identifying part-of-speech categories which (wrongly) assume such categories have sharp boundaries.

First, I have said "roughly lexical" in the definition above because some of the adverbs have significantly broadened in meaning. Different semantics and usage profiles entail that one versus another adverb may have non-identical structural collocations, to the point that some are becoming more grammaticalized. We have especially noted the use of some high-frequency temporal/aspectual adverbs adverbs within DPs for a nominal tense/aspect function.

Second, while Maa adverbs can be considered a single category due to the shared morphosyntax of not inflecting for person or case and the shared function of modifying predicates/predications, there are nevertheless some distinctions among them. In part this is due to a variety of historical origins. Some have sources in oblique prepositional phrases, others in relational nouns and adjectives, some in relative clause forms, and others possibly in infinitive verbs and idiophonic sources. Some adverbs have tone melodies corresponding to the nominative case of the base lexeme, including those from oblique and some relative clauses. Adverbs from relational nouns have the absolute tone melody of the source. The listed sources do not account for all adverbs. Certainly there is no hint of them for adverbs like *pényɔ* 'improbably', *doí* 'indeed, certainty', and others which probably have had adverbial status since pre-Maa stages.

Third, because some adverbs historically come from other parts-of-speech, the morphosyntax between such adverbs and their sources is not always clear-cut. For instance, we have differentiated adverbs from the INFINITIVE-SERIAL verb construction, which also modifies predicates/predications, but it is possible that the INFINITIVE-SERIAL verb construction is one historical source of adverbs. The difference between a nonce productively-generated oblique temporal expression and a fully lexicalized expression like *téípa* '(in) late afternoon, early evening' is a cline, as is the relationship between some nouns, relational nouns, and adverbs.

Finally, this study has given us a chance to reflect on the creativity of the human mind in stretching and adapting lexemes for new functions. Though certain semantic pathways are well-trod cross-linguistically (e.g. adaptation of translational movement 'come' and 'go' for temporal meanings, the extension of locatives to temporal meanings, 'sit' or 'stay' reanalyzed as a continuative), communities of speakers also can adapt things in more unique ways. Notably, the intensifying adverbs *olêŋ* and *naléŋ* likely come from the verb root *leŋ* 'be plenteous, abundant (with green grass); be generous'. This root embodies culturally very important concepts – both the source of food for grazing animals and a human social value –, that crucially bear on what sustained life for a traditional pastoralist population.

Abbreviations

ATN	attenuative	MID	middle
CAUS	causative	MPL	masculine plural
CN	connective	MSG	masculine singular
CVB	converb	NEG	negative
DAT	dative	NMLZ	nominalizer
DSCN	discontinuous	NOM	nominative
EMPH	emphatic	NPF	non-perfect(ive)
EP	epenthetic	OBL	oblique
F	feminine	OPT	optative

FPL	feminine plural		PF	perfect(ive)
FSG	feminine singular		PL	plural
IMPS	impersonal "passive"		PROG	progressive
IMPER	imperative		REDUP	reduplication
INCHO	inchoative		REL	relativizer
IDEO	idiophone		SBJV	subjunctive
INF	infinitive		SG	singular
ITV	itive		VBLZ	verbalizer
M	masculine		VEN	ventive

Acknowledgements

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