Maa (Maasai) Nominalization:
Animacy, Agentivity and Instrument

Doris L. Payne[1] and Derek Olsen[2]
[1,2]University of Oregon and [1]SIL International

Maa (Maasai, Eastern Nilotic) has fairly rich morphology for deriving nouns from verb stems, including prefixal, suffixal, and tonal forms.[1] Some nominalizations have distinct forms for plural versus singular referents, and many have allomorphs based on ATR vowel harmony. This paper focuses on {-ɛt} and {a-...-ani} nominalizations, both of which are highly productive.[2] Tucker and Mpaayei (1955:219-220) and Mol (1966, p. x) have labeled the former an Instrumental and the latter an Agent nominalizer, referring to oppositions such as *en-duŋét* 'knife' versus *ɔl-adúŋònì* 'one who divides'. However, forms such as *ol-dúŋóret* 'last born child' (from *duŋ* 'cut') and *ɔl-mɔdét* 'small pieces of meat' (from *mɔd* 'get little pieces of something with idea of making something big out of them; fool') suggest that the Agent and Instrument labels do not account for all instances of the nominalizers' use. But examples like *ɛnk-áípóóponí* 'loved child' (from *pɔɪpɔɪ* 'nurse, take care of well') alongside *ol-dúŋóret* 'last born child' raise the possibility of some overlap in semantic role meaning.

This paper explores the synchronic semantics related to the opposition between *-ɛt* and *a-...-ani* formations. In particular, we investigate whether there is overlap in: (a) inherent aspect of the verb stems they occur with, (b) semantic role of the verb to which the resulting nominalization refers, (c) and animacy or humanness of the referent. We assume that since the ecological system of the language has maintained these two highly productive distinct forms, there must be some primary semantic difference between them. Thus, our aim here is to empirically explore the degree of conceptual difference between the two Maa nominalizations, evaluating whether semantic role, aspect, or animacy provides the best explanation for choice between them.

Nominalization is classically considered a derivational process, meaning that it correlates with either a change in part-of-speech and/or a substantive change in meaning.[3] Some derivational forms may be idiosyncratic in meaning, but others may be quite consistent in their meaning contribution, as with English *-er*. With a high level of consistency this means 'someone or something that performs the

---

Abbreviations are: ACC accusative, AG agent, CN discourse connective, DVB deverbalizer, *EN possible Proto-Eastern Nilotic number suffix, EXP experiencier, F feminine, IN instrument, INCEP inceptive, INF infinitive, INST instrument, LOC locative, M masculine, MID middle, NMLZ nominalizer, NOM nominative, NPF non-perfective, PASS passive, PFTV perfective, PL plural, PROG progressive, PT patient, RECEP recipient, REL relative, RESL result, SG singular, TH theme. On whole word forms tone writing generally follows the conventions of Tucker & Mpaayei (1955).

[2] For the most part we simply use *"-ɛt"* and *"a-...-ani"* as cover forms to refer to singular and plural counterparts together (as well as all their allomorphs).

[3] See Anderson (1982) and Payne (1986) for discussion of the problematic inflectional/derivational distinction.

action of the verb', as in *singer, burner*.[4] Morphemes like English *-er* raise the question of whether there is any "real" difference between Agent and Instrumental roles associated with the meaning of a verb; that is, does the *-er* in *sing-er* refer to the understood 'Agent' of the verb root *sing*, but the *-er* in *burn-er* to a distinct notion of 'Instrument' used by a referentially-distinct Agent to carry out the action of 'burning'?[5] Or is there just one basic meaning here? Similar in semantic terms is the Maa applicative/causative morpheme *-ie(k)* that appears to add a (typically inanimate) 'Instrumental' Object to one class of verbs (Tucker and Mpaayei 1955), but a (typically animate) 'Causee-Agent' to another class of verbs.[6] The fact that morphemes like *-ie(k)* are historically unitary provokes some to ask whether a propensity to see a difference between 'Agent' and 'Instrument' might not just be misguided sensitivity to referent features such as humanness or animacy. That is, humanness and animacy are features inherent to referents, while Instrument and/or Agent are semantic *relational* notions deriving from the meaning of predicate types or adpositions (Gruber 1965, Chafe 1970, Jackendoff 1990, Fillmore, Johnson and Petruck 2003, *inter alia*).

1. Maa nominalizers: forms and sources

Building on the work of Kotikash (2000), Table 1 below attempts to initiate a comprehensive description of Maa nominalizers, correlating their morphological forms with the derivation of nouns from verb stems (however, we do not claim this chart is yet exhaustive of the language's nominalizing resources).[7] Rows 1 and 11 show our target nominalizers, *-ɛt* and *a-…-ani*. The glosses for nominalizers in Table 1 are provisional and should be considered just convenience labels (though for future reference purposes, the gloss for *a-…-ani* already reflects the ultimate conclusions of this paper).

Singular and/or number-neutral forms are in column 1 of Table 1, and principle allomorphs (due to ATR vowel harmony) are in parentheses. Note that in some cases there is both a prefixal and suffixal element to the nominalizer, other times there is just a prefix, and other times there is just a suffix. Some speculations on source of the singular/neutral suffixes are in column 2. Column 3 contains any plural counterparts to the forms in column 1 (again, principle allomorphs are in parentheses). Column 4 gives illustrative examples of nominalizations in their most natural citation forms, which is usually with a gender+number prefix. Column 5 gives source verbs for the specific nominalizations in column 4, in either root or stem form. We make no particular claims here about underlying tones on affixes or roots/stems.

---

[4] This suffix also has the sense 'one associated with', as in *Westerner*. Perhaps as an extension from this more general sense, note derivations like *steamer* as used in coffee shops for a hot milk drink which has been steamed – here, *-er* creates a nominalization referring to a Patient of the verb *steam*, not its Agent/Instrument. Neither the on-line (2007) Mirriam-Webster dictionary (http://www.m-w.com/cgi-bin/dictionary), nor the 1973 *American Heritage Dictionary* cite this meaning for *-er*, suggesting it is a newer usage.

[5] As in the attested sentence, *The lab Bunsen burner is to be used* [by the student in a science class] *when heating a substance in a beaker or crucible…* (http://www.fordhamprep.org/gcurran/sho/sho/skills/burner.htm).

[6] Though Instrument and Causee are by far most common, additional semantic nuances of objects associated with the *-ie(k)* Applicative suffix include Accompaniment, Reason, Source, and Location.

[7] The role of tone in nominalizations, either alone or in conjunction with other affixes, is particularly unstudied. Also, Maa can derive nominals from adjectival stems simply by adding a gender+number prefix. Third, relative clause formations are nominal. These nominalization strategies are not addressed here.

	Singular/ number-neutral nominalizing morphology	Possible suffix sources	Plural	Nominalization examples	Verb sources
1	-ɛt (-ɛt) 'Instrument. SG'	?	-ɛta (-ɛta) 'Instrument. PL'	ɛn-dakɛ́t 'mouth'	da(k)[8] 'eat'
2	a- 'Patient, State'	?	(PL does not occur)	ɛn-áímìn 'darkness'	mɪn 'be lost'
3	-a (+Tone?) 'Patient' 'Result'	Non-perfective middle, or *EN	-iki	ɛn-dáà 'food' / ɛn-dála 'game'	daa[9] 'eat, feed (intr)'
4	a-...-a (-o) 'Patient, Result'	Non-perfective middle, or *EN	a-...-ak (-ok)	ɔl-ákɛ́sɛ́nà 'skirt'	kesen 'tie'
5	a-...-a (-o) 'Instrument'	Non-perfective middle, or *EN	a-...-i	ɪn-aipúkò 'wing'	ɪpuk 'flee'
6	a-...-a 'Action-Situation'	Non-perfective middle, or *EN	a-...-arritin	ɛn-aɪdʊ́rrà 'migration'	ɪdʊrr 'migrate'
7	(a-)...-ɛ 'Instrument, Result'	Perfective middle, or *EN	(a-)...-ɛn (-ɛn)	ɛnk-aɪdáshè 'shoe' / ɔl-míshíré 'iron, branding mark'	ɪdash 'trample' / mshɪr 'brand'
8	a-...-ʊ 'Result, State-Situation'	Ventive	(PL does not occur)	ɔl-adalú 'heat, warmth, dry season'	dal 'scorch'
9	a-...-aa 'Instrument'	Itive	(PL does not occur)	ɛnk-amanàà[10] 'lid, top for calabash; circumference'	man 'surround'
10	a-...-ishɔ 'State-situation'	Antipassive	(PL does not occur)	áísínánìshɔ̀ 'poverty'	sɪna 'lack, be depressed'

---

[8] The root *dak* 'eat' does not synchronically surface in this simple form; typically the /k/ is deleted by regular phonological processes. However, certain morphologically complex forms, such as the Instrumental nominalization, show the /k/.

[9] *A-daá* 'to eat, feed (intransitive)' must certainly contain the root *da(k)*, but with the 'Middle' suffix *-a* added.

[10] Mol (1996: 24) indicates that the plural of this term is marked just by change of gender+number prefix: *ɪnk-amanàà*.

154

#	Nominalizer (SG)		Plural / Form	Example	Gloss	Root	Root gloss
11	*a-...-ani (-oni)* 'Animate.SG'	?	*a-...-ak (o-...-ok)* 'Animate.PL'	ɔl-arrágàni	'sleeper, watchman'	ɪrrag	'sleep'
				ɔl-aibóni	'diviner, sorcerer'	ibon	'exercise office of ritual expert'
12	*a-ɨkɨ-...-ani* 'Agent.SG'	?	*-ak*	ɔl-áíkítáɨlànì	'spy'	tal	'reconnoiter, scout out'
13	*a-...-tta (-ite)* 'Patient, Instrument'	?	(PL does not occur)	ɔl-adakîtà	'food, food dish'	dak	'eat'
14	*a-...-ɪ* 'Patient'	Impersonal passive or *EN	*aá-...-ɪ (oo-...-ɪ)*	en-abelí	'salt chunk'	bɛl	'break'
15	*a-...-ɪ* 'Theme'	Impersonal passive or *EN	*a-*	ɛnk-adɔ́ri	'height'	adɔ(r)	'be linearly extended'
16	*-ɪ* 'Situation'	Impersonal passive or *EN	(PL does not occur)	en-taáni	'nearness'	taana (taan?)	'be near'
17	*-ati* 'Patient'	?	*-at*	ɛm-beláti	'piece that broke off'	bɛl	'break'
18	*kɪ-* 'Result'	?	*-in*	en-kiás	'work, deed'	as	'work'
19	*-ata (-oto, -ɔtɔ)* 'Result' 'Action-Situation'	?	*-at (-ot)*	ɛ-síɲátá	'(a) sneeze'	sɪŋ	'sneeze' (v)
				em-bɛ́látá	'breaking off'	bɛl	'break'
20	*-are* 'Action-Situation'	?	*a-...-arritin*	ɛ-síɲáɾɛ́	'sneezing'	sɪŋ	'sneeze' (v)
21	*-an (-on, -ɔn)* 'State-Situation'	?	(PL does not occur)	ɛm-pɪ́ján	'sharpness'	pɪ́j	'be sharp'
22	*-no* 'State-Situation'	?	(PL does not occur)	ɛnk-árríyíánó	'skillfulness'	arriyia	'be skillful'
23	*-i* or *-ie* 'State-Situation'	?	(PL does not occur)	ɛ-nanáí	'softness'	nana	'be soft'
24	TONE 'Result'	?	(PL does not occur in some instances) *-i*	o-lɔ́m	'jealousy'	lom	'be jealous'
				ɛnk-ányɪt	'respect' (n)	anyit	'respect' (v)
				ɪ-anyɪtɪ	'sisters-in-law'		

Table 1. Maa Nominalizers.

We cannot discuss all the forms in Table 1 in this paper, but some comments are in order. First, as just noted, column 2 of Table 1 speculates on sources for some suffixes in column 1, including possible voice and directional sources. However, many Nilo-Saharan languages have elaborated singulative and plural-marking suffix systems, argued to (partially) reflect old nominal classification systems. The forms /ɪ/ ~ /i/ , /a/ ~ /o/, and /ɛ/ ~ /e/ are common number suffixes in Eastern Nilotic languages, so some of the suffix morphemes associated with singular (and/or number-neutral) nominalizations in Maa are likely reconstructable to Proto-Eastern Nilotic (if not even further back) as number affixes (indicated by *EN in Table 1). In certain other Nilotic languages, phonological forms like /ɛt/ and /(a)ni/ have also been analyzed as number morphemes. Thus, in at least some Maa words one might argue that an *-ani* (or *-ni*, or *-i*, etc.) should be considered a number (not a nominalizer) suffix, reflecting a now largely-opaque noun classification system (cf. Dimmendaal 2000). As a corollary, the nominalizer *per se* on at least some Maa words could then be thought of as just a prefix (e.g., *a-* in line 11 of Table 1). However, given that the suffixal portions are an essential part of the noun words which have been derived from verb roots, and given that they are part of the form that contrasts with certain other unambiguous Maa nominalizers like *-ɛt*, we treat the apparent nominalizing-cum-number affix complex as a whole in this paper.[11]

Another observation concerns the prefix *a-*, which co-occurs with several suffixes in Table 1, including *-ani*.[12] In examples we gloss this *a-* as a deverbalizer (DBV) because historically it may have had some role other than being strictly a nominalizer.[13] However, for the purposes of our synchronic examination of *a-...-ani* in contrast with *-ɛt*, we shall treat the former as a nominalizer that simply requires both elements, keeping in mind that further research may indicate some further significance of the prefix.

Though some suffixal elements in Table 1 may involve number origins, other – sometimes homophonous endings – are almost certainly related to the derivational voice and directional resources of the language: Non-perfective Middle *-a,* Perfective Middle *-ɛ,* Antipassive *-ɪshɔ,* Impersonal Passive *-ɪ,* the Directionals *-aa* 'Itive' and *-ʋ(n)* 'Ventive'. Particularly in those cases where the suffixal element may correspond (historically) to a voice-type affix, it raises the question of whether the suffix is immaterial to the nominalization paraphernalia, and is instead part of a complex verb stem which is nominalized solely by the *a-* prefix. This analysis would certainly be supported by line 2 of Table 1 where there is only a prefix element. However, many of the suffixes in column 1 that co-occur with the prefix *a-* are specifically singular in their nominalizing function (as shown by their contrasting plural counterparts in column 3). Verb-stem derivational elements generally do not have plural counterparts, certainly not the ones found in Table 1. Thus, even if some suffixes in Column 1 do prove to be historically related to the verbal voice and direction affixes, they have clearly diverged in meaning wherever they are now semantically specialized for singular referents. Altogether, it appears too simplistic to say that the prefix *a-* can always be analyzed as "the" nominalizer, separate from the suffixes with which it co-occurs.

One observation about a probable allomorph of the nominalizer *a-...-ani* is in order. As shown in Line 11 of Table 1, *ɔl-aibónì* 'diviner, sorcerer' would appear to have the suffixal element *-i* rather than *-ani*, as the noun is formed from the stem *ibon* 'to exercise the office of ritual expert.' Occurrence of *-i* rather than *-ani* may be due to haplology: the phonological sequence /on/ drops from the morphemic sequence *ɔl-a-ibon-oni* (MSG-*a*-Vstem-*ani*), such that /on/ is not pronounced twice. Thus, here we treat *-i* as an allomorph of *-ani*.

---

[11] Dimmendaal (2000) cautiously notes that in differing Nilo-Saharan languages the same surface number form may have differing etymologies; also see Storch (2005). As noted, some nominalizing suffixes in Maa may (or may not) turn out to be cognate with one or more number suffixes in other languages.

[12] Various nominalizations also show a prefix *k-*, at least sometimes parsed synchronically as part of the feminine gender prefix allomorph *ɛnk-*. This *k-* may be related to what Greenberg (1981) called "the moveable k Stage III article"; we will have little to say about it here.

[13] Historically it may possibly be related to the Infinitive Singular prefix *a-* or to a relative clause pronominal prefix.

2. Data for the analysis

Our ultimate goal here is to determine what (range of) semantic notions are emically targeted by -*ɛt* and *a-…-ani*, and how conceptually distinct these two productive morphological patterns are. We thus are interested not only in examining clear differences between them, but also evaluating what degree of overlap there might be in their semantic ranges. To investigate these issues, we relied on a lexicography database that contains approximately 7,000 entries (see Payne and Kotikash, in process), and somewhat secondarily on a database of elicited sentence-level materials and a corpus of some 20,000 lines of text.

We first filtered the lexicography data by part of speech so as to collect all the nouns. We then filtered the nouns by ending, identifying all that ended with phonological material matching any of the singular or plural allomorphs of the nominalizer {-*ɛt*} (-*ét, ét, -èt, èt, -étà, -étà*, and so on). We did the same for the singular and plural allomorphs of the nominalizer {*a-…-ani*} (-*ánì, -ànì, -ónì, -ònì, -ák, -ók*, and so on). We carefully examined the resulting data by hand and excluded any that did not actually contain the requisite suffixes but just happened to phonologically terminate like the desired forms.

We then searched for verb roots and verb stems that the nominalizations might be derived from. There were a few cases where *a-…-ani* appeared to be added to a noun root or stem (e.g., *ɔl-aɪkɔ́shúàànì* 'glutton' vs. *ɔ́shɔ̀kɛ̀* 'stomach'), and excluded these. In some cases we could not find a synchronic verb root or stem from which the noun might be derived. Wherever we could not find a verb root/stem, we excluded the nominalization from the study because we did not want to speculate about what the semantics of the source verb root/stem might have been.[14]

With the remaining data, we took an etic perspective in assigning source verb roots/stems to Active vs. Stative categories (Section 3.1), and nominalizations to the animacy (Section 3.2) and semantic role categories (Section 3.3). Whenever we had questions, we checked for usage or related forms of verb roots/stems and nominalizations in the text corpus, Mol (1996), and (Wagner n.d.), in order to amplify our understanding of semantic issues; however, we did not use these as sources for collecting additional nominalizations to examine in detail or for the quantified portion of the study.

The final study sample contained 137 nominalizations, based on 117 distinct verb roots. There are more nominalizations than roots because a single root may have multiple possible derivations. For instance, the following three nominalizations are all based on the single root *duŋ* 'cut':

(6)   a. *ɔl-adúŋònì*   'cutter, one who divides'
         b. *ol-dúŋórét*   'last-born (masculine) child'
         c. *en-duŋét*   'knife; decision'

Of the 137 nominalizations, 63 were -*ɛt* nominalizations and 74 were *a-…-ani* nominalizations. Not too much should be made of this exact proportion because a different sample might have resulted in somewhat different numbers. However, we believe the numbers are sufficient to allow for valid comparison between *ɛt*- and *a-…-ani*.

3. Hypotheses and conceptual framework

Our initial perusal of the data suggested that both *a-…-ani* and *ɛt*- nominalizers have a range of meanings. The complex *a-…-ani* appears to primarily create nouns referring to humans that are the 'doers' of actions, though this is not a 100%-generalization. The suffix -*ɛt* creates nouns referring to prototypical tools such as 'knife' from 'cut', but also: inanimate referents that could still be construed as 'doers' of actions such as the same item 'knife', places such as 'temporary place for roasting meat' from the verb 'roast', some abstract concepts such as '(an) answer' from the verb 'reply, exchange',

---

[14] In the case of *ɔl-aɪkɔ́shúàànì* 'glutton', a nominalization was probably involved (historically), likely based on a now-lost verb stem like **ɪkɔshɔk*. Nevertheless, we excluded it from the analysis.

and occasionally Patient or Resultative concepts such as 'knot' from the verb 'tie' or 'child' from the verb 'open' (referring to the birth process).

Since the nominalizers have a range of meanings, we might expect that the semantic range of one could conceivably overlap with that of the other. In order to explore the semantic range of *-ɛt* and *a-…-ani* (and with an eye to eventually investigating all Maa nominalizations in greater depth in the future), we investigated the following sub-hypotheses to see what provides the best overall account of the data.

> **Hypotheses**:
> 1. **Lexical aspect:**
>   a) Inherent lexical aspect of the verb stem does not differentiate *-ɛt* from *a-…-ani* nominalizations.
>   b) Both *-ɛt* and *a-…-ani* operate on Active stems, and not on Stative stems.
> 2. **Animacy:**
>   a) *-ɛt* creates nominalizations referring to inanimate referents.
>   b) *a-…-ani* creates nominalizations referring to animate referents.
> 3. **Semantic role:**
>   a) *-ɛt* creates nominalizations referring to the Instrument role of a verb stem.
>   b) *a-…-ani* creates nominalizations referring to the Agent role of a verb stem.

We will see that the data do not empirically support hypotheses 1 through 3 at the level of 100% in their most simplistic interpretation. We will, however, argue that hypotheses 1a and 1b are upheld. Further, when the investigation is limited to a comparison of *-ɛt* and *a-…-ani*, a prototype notion of 'animacy' best accounts for the choice between them. Until a fuller ecologically-oriented study of all the nominaliziers in Table 1 (especially the 'Patient' nominalizers) is undertaken, the relative contribution of semantic role to understanding *-ɛt* and *a-…-ani* must remain somewhat uncertain.

To provide a framework for our investigation, we first attempt to give clear definitions of certain conceptual categories, in particular: inherent aspect types for verb stems, animacy type of the referent of the nominalization, and semantic role of the nominalization relative to the argument frame of the verb stem.

3.1. Inherent aspect

Inherent aspect concerns the lexical temporal nature of a verb root or stem, not including the semantic contribution of any grammatical aspect markers. We assign each verb stem in our data to either the category Active or Stative,[15] according to the following criteria.

Active verbs refer to a process, action, or action-process situation (Chafe 1970). In Maa, such verbs can take one or more of the following grammatical categories: *-ɪta* 'Progressive', the directionals *-aa* 'Itive', *-u(n)* 'Ventive', and/or the Nominalizer *-ata* (allomorphs *-oto, -ɔtɔ*) for referring to the Action or Process as a whole.

Stative verbs refer to static non-dynamic conditions. In Maa such verbs take none of the preceding affixes, but can (nearly always) take the Inceptive Aspect suffix *-u(n)*,[16] as in the Inceptive verb stem *modok-ú* (be.blind-INCEP) 'become blind', formed from the stative root *modok* 'be blind'. Statives will take the Nominalizer *-an* (allomorphs *-on, -ɔn*) to refer to the Stative situation as a whole.

---

[15] König (1993) provides a more elaborate classification of ɪl-Chamus Maa verb roots according to the aspectual categories of Totally Stative, Inchoative Stative, Action, Gradual Terminative, and Total Terminative.

[16] König (1993) classifies ɪl-Chamus *a-atá* 'to have', *a-tií* 'to be at', and *a-icú* 'to be alive' as Totally Stative, as they cannot take the Inceptive suffix. For our purposes here, we would subsume such verbs to our Stative category. There are also other aspectually idiosyncratic verbs in the language which did not present problems for this study.

3.2. Animacy

We initially distinguished referents of nominalizations according to various "animacy" categories: supernatural being, human, animal, concrete inanimate, and abstract inanimate referents. Due to low token counts for animals and supernatural entities in our sample, we eventually collapsed these together with human into a general category of Animate. One nominalization was ambiguous between animal and human: *ol-abúáànì* 'shouter, barker', from *buak* 'shout, bark'; this was simply counted as Animate.

Most of the inanimate nominalizations in our data (50 out of 59) were concrete referents, though some also had abstract senses. For example, *en-duɲét* has the concrete sense 'knife', as well as the abstract sense 'decision'. Because of the low number of abstract inanimate referents, we collapsed them together with concretes into a single Inanimate category.

In quantifying the data for animacy, we used a coding system as follows. If, according to the data available, a particular nominalization has just an animate referent, we counted it as a member of the category Animate. If it has just an inanimate referent, we counted it as Inanimate. But if it is ambiguous across inanimate and animate referents (i.e., potentially has two senses), then we counted it just once as a member of the category Animate+Inanimate (AN+IN). For example, *ɛ-wɔlét* has senses of both Animate 'child born after the death of another', and Inanimate 'an answer, reply'. This was done in order to identify the number of nominalization tokens that have a broader vs. narrower range of animacy meanings. In contrast, the masculine Animate nominalization *ɔl-barnét* 'lamb' was considered to be a separate lexical item from the feminine Inanimate *en-barnét* 'shaving instrument'; though both are formed from *barn* 'shave', the gender prefixes clearly distinguish them and thus the word-forms as a whole are not ambiguous for animacy.

3.3. Semantic roles

We investigated the correlation of nominalization forms with semantic roles using an etic, moderately elaborated, set of categories: Agent, Experiencier, Instrument, Recipient, Patient, Result, Theme, Locative, and Situation (the last covering both Action and State nominalization concepts, depending on the verb). This "splitter" approach was taken because we wanted to know whether the *-ɛt* and *a-…-ani* nominalizers are emically differentiated by semantic role, and if so, what emic role notions are relevant. Section 4 discusses whether the data justify an emic division into fewer semantic role categories, e.g., something closer to a distinction between (proto-) Actor, (proto-) Undergoer, and Goal; cf. Dowty 1991).

An **Agent** is widely understood to be the extrinsic instigator of an event, or the "first" Causer argument of a conceptual CAUSE predicate. Jackendoff (1990: 128, 259) notes that an Agent (or Actor) can be inanimate as well as animate; for now, we do not distinguish the concepts Actor and Agent.

For our study, we judge a nominalization to refer to the Agent (AG) of a verb stem if it can be understood as the cause of the action expressed by the verb stem. To operationalize this, we count an *-ɛt* or *a-…-ani* form as an Agent nominalization if there is reason to believe it can occur in the frame, "What X did was *V.stem*" (tense irrelevant; cf. Chafe 1970, Jackendoff 1990). Consider the following examples:

(6) ɔl-a-dúŋ-ònì
    MSG-DVB-cut-NMLZ
    'cutter, divider, harvester; someone who cuts'

(7) e-rem-ét
    FSG-spear(v)-NMLZ
    'spear (n)'

It is sensible (in Maa) to say "What *ɔladúŋònì* did was *a-dúŋ*" (i.e., 'What the cutter did was to cut'). It is also sensible to say "What *eremét* did was *a-rém*" (i.e., 'What the spear did was to spear'). These thus should count as (in)animate Agent nominalizations of their respective verb roots. Additional evidence that Maa inanimate entities can function as Agents is their ability to occur as the Subjects of sentences with active verbs, as in *Edúŋisho ɪnkálémà* 'The knives will cut' (i.e., they are sharp), or *Néípuŋ erémèt* 'The spear passed through him.'

According to Jackendoff (1990: 142), an **Instrument** is an intermediary means by which an Agent (or Actor) accomplishes the action. Typically, an Agent acts on the Instrument such that it affects a Patient. Within Jackendoff's system, an Instrument is nearly always an adjunct, such as *the key* in *John opened the door with a key*. By contrast, he considers *the key* to be an inanimate Agent in *The key opened the door*, as it can occur in a "do" frame, like "What the key did was open the door." For our study, we conceptualize the notion of Instrument (IN) nominalization as the means (physical or abstract) by which the Agent could cause or enable the action described by that verb stem to take place. *Eremét* 'spear' in (7) above meets this definition. The following text example shows *eremét* as the object of an Instrumental-Applicative verb form:

(8)   N-é-ipaŋ-ie   e-rem-ét
        CN-3-go.out-INST   FSG-spear-NMLZ
        'He passed the spear through him. ' (Takule 044)

Because *eremét* meets the definitions of both Agent and Instrumental nominalizations of the particular root *rem*, we count it as an AG+IN nominalization; i.e., this form is ambiguous across these two semantic roles of the root *rem*. Similarly, *em-putét* 'tweezers, tongs', from *put* 'pluck', can refer to the "doer" of the action 'pluck', as in "What the *emputét* did was *a-pút*" ("What the tweezers did was to pluck"). But additionally, *emputét* can be the instrument via which an independent person could perform the action of *a-pút*. So we count *em-putét* in the category AG+IN.

If a nominalization meets the Instrumental conceptualization just described but cannot felicitously occur as X in the frame "What X did was *V.stem*", it is counted just as an Instrumental (IN) nominalization. Consider the noun *enjɪŋét* 'gate, door', formed from the root *jɪŋ* 'enter' (9). It does not make sense to say (in non-fanciful Maasai worlds) that 'What *enjɪŋét* did was *a-jíŋ*' (i.e., 'What the gate did was to enter (something).') However, a 'gate' is the means that an Agent can use to enter a kraal. We thus count *enjɪŋét* only as an Instrumental nominalization of the root *jɪŋ* 'enter'.

(9)   ɛn-jɪŋ-ét
        FSG-enter-NMLZ
        'gate, door, entrance, access'

A **Patient** can felicitously answer the question, "What happened (happens/is happening) to X?" (Chafe 1970, Jackendoff 1990: 125ff). In Dowty's (1991) terms, a prototypical Patient undergoes a change in state and is causally affected by the action. Taking an etic perspective, for this study we identify the referent of a nominalization as Patient (PT) if it is affected by or undergoes a (non-locational) change in state due to the action, prototypically (but not necessarily) requiring physical impact of some sort, and if it retains its identity throughout the process. We provisionally do not identify the role of a nominalization as Patient if the referent is simply in a state described by the verb root, or simply undergoes literal movement expressed by the root (see the discussion of Theme below).

We define a **Result** (RESL) nominalization as one that refers to the resultant product, byproduct, or leftover produced by the action described by the verb stem. This implies that the referent was not conceptualizable as such before the action of the verb root occurred. For example, the stuff out of which a knot is made is not a 'knot' before the action of tying:

(10)   ɔ-ɛn-ét   from *ɛn* 'tie (v)'
        MSG-tie-NMLZ
        'knot'

In the following example, the person who is installed or metaphorically 'planted' as a leader is not an installed individual prior to the metaphorical action of "planting" (nor is he the one who does the installing, nor is he used to facilitate the installing).

(11)   ɔl-a-ún-ònì
        MSG-DVB-plant-NMLZ
        'warrior selected from among different clans within a community to be an overall leader'

        from *un* 'plant, erect; install or graduate warriors to adulthood; appoint a ceremonial leader'

Gruber (1965) defines **Theme** as an entity in motion or simply being located. Following this precedent, we identify the role of a nominalization as Theme (TH) if the nominalization refers to a non-agentive participant that is in the condition described by the verb stem, i.e., where no change in state occurs. We also identify the referent as Theme if the nominalization refers to a participant undergoing literal movement or change in location but no other change in state.

(12)   ɔl-kípáár-ét   from *ipaaya* 'send on an errand'
        MSG-send-NMLZ
        'disciple; messenger sent by elderly or rich person'

Like many others, Dowty (1991) subsumes Results to his proto-patient role, and Themes and Patients are often not differentiated; but at least at the start of our study we etically attempt to distinguish these roles.

We identify an **Experiencier** (EXP) nominalization as one that refers to the perceiver or cognizer of a psychological predicate, as in the following:

(13)   ɔl-a-dúá-ànì   from *dɔl* 'see' (by regular phonological processes)
        MSG-DVB-see-NMLZ
        'visionary; one who can predict the future (without recourse to magic)'

(14)   ɔl-a-irúk-ònì   from *iruk* 'believe, respond, agree, permit'
        MSG-DVB-believe-NMLZ
        'believer'

We identify a **Locative** (LOC) nominalization as one that refers to a place in which the action described by the verb stem takes place:

(15)   ɔl-tal-ét   from *tal* 'survey, scout, reconnoiter'
        MSG-survey-NMLZ
        'lookout; raised place used to/from which one can look at a far-off area (esp. for approaching enemies)'

A **Recipient** (RECP) nominalization is a participant that receives a transferred item (literally or metaphorically), and which cannot be construed as the external instigator of the action of transferring expressed by the verb. For example:

(16)   ɔl-a-júŋ-ònì   from *juŋ* 'inherit'
        MSG-DVB-inherit-NMLZ
        'heir, inheritor'

Finally, we identify a **Situation** nominalization as one that refers to the condition, act, or state described by the verb stem. Situation:Action refers to such a nominalization of an Active verb, and Situation:State to such a nominalization of a Stative verb. The first word of the following example illustrates this (note that it does not have the *-ɛt* nor the *a-...-ani* nominalizer).

(17) e-ŋór-ótó   (oó   n-kíshú)
      FSG-shoot-NMLZ   of.ACC.PL   F-cattle.ACC
      'the shooting (of cows)' [e.g., on the jugular vein]

If, according to the data available, a nominalization refers only to an Agent, or only to an Instrument, we code it just as AG or as IN, respectively. However, if the same nominalization has both possible interpretations, we code it as AG+IN; recall the discussion of *e-remét* 'spear' and *em-putét* 'tweezers, tongs' in section 3.3 above. This methodology is adopted so that we can evaluate how many tokens of each nominalization type have a broad vs. narrow meaning range.

4. Results and discussion
4.1. Inherent aspect

Our original hypotheses regarding aspect and the nominalizers in focus here were:

1.   a) Inherent lexical aspect of the verb stem does not differentiate *-ɛt* from *a-…-ani* nominalizations.
     b) Both *-ɛt* and *a-…-ani* operate on Active stems, and not on Stative stems.

One hundred percent of the 63 *-ɛt* nominalizations were based on Active verb stems. Ninety-nine percent (73) of the 74 *a-…-ani* nominalizations were based on Active verb stems. The one based on a Stative verb stem, *modooni* 'blind person', derives from *modok* 'be blind. ' (Via a regular phonological process the root looses its *k* between two identical back vowels, i.e., *modok-oni* > *modooni.*) *Modooni* appears to be totally regular, forming both its singular and plural in the same way as other *a-…-ani* nominalizations based on active verb stems. On a statistical basis, then, Hypothesis 1 is certainly supported, though we do note this one exception to the *a-…-ani* part of Hypothesis 1b. We expect that additional data might reveal a few more *a-…-ani* nominalizations from Stative verbs. Dimmendaal (1983) notes that in Turkana (Eastern Nilotic), the presumably cognate form functions to nominalize both Active and Stative verbs. However, in Maa the use of this nominalization pattern with Active verbs is close to categorical.

4.2. Animacy

Relative to animacy, we started with the following two hypotheses:
2.   a) *-ɛt* creates nominalizations referring to inanimate referents.
     b) *a-…-ani* creates nominalizations referring to animate referents.

Table 2 presents the results.

	Animate	Animate+Inanimate	Inanimate	Total
a-…-ani	71	3	0	*74*
-ɛt	4	1	58	*63*
Total	*75*	*4*	*58*	*137*

Table 2. Animacy status correlated with nominalizer

As seen in Table 2, 58 out of the 63 *-ɛt* nouns have inanimate referents (92%), 4 have animate referents (6%), and one has both inanimate (abstract) and animate senses. The four animate *-ɛt* nouns in the data are:

(18) a. *ol-dúŋórét* 'last born child'. From *duŋ* 'cut'. The image is that the "stream" of children has been stopped or 'cut'.
     b. *ɔl-kípáárét* 'messenger, someone sent by an elderly or rich person; disciple'. From *ɪpaaya* 'send'.

  c. *ɔl-barnét* 'lamb slaughtered for shaving ceremony'. From *barn* 'shave'.
  d. *ol-kípókét* 'lamb slaughtered for purifying or cleansing a house where a woman gives birth'.
   From *ipok* 'ritually cleanse'.

The one *-ɛt* Animate+Inanimate ambiguous item is the following, with two distinct senses for exactly the same word form.

(19) *ɛ-wɔlét/ɛ-walét*   from *wɔl/ wal* 'answer'[17]
   a. 'child born after the death of another'
   b. '(an) answer, reply'

Fully 91% of the *-ɛt* nominalizations refer to concrete inanimates. Only 6 out of the 63 *-ɛt* nouns had abstract inanimate referents: 'dividing point, prophecy conditions', 'answer, chorus', 'dream', 'witchcraft', 'curse', and 'praise'.

  We now turn to animacy of *a-…-ani* nominalizations. Fully 100% of them refer to animates; 96% apparently have just animate senses, and 4% are ambiguous with both animate and inanimate senses. The three ambiguous Animate+Inanimate items were the following:

(20) *enk-áípóóponí*   from *ɪpɔɪpɔɪ* 'handle an animate vulnerable creature
   a. 'loved child'   with great care, so as not to damage it'
   b. 'mushroom'

(21) *enk-aitóyìònì*   from *itoi* 'dry' (transitive)
   a. 'midwife'
   b. 'someone or something that dries something' (e.g., a woman
   who dries the calf pen of urine)

(22) *ɔl-aibóònì*   from *ibok* 'to prevent'
   'someone or something that prevents (in a very general sense)';
   e.g., medicine to prevent a disease.

  Though technically the nominalizations in (18) and (19a) refer to animates, it is noteworthy that the referents are children, someone in a socially subordinate position, or animals. Hence, these "exceptions" may be said to be low on a scale of animacy. In contrast, (20a) refers to a 'loved' child, which we may speculate is higher on a scale of animacy than just 'child'. This suggests that the appropriate understanding of Hypothesis 2 must be in terms of a proto-type notion of animacy, where some items are so far from the prototype that they effectively belong to a different category. It would appear that referents high on the scale of animacy can take *a-…-ani*, while those low on the scale of animacy take *-ɛt*. The inanimate sense options in (20-22) must be secondary extensions from the prototypical human referent meanings, and are related to the animate prototype via metaphorical extension ('mushroom'), or perhaps are modern extensions ('something that dries').

4.3. Semantic roles

  Our two original hypotheses regarding semantic roles were:

---

[17] Whether there is one versus two roots involved historically in *wɔl/wal,* and if so whether both the verbs and the nominalizations are diverging in form+meaning together, merits further research. In his unpublished dictionary material for the Samburu dialect, Wagner (n.d.) lists two verbs *a-wál* 'to answer' and *a-wɔ́l* 'to arbitrate; to quit suckling when the cows go into calf'; but a single nominalization 'answer' with variants *walét ~ walát.* (He does not give the sense 'child born after the death of another'.) Mol (1996) gives a single verb *a-wál* 'to reply, answer, change', but distinct nominalizations *ɛ-walet* (no tone indicated) 'something to answer with, return, answer, chorus, refrain, response' and *e-wolet* 'child born after the death of a first child'.

3. a) *-ɛt* creates nominalizations referring to Instrument roles of the verb stem.
   b) *a-…-ani* creates nominalizations referring to Agent roles of the verb stem.

The raw data relevant to these hypotheses are presented in Table 3.

	AG	EXP	IN	AG+IN	IN, LOC	LOC	RECP	IN, RESL	PT	RESL	TH	*Total*
-ɛt	0	0	23	27	1	5	0	1	0	4	2	63
a-…-ani	65	5	0	0	0	0	1	0	0	1	2	74

Table 3. Semantic role correlated with nominalizer

4.3.1. *-ɛt and semantic roles*

The one "IN, LOC" item *ɛn-jɪŋét* had two distinct senses: (a) 'door, gate' (IN); and (b) house, that which is entered' (LOC). The one "IN, RESL" item *ɛ-wɔlét* also had two distinct senses: (a) 'an answer' (IN); and (b) child born after the death of a first child' (RESL). For all items in the category "AG+IN", the single sense could be interpreted as both Agent and Instrument relative to the meaning of the verb stem/root, as described in Section 3 for *eremét* 'spear'. If we combine all categories involving the Instrumental semantic role (i.e., IN; AG+IN; IN, LOC; and IN, RESL) together, then Hypothesis 3a is supported by 84% of the instances – all of which are inanimate referents. Clearly, all cases of Instrument are expressed by *-ɛt* nominalizations.

On the other hand, we cannot so easily say that *-ɛt* nominalizations are restricted to the Instrument role; (23) lists all *-ɛt* nominalizations that we did not etically classify as being in either the AG+IN or in some other IN category.

(23) *-ɛt* nominalizations not classified as Agent or Instrumental roles of verb

ROLE	Nominalization		Source Verb Stem	
LOC	*n-cumét*	'resting place for cows as they take water'	*shum*	'store, keep, raise up'
	ɛn-cɔpét	'lower part of the neck as it joins the body'	*cɔp*	'slit the neck of an animal'
	ol-pejét	'temporary meat-roasting place'	*pej*	'roast'
	l-kérénkét	'town, market, region; barricade, moat'	*ker*	'occupy, deny access to'
	ɔl-talét	'lookout'	*tal*	'survey, scout, reconnoitre'

RESL	*ɛn-kɪŋɪŋɪrét*	'sweat'	*kɪŋ*	'peel, uncover'
	ɛn-kíyàŋèt	'breath'	*(i)yaŋ*	'breathe, puff'
	ol-dúŋórét	'last-born child'	*duŋ(or)*	'cut (away), stop sth. stream-like'
	ɔ-ɛnét	'knot'	*ɛn*	'tie'
	ɛ-wɔlét	'child born after death of first child'	*wɔl/wal*	'answer, reply, exchange'

TH	*ɔl-danyét*	'watery liquid that first emerges at birth'	*dany*	'burst'
	ɔl-kípáárét	'disciple, messenger sent by elderly or rich person'	*ipaaya*	'send on an errand'

It is conceivable that some nominalizations in (23) could be conceptualized as Instruments, i.e., as items used by an Agent to carry out the action of the verb. For example, *ɔltalét* 'lookout, raised place used for looking at a far off area' is clearly "used by" scouts or warriors. Similarly *ɔɛnét* 'knot' could perhaps be conceptualized as something "used for" tying rather than the result of tying. To the extent that such items are (or historically were) so conceptualized, the more likely it is that the notion of 'Instrument' is indeed a reasonable fit to the data – at least it may well be the prototype meaning of the *-ɛt* category.

4.3.2. a-…-ani *and semantic roles*

No *a-…-ani* nominalizations in our sample refer to Instruments. But neither do all *a-…-ani* nominalizations refer to Agents – only 88% (N = 65) do. Conceivably we could classify the instances of Experiencier and even Recipient (from the item 'heir, inheritor') together with Agents into a macro-role category of Actor, which then accounts for 96% of the data. But even so, we still cannot say that *a-…-ani* is restricted to the Actor role, because of those Result and Theme (or Undergoer-like) *a-…-ani* forms which could not conceivably be classified as such. The three instances in the sample are listed in (24).

(24) *a-…-ani* nominalizations not classifiable as Actors

ROLE	Nominalization	Source Verb Stem
RESL	ɔl-aúnònì 'warrior selected from different clans within a community to be the overall leader'	un 'plant'
TH	ɔl-áíbártànì 'male initiate who has just been circumcised but not yet a warrior'	ɪbart 'watch over, take care of'
	ɛnk-áípóóponí 'loved child'	pɔɪpɔɪ 'nurse, take care of well'

Though few, these are salient examples standing as clear counter examples to an Agent gloss for *a-…-ani*; not even a prototype notion of the category Agent could save them from standing as counter examples because these are in no way even poor Agents.

5. Conclusions

Our aim in this investigation was to discover the primary semantic difference between the nominalizers *-et* and *a-...-ani*. The data suggest that there exists both an agent-instrument and an animate-inanimate contrast between referents for these nominalizations. However, animacy appears to be the better criterion for making the distinction between them.

As we hypothesized, inherent aspect of the verb root/stem is irrelevant for distinguishing between *-et* and *a-…-ani*. However, there is no doubt that a full study of Maa nominalizers will show inherent aspect to be relevant to choice between Situation nominalizers like *-ata* and *-an*.

Semantic role is a generally effective but not wholly satisfactory basis for predicting choice of *-et* versus *a-...-ani*. Though *-et* may center around an Instrumental prototype, these nominalizations also can express the semantic Result, Theme, and Location of their verb roots. In addition to Agent/Actor roles, *a-…-ani* also express some Undergoers (i.e., roles centering around Patient, Result, Theme). Moreover, *-et* and *a-…-ani* overlap in coding Agent roles of the verb stem: fully 27 of the *-et* nominalizations were construable as Agents according to the "What the X did was *V.stem*" test. These 27 instances comprise 29% of all 92 Agent nominalizations (summing across the AG and AG+IN categories in Table 3). Altogether, we have to conclude that semantic role is incomplete in its predictive power for distinguishing these two nominalizers; and the "Agent" gloss for *a-…-ani* should be discarded.

The Animacy hypothesis about the function of *a-…-ani* (Hypothesis 2b) is satisfied at a much higher level than is the Agent/Actor hypothesis (Hypothesis 3b). When considering that all exceptions to the literal animacy distinction operate on an animacy hierarchy (i.e., a semantically understood animate may be treated grammatically as inanimate if it codes an animal, a child, or a person of lower status or power), the animacy hypothesis accounts for 100% of the data observed.

Thus, our interim conclusion is that, contra Tucker and Mpaayei (1955) and Mol (1966), *a-…-ani* is best considered an Animate nominalizer, motivated by semantic features inherent to the intended referent and not by a semantic relational notion. We also propose that an animacy hierarchy accounts for the use of *-et* to code literal animates which are low on a scale of animacy.

The results of this study have to be regarded as preliminary as we have not yet contrasted *-ɛt* and *a-…ani* with all the other nominalization strategies listed in Table 1. Such contrast is particularly necessary for understanding what distinguishes *-ɛt* from other nominalizers that can also code inanimates. In that contrast, it might yet prove that semantic roles will be relevant. For the time being we will thus continue to call *-ɛt* an Instrumental nominalizer, recognizing that it is a label for a grammatical form and does not necessarily designate the sense of 100% of *-ɛt* uses, but we will update our gloss of *a-...-ani* to 'Animate' to reflect our findings. It is our hope that this investigation will prompt further research to test the glosses for all the other nominalizers in Table 1.

References

Anderson, Stephen. 1982. Where's morphology? *Linguistic Inquiry* 13.571-612.

Chafe, Wallace. 1970. *Meaning and the Structure of Language*. Chicago: Chicago University Press.

Dimmendaal, Gerrit J. 1983. *The Turkana Language*. Dordrecht: Foris.

Dimmendaal, Gerrit. 2000. Number marking and noun categorization in Nilo-Saharan languages. *Anthropological Linguistics* 42.214-261.

Dowty, David. 1991. Thematic proto-roles and argument selection. *Language* 67.547-619.

Fillmore, Charles, Christopher Johnson, and Miriam Petruck. 2003. Background to Framenet. *International Journal of Lexicography, Special Issue 3,* 235-250.

Greenberg, Joseph. 1981. Nilo-Saharan moveable-k as a stage III article (with a Penutian typological parallel). *Journal of African Languages and Linguistics* 3.105-112.

Gruber, Jeffrey. 1965. Studies in Lexical Relations. Doctoral dissertation. Cambridge, MA: MIT. [Reprinted by Indiana University Linguistics Club, Bloomington, IN. Reprinted 1976 as part of *Lexical Structures in Syntax and Semantics*. Amsterdam: North-Holland.]

König, Christa. 1993. *Aspekt im Maa*. Afrikanistische Monographien 3. Köln: Institut für Afrikanistik, Universität zu Köln.

Kotikash, Leonard L. 2000. The derivational morphology of the Maa noun. Nairobi Evangelical Graduate School of Theology, M. A. course project.

Mol, Fr. Frans. 1996. *Maasai Language and Culture Dictionary*. Limuru, Kenya: Maasai Centre Lemek.

Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge, MA: MIT Press.

Payne, Doris L. 1986. Inflection versus derivation: is there a difference? *Proceedings of the First Annual Pacific Linguistics Conference*, 247-260. Eugene: University of Oregon.

Payne, Doris L. and Leonard Ole-Kotikash. In process. *Maa-English Dictionary*. 2008 online version at: http://www. uoregon. edu/~maasai/.

Storch, Anne. 2005. *The Noun Morphology of Western Nilotic*. Cologne: Rudiger Köppe Verlag.

Tucker, Archibald N. and J. Tompo Ole Mpaayei. 1955. *A Maasai Grammar with Vocabulary*. London: Longmans, Green and Co.

Wagner, Stephen. ca. 1998. *Samburu-English dictionary*. ms.

Selected Proceedings of the 38th Annual Conference on African Linguistics: Linguistic Theory and African Language Documentation

edited by Masangu Matondo, Fiona Mc Laughlin, and Eric Potsdam

Cascadilla Proceedings Project   Somerville, MA   2009

Ordering information

Orders for the library binding edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, e-mail: sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Payne, Doris L. and Derek Olsen. 2009. Maa (Maasai) Nominalization: Animacy, Agentivity and Instrument. In *Selected Proceedings of the 38th Annual Conference on African Linguistics*, ed. Masangu Matondo, Fiona Mc Laughlin, and Eric Potsdam, 151-165. Somerville, MA: Cascadilla Proceedings Project.

or:

Payne, Doris L. and Derek Olsen. 2009. Maa (Maasai) Nominalization: Animacy, Agentivity and Instrument. In *Selected Proceedings of the 38th Annual Conference on African Linguistics*, ed. Masangu Matondo, Fiona Mc Laughlin, and Eric Potsdam, 151-165. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #2143.