Positional Verbs in Nen

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In this paper, I lay out the workings of the rather unusual system of positional verbs found in Nen, a language of the Morehead-Maro family in Morehead district, Western Province, Papua New Guinea. Nen is unusual in its lexicalization patterns: it has very few verbs that are intransitive, with most verbs that tend to be intransitive cross-linguistically realized as morphologically middle verbs, including 'talk', 'work', 'descend', and so on. Within the fifty attested morphologically intransitive verbs, forty-five comprise an interesting class of "positional verbs," the subject of this paper; the others are 'be', its derivatives 'come' and 'go' (lit. 'be hither' and 'be thither'), and 'walk'. Positional verbs denote spatial positions and postures like 'be sitting', 'be up high', 'be erected (of a building)', 'be open', 'be in a tree-fork', 'be at the end of something'.

Positional verbs differ from regular verbs in lacking infinitives, in possessing a special "stative" aspect inflection and an unusual system for building a four-way number system (building large plurals by combining singular and dual markers), and in participating in a productive three-way alternation between positional statives (like 'be high'), placement transitives (like 'put up high'), and get-into-position middles (like 'get into a high position'). The latter two types are more like normal verbs (for example, they possess infinitives and participate in the normal TAM series), but they are formally derived from the positionals.

The paper concludes by situating the Nen system regionally and typologically. Similar systems are found in related languages, but with the exception of the Eastern Torres Strait language Meriam Mer, no comparable system has been reported anywhere in New Guinea—the "classificatory verbs" known from languages like Ku Waru are quite different, serving primarily to classify objects rather than to give spatial dispositions. On the other hand, rather similar systems are found in some parts of Meso-America and the Amazon.

1. INTRODUCTION. In this article, I examine the system of positional verbs in Nen, a Papuan language of the Yam (Morehead-Maro) family in Southern New Guinea. Positional verbs denote postures like 'be sitting' or 'be standing', 'or spatial dispositions of a figure with respect to some ground, like 'be in a fork', 'be immersed', or 'be wedged', and with around three dozen members they form a central part of the Nen verbal lexicon, clearly defined by many shared properties, to be outlined in this article. As Ameka and Levinson (2007:847) have pointed out, in the examination of systems of positional verbs, the verbal component of locative statements is a neglected area—for example, the influen-

^{1.} See Newman (2002) for an excellent cross-linguistic survey of posture verbs. However, this source does not investigate the much larger systems of the type discussed here.

tial examinations of the "what / where system" in cognitive science, such as Landau and Jackendoff (1993), concentrate on adpositional systems as exemplified in English. To my knowledge, no Papuan language has been reported as having a system anywhere close to the Nen system in terms of internal coherence,² formal complexity, and semantic elaboration—a claim I return to in the conclusion of this article.³

To begin by giving some examples of what these are used for, consider their use in a videorecording I made with my Nen teacher Jimmy Nébni, in which we walked around the village
while he pointed out all the houses and who lived there. In this recording, positional verbs were
used frequently for descriptions such as 'Mängonde mnō bà ym gtengama qémbén gs
ymngimgr' ('Mängo's house is there behind from there'), ''yna mnō totr ge ytromngr Angande
mnō yramtat, yande togetogeyäm Angande mnō yramtat gehō' ('that new house standing
erected there is Anga's house that they are building, Anga's children are building it there'), 'mnōn
ykmangr yande totr mnō poa bà yramte' ('he sleeps in that kitchen-building, he will build his
new house later'). (Note that many words in the above and other examples cited in the paper have
nonphonemic epenthetic schwas opening up the syllable structure: so ym, for example, is pronounced [jəm] and gs is pronounced [gəs]; comparable phonological systems are found in a
number of other Papuan languages, such as Kalam [Blevins and Pawley 2010].)

In each of these cases, the positional verb is formally identifiable through the stative ending *-ngr*, only found with verbs of this class. It denotes either a spatial position (*ynngärngr* 'it is next to, close to, on this side', *ytromngr* 'it stands, of a construction'), or a physical position/posture (*ykmangr* 'he lies, he sleeps'). In texts, they occur frequently in scene-setting or layout descriptions and, in conjunction with case suffixes like the locative *-n* or locational postpositionals like *tq* 'top' and its locative-inflected form *tqn* 'on top of', do most of the work of describing the positioning of objects in space.⁵ Some idea of

- 2. The closely related language Nambu has a very similar set, which Martin (2001) labels "steady state" verbs, and which end in -ngar in the singular and -ngarwan in the plural. Martin lists twelve such verbs: iyetungar 'rests (end of road, journey, log, river)', yakamongar 'lying in a steady state', yemarengar 'it is sitting', yaakiongar 'it is standing', yiyengar 'it is standing (post, tree)', yatnongar 'it is standing (house)', yaohongar 'standing dressed, ready', yer[n]ingar 'be attached (leech, rope, mosquito), yaviongar 'resting on top of', yemengar 'hanging from something', yerarengar 'resting in a fork (of a tree), yedarengar 'drain lying on the earth'. Ongoing fieldwork by Jeff Siegel on Nama, Christian Döhler on Kómnzo, and the present author on Nä, suggest sets of roughly comparable size in these three languages, all fellow members of the Morehead-Maro family.
- 3. Data presented here were gathered over six fieldtrips, totaling eighteen weeks, in 2008–2013. For financial support during both fieldwork and analysis phases, I thank the Australian National University (Professorial Setup Grant), the Australian Research Council (Discovery Project "Languages of Southern New Guinea," ARC Centre of Excellence for the Dynamics of Language), and the Volkswagen Foundation's DoBeS program (Project: "Nen and Tonda"). I would especially thank my Nen teachers, in particular Jimmy Nébni, Michael Binzawa, and †Aramang Wila, as well as the whole village of Bimadbn for its hospitality, friendship, and great interest in linguistic matters. Preliminary versions of this paper have been presented in seminar form at the Australian National University, Friedrich-Schiller Universität Jena, the University of Cologne, the North Eastern Hills University in Shillong, and James Cook University in Cairns, and I thank the audiences at those talks for useful comments. My thanks go also to Jeff Siegel, Graham Martin, and Christian Döhler for information on positional verbs in Nama, Nambu, and Kómnzo; to Volker Gast for confirming their absence in Idi; to Nick Piper for information on a similar phenomenon in Meriam Mer; to two anonymous referees for their useful critical feedback on an earlier draft; and to Susan Ford for assistance in preparing the manuscript.
- 4. The orthographic symbols used for writing the Nen phonemes are outlined in appendix 1.

their prevalence in spatial description can be gained by the fact that out of the 71 spatial stimuli in the Bowped Stimulus Set (Bowerman and Petersen 1992),⁶ 54 were described using positional verbs (see appendix 2).⁷

The Morehead-Maro family, spoken in the lowland areas of the Morehead district in Papua New Guinea and the Merauke district of Indonesian Papua, counts around two dozen languages (depending on how the language/dialect criterion is delineated), and so far has received little attention from linguists (see Evans 2012 for key references). The typological profile of its members deviates significantly from the better-known languages of the Trans-New Guinea phylum and the Sepik, and there is currently no evidence for relating the Morehead-Maro family to any other languages of New Guinea or elsewhere. The phenomenon to be described here, namely positional verbs, is found throughout the family—for example, Kómnzo, in the geographical center of the family, has 42 positional verbs so far attested (Christian Döhler, pers. comm.), though the set gets smaller as one moves towards the western boundaries of the family. The presence of positional verbs also delineates the Morehead-Maro languages sharply from the unrelated families that surround it, none of which appear to have any comparable phenomenon: Suki to the north, Marind and Marori to the west, Kala Kawaw Ya to the south, and Pahoturi River to the east. The presence of a large and clearly delineated class of posi-

- 6. Also known as the Topological Relations Picture Series (TRPS). There is a more recent stimulus set, the Picture Series for Positional Verbs, developed by the same team (see fieldmanuals.mpi.nl), but I have yet to gather Nen data using that set. In my previous work in Arnhem Land, I have found the TRPS to work better, since by virtue of being sketches rather than photographs it generates fewer distracting discussions about what names to use for the entities (such as specific plants), and in any case it is the TRPS that forms the cross-linguistic stimulus anchor in Levinson and Wilkins's (2006) major typological work *Grammars of space*.
- 7. I should point out that these were used as a follow-up to clarify the semantic range once the basic system had been discovered. At the beginning of fieldwork, I had not thought about the need to elicit positional verbs, and although I obtained a few early on, the most important tool in getting them was the following method that I have been employing in my PNG fieldwork: each trip, I wander around the village, taking photos of whatever strikes me as visually interesting, such as pigs' jaws on a mango branch, bundles of paperbark on a rack, or kitchen knives placed between the roofing and the rafters. I then make simple picture books in which I get descriptions of these pictures, as a way of generating simple material for the local bilingual school. It turned out that a large number of the descriptions of these pictures furnished positional verbs, leading to a fuller picture of the phenomenon described here.
- 8. Earlier classifications, such as those by Wurm (1982:183–84), Pawley (2007), and Ross (2005:30–31) have lumped together various families from the Trans-Fly Region—Wurm refers to a "Trans-Fly Stock" and Ross to a "South-Central New Guinea" family—but the basis is extremely slender. For the time being, a sober weighing of the evidence suggests we should distinguish three unrelatable families from Ross's "South-Central New Guinea" family: Pahoturi River, Morehead-Maro, and Yelmek-Maklew families. In section 6, I will mention some tantalizing typological similarities between the Morehead-Maro languages and those of the Eastern Trans-Fly, and there are a couple of tantalizing morphological resemblances as well (most importantly, the opposition of masculine y- and feminine w- in the verbal object-agreement slots, found in some languages of both families—see Evans et al. to appear), but at present there is no evidence from cognate sets to strengthen claims of a genetic link.
- Though further east, languages of the Eastern Trans-Fly family have something similar, as I will discuss in section 5.

^{5.} However, their overall frequency should not be exaggerated: in my consolidated corpus of natural text material so far, from 14 texts across a range of genres and containing 1035 inflected verbs, only 18 of these (that is, a little under 2 percent) are positionals.

tional verbs is, thus, a salient typological feature distinguishing the Morehead-Maro languages from the other languages of the region.

This article is organized as follows. In section 2, I give some typological background on Nen, including the main morphological subtypes of verb and the lexical classes that map onto them, the system for marking grammatical number of verbal arguments, and the set of TAM categories. In section 3, I introduce the special features that define positional verbs as a class, as well as the detailed semantic makeup of the class; while in section 4, I turn to the productive three-way alternations between positionals, causatives (place in position X), and middles/inchoatives (place oneself/get into position X). In section 5, I discuss the significance of some further restrictions on combining positionals with other categories or constructions (the imperative and complements of desire and intention) in terms of what it reveals about their fundamentally stative semantics. Finally, in section 6, I situate the phenomenon typologically and areally.

2. BACKGROUND ON NEN VERB MORPHOLOGY. It is convenient to begin with transitive verbs, since they have the fullest morphological possibilities (see figure 1), of which other types essentially form a subset. As figure 1 illustrates, transitive verbs are "ambifixing," with both prefixal and suffixal morphology for the expression of subject, object, and TAM inflectional information; I use "ambifixing" to contrast such verbs with prefixing verbs, where the argument and TAM inflections are concentrated in the prefix (except for the indexing of number and, to a lesser extent, tense, as will be discussed below). The prefixes encode the person and number of the undergoer, and belong to three series (here glossed simply α , β , and γ) that lack an inherent semantic value, but which combine with the TAM suffixes to give precise tense/aspect/mood values. (The term "undergoer" is used rather than "object" because the same prefixes are also used with stative intransitive subjects; thus, what I am calling "undergoer" prefixes represent objects and stative subjects, while "actor" suffixes represent subjects of transitive and dynamic intransitive verbs.)

Suffixes—usually segmentable into a "thematic" followed by a "desinence"—encode the person and number of the actor and further TAM information; unlike with the prefixes, the TAM values of particular suffixes are more amenable to semantic characterization and are given meaningful glosses here. The thematics display less TAM-sensitive variability than the desinences, and the form they take aligns with a three-way aspectual split of the suffixal TAM series (into imperfective, perfective, and neutral TAM values); but their most important feature is the way they organize number, with an unusual system

FIGURE 1. MORPHOLOGICAL STRUCTURE OF FINITE TRANSITIVE VERBS †

Infle	ctional prefixe	S	Stem	1	Suffix		
					Thematic	Desinence	
U (pers/num) + TAM	(Directional)	(Future Imperative)	(Diathetic prefix)*	Root	TA+num ^d	A(pers/num) +TAM	

[†] Key: U, undergoer; A, actor; TA, tense and aspect; num^d, number (dual vs. nondual); * = up to two diathetic prefixes allowed.

that opposes "dual" to "nondual." (On the question of which argument is interpreted as dual, see Evans to appear b.)

The workings of this system are shown in (1a–c). Note that a three-way number system for the subject is composed by combining a singular vs. nonsingular distinction in the actor desinence (and the free pronoun) with a dual vs. nondual distinction in the thematic.¹⁰

- (1) a. Ymam toge y-aka-t-e.
 3sgERG child(ABS) 3sgU.α-see-NDU.IPF-3sgA

 '(S)he sees the child.'
 - b. Ymabem toge y-akae-w-t.
 3nsgERG child(ABS) 3sgU.α-see-DU.IPF-3nsgA
 'They two see the child.'
 - c. Ymabem toge y-aka-ta-t. 3nsgERG child(ABS) 3sgU.α-see-NDU.IPF-3nsgA 'They (more than two) see the child.'

The vast majority of one-place verbs, such as 'talk', use the same basic template given in figure 1, with the sole exception that the undergoer slot is person-insensitive: instead of the person-sensitive forms found with the undergoers of transitive, the general middle prefix n-k-g is used. (Each of these belongs to one of three TAM-sensitive series; here we exemplify with just the n- form, used in present imperfectives and more generally in the α -series.)

- (2) a. Bä n-owab-t-e.
 3ABS M.α-talk-NDU.IPF-3sgA
 '(S)he is talking.'
 - b. Bä n-owab-Ø-t. 3ABS M.α-talk-DU.IPF-3nsgA 'They two are talking.'
 - c. Bä n-owab-ta-t.
 3ABS M.α-talk-NDU.IPF-3nsgA
 'They (more than two) are talking.'

Unlike the subjects of transitive verbs, with their three-way number distinction as exemplified in (1a–c), subjects of middle verbs make a four-way number distinction: large plurals employ person/number marking in both the prefix (undergoer) and suffix (actor) slots instead of just in the suffix slot, as happens with the other numbers; cf. (3).¹¹

^{10.} The following glosses are not obvious or deviate from the Leipzig glossing rules: A, Actor; ABL, ablative; AL, allative; AWA, away; COND, conditional; DEM, demonstrative; DU, dual (in thematic); du, dual (in A suffix); F, future; INF, infinitive; IPF, imperfective; IMP, imperative; ITER. iterative; LOC, locative; M, middle; MANY, many; NDU, nondual (in thematic); nsg, nonsingular (in U or A affix); P, past; PERL, perlative; PFV, perfective; PRIV, privative; RPST, remote past; RR, reflexive/reciprocal; SOU, source; STAT, stative; TOW, toward; TR, transitivizer; U, Undergoer; >, acting upon; | (disjunction/underspecification between person/number values) or, e.g., 2|3sg '2nd or 3rd singular'. The symbols α , β , γ represent different series of undergoer prefixes, varying according to TAM, but no straightforward semantics are possible until they are combined with TAM suffix series. For number, lower-case glosses (e.g., sg) are used for the pronominal affixes, and upper-case (e.g., DU) for number encoded in the thematic. I also use the notation \sqrt{t} to identify verb roots, which never occur in isolation.

(3) Gbres Bimadbn-mne är Nenzi-ngama sikma majority Bimadbn-SOU person(ABS) Nen-ABL most ya-owab-t-e.
3nsgU-talk-NDU.IPF-3sgA

'Most Bimadbn people speak in Nen.'12

Note that this middle pattern is also used for many types of derived intransitive, most importantly the reflexive-reciprocal, which also adds a specific RR prefix to the stem:

(4) Bä n-a-wakae-w-t.
 3ABS M.α-RR-see-DU.IPF-3nsgA
 'They two see themselves/each other.'

Most meanings that would be expressed by intransitives cross-linguistically are expressed by middles whose morphological behavior is comparable to 'talk' in (2). Some examples follow, cited in the infinitive form, which is built by adding -s to the stem (thus wakaes 'to see'; cf. the stem wakae in [4]):

- Translational motion or orientation: angs 'return', armbs 'climb, ascend', elaws 'enter', esrs 'descend', ipars 'appear, arrive'
- Controlled motion: abarms 'jump', aebyängs 'fly'
- Controlled activity: ermdrers 'fasten oneself', ernes 'hide oneself'
- Uncontrolled activity: uzers 'be on fire, burn', äkrers 'burn'
- Uncontrolled bodily processes: ess 'be itchy', momae ke otärs 'cough'
- Uncontrolled change of state: edrers 'tear (ITR)', erebrs 'break (ITR)'
- State and change of state: apan\(\bar{g} s \) 'be shrunken', \(\bar{a} prs \) 'be stunted'
- Noise emission: oters 'make a noise', owabs 'talk'
- Phase: ibs 'finish, come to an end', esns 'begin'
- Cognitive or perceptual activity, controlled: awabaes 'think', embers 'think'

Even by the standards of languages like Spanish, Lithuanian, or Russian that have large numbers of middle verbs (in the sense of Kemmer 1993) or *reflexiva tanta* (in the sense of Geniusienie 1987), such a proportion of middle constructions is striking. It is likely to have resulted from a gradual reinterpretation of the verbal template such that ambifixing structures become the default, and generalizing the ambifixing middle structure to any kind of dynamic activity regardless of whether it is controlled or not. The morphologically simpler structures in which most of the argument signaling is done by

^{11.} Incidentally, this example raises an issue that will arise often in our analysis of Nen, and follows from the unificational, constructional, nonmonotonic, and distributed nature of Nen verbal morphology: the whole (obtained by integrating prefixes and suffixes) is often different from the sum of its parts, so that classic morpheme-by-morpheme glosses can be misleading. An alternative analysis (see Evans to appear b) is to treat the combination of prefixes and suffixes as forming a circumfixal paradigm where it only makes sense to assign a gloss to the whole "wrap" of prefixes plus suffixes; I avoid doing that here, because I want to emphasize the individual contributions of each part, but this comes at the cost of the semantics not being totally clear from the glosses.

^{12.} Note that this is still a middle verb, as in (2a–c), with a single actor argument in the absolutive.

^{13.} Another common cross-linguistic candidate for intransitive verbs—expressions of physical state, sensation, emotion, etc.—are expressed by transitive, "experiencer object" verbs (Evans 2004, to appear a) of the type 'hunger does me', 'desire seizes me', etc. (cf. Pawley et al. 2000 on Kalam). These are effectively normal transitive verbs with a lexically fixed subject, the stimulus, in the ergative case.

prefixing alone, are strongly identified with stative predicates, of which the positionals are the most important. Before getting on to positionals, however, I illustrate the prefixing structure with the most important of the prefixing verbs, namely the verb 'to be'.

Example (5) illustrates the verb 'be'. Note that, unlike all verbs so far, only prefixes are employed; the subject is encoded by "undergoer" forms identical to those that encode the objects of transitive verbs, and like those they exhibit three series encoding TAM. As with the ambifixing verbs examined so far, there is an important distinction between dual and nondual forms of the verb, though here it is shown by suppletion of the root, rather than by different forms of the thematic.

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(5) a. Bä mer y-m.

3ABS good 3sgU.α-be.NDU

'(S)he is good (= OK).'

b. Bä mer yä-ren.
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- o. Ba mer ya-ren.

 3ABS good 3nsgU.α-be.DU

 'They two are good (= OK).'
- c. Bä mer yä-m.

 3ABS good 3nsgU.α-be.NDU

 'They (three or more) are good (= OK).'

As with middle verbs, it is possible to build a large plural, though the method is different: this time the prefix ng-, homophonous with the directional prefix ng- 'away', '4 can be combined with the singular prefix:

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(6) Bä mer y-ng-m.
3ABS good 3sgU.α-MANY-be.NDU
'They (many) are good (= OK).'
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Besides 'be', the class of "prefixing" verbs is small. It includes 'come' and 'go', which are directionally specified derivatives of 'be': interposing 'toward' *n*- or 'away' *ng*- into the verb of (5a), one obtains *ynm* '(s)he is coming' and *yngm* '(s)he is going', respectively. A further derivative of 'be' is the verb for 'to own', derived by prefixing the benefactive applicative (a)wa- to the relevant 'be' stem and inflecting the resultant verb with the undergoer prefix, indexing the owner; for example, *wawam* 'I own it', *ynawaren* 'we two own it', *ynawam* 'we (more than two) own it'. This verb is unique among prefixing verbs in assigning the dative case to its subjects; for example, in *tagta wawam* 'I own it', *tagta* is the 1SG dative pronoun. The class also includes the verb for 'walk', exemplified by the third singular form *y-tan* '(s)he is walking'. Beyond this small set (three or five, depending on whether one treats 'come' and 'go' as separate lexical items), all other members of the class of prefixing verbs are positional verbs, which we will turn to shortly.

Before doing so, however, a few more words on the morphology of basic prefixing verbs. The only place on prefixing verbs where person information is found is in their prefixes. In addition, most TAM information comes either from the choice of prefix

^{14.} Grammaticalization has only been partial, since the directional slot, which the MANY derivative still occupies, can only be filled once, so that it is not possible simultaneously to specify direction and large number: forms like *yngngm or *ynngm are impossible for 'many of them are going / coming'.

series (cf. α -series ynm '(s)he is coming', β -series tnm '(s)he came (yesterday)', or from additional prefixes, as in n-n-a-m [2sgU. α -hither-FUT.IMP-BE.NDU] 'you (SG) come later!'

However, some TAM information is also encoded by infix into the stem: for 'go', the remote past imperfective form is ng-ron (dual) / -ng-nzron (nondual), and the primordial past ¹⁵ is ng-rman (dual) and ng-zrman (nondual), suggesting a basic root r...n 'be (DU)', infixed by <o> in the remote past imperfective and <ma> in the primordial, plus further prefixation of (n)z- to derive the nondual from the dual stem. Samples of these verbs with third singular and first nonsingular subjects are given in table 1.

Almost all prefixing verbs lack infinitives. This contrasts with ambifixing verbs, all of which have infinitives, which almost always bear a very close formal relation to the stem. The clearest case of an infinitive corresponding to a prefixing verb is the form yls 'go', which bears no formal resemblance to its finite counterpart $ng-m \sim ng-ren$, formed by adding the away prefix ng- to the nondual and dual stems for 'be'. The lack of an infinitive form with prefixing verbs generalizes to the subclass of positional verbs.

For a fuller discussion of Nen inflectional morphology than can be given here, see Evans (to appear b).

TABLE 1. SELECTED FORMS FOR 'GO',† FORMED BY PREFIXING THE
DIRECTIONAL ng- 'AWAY' TO THE RELEVANT ROOT FOR 'BE'

	Present (ndu <i>m</i> , du <i>ren</i>)	Yesterday past (ndu <i>m</i> , du <i>ren</i>)	Remote past imperfective (ndu nzron, du ron)	Primordial (ndu zrman, du rman)
3sg <i>y</i> -	yngm	tngm	dngnzron	yngzrman
3du <i>yä</i> -	yängren	tängren	dängron	yängrman
3pl yä-	yängm	tängm	dängnzron	yängzrman
1sg w-	wngm	qngm	<u>g</u> ngnzron	wngzrman
1du <i>yn</i> -	ynngren	tngren	dnngron	ynngrman
1pl yn-	ynngm	tnngm	dnngnzron	ynngzrman

[†] The verb 'go' is used rather than 'be' because the primordial form is not available with the verb 'be'; the verb 'come', which is basically like 'go' but with *n*- instead of *ng*- as the prefix, has a number of irregularities resulting from the interaction of the directional *n*- with the final *n* of certain prefixes.

3. SPECIAL CHARACTERISTICS OF POSITIONAL VERBS. We now pass to the special characteristics of positional verbs.

An immediately obvious difference from all ambifixing verbs is that they draw on only a subset of the TAM categories. The larger set, which is available through the suffix system on ambifixing verbs, is not available to any prefixing verb. Those found with prefixing verbs are exclusively drawn from the imperfective set: (a) basic imperfective, with further time subdivision into 'some time in the period beginning at dawn today' if combined with the α -series of prefixes, and 'some time in the last couple of days preceding dawn today' if combined with the β -series; (b) remote imperfective, for events occurring longer ago: here the y-series is used. The primordial (see table 1) is not attested with positional verbs. These

^{15.} The "primordial," roughly translatable as 'first', has a range of meanings, including 'do first (among a series of actions)', 'be the first to do', and 'begin doing (but not complete the action)'.

^{16.} The only exceptions are a couple of cases where two different verbs share the same infinitive, such as the infinitive *renzas* which corresponds to the two stems √*enza* 'carry' and √*ane* 'take'.

restrictions are largely inherited from the larger class of prefixing verbs, with the lack of availability of the primordial being shared with 'be' but not the other members of the prefixing class, and presumably deriving from the incompatibility of primordial semantics, which is dynamic (happen first / do first), with the stative semantics of 'be' and the positional verbs.

In addition, however, there are a number of further restrictions, constructions, and possibilities that are unique to the positional verb subclass.

- **3.1 SPECIAL STATIVE SUFFIX** *-ngr* / *-aran*. All and only the members of the positional verb subclass take one of the above two suffixes: nondual *-ngr*, and dual *-aran*. The remote imperfective forms of these are *-ngron* and *-aron*, respectively. I gloss these as 'stative'. Examples (7) and (8) illustrate the use of stative *-ngr* for the positional roots \sqrt{trom} 'be erected (of a building)' and \sqrt{dar} 'be open (of a pit)', while (9a–c) illustrates the possibility of varying the tense values for the positional root $\sqrt{z\ddot{a}r}$ 'be in a tree-fork'.
 - (7) Ynane Bernda-nde totr mng y-trom-ngr here Bernda-GEN new house 3sgU.α-be.erected-STAT.NDU w-ib-s-pna y-m.

 TR-complete-INF-PRIV 3sgU.α-be.NDU 'Here (in this photo) is Bernda's new house standing, still uncompleted.'
 - (8) Zewn qép y-dar-ngr. grave pit(ABS) 3sgU.α-be.open-STAT.NDU 'There's a grave there.'

Undergoer prefixes show the regular set of three TAM-sensitive forms, in addition to the suffixal variation found in the remote past imperfective.

- (9) a. Parwae got bémis kape-wan y-zär-ngr.
 animal bone(ABS) mango fork-LOC 3sgU.α-be.in.a.fork-STAT.NDU

 'There's an animal bone in the fork of the mango tree.' 18
 - b. Kae t-zär-ngr.
 ±1.day 3sgU,β-be.in.a.fork-STAT.NDU
 'It was in the fork yesterday.'
 - c. Ynd d-aka-taw-n kiémb btkam bémis kape-wan 1sgerg 3sgU.γ-see-RPST.IPF-1sgA pig jaw(ABS) mango fork-LOC d-zär-ngr-on.
 3sgU.γ-be.in.a.fork-STAT.NDU-RPST.IPF

'(Last year) I saw a pig jaw stuck in the fork of a mango tree.'

Positional verbs are generally used in constructions with just a sole argument, as befits their intransitive status. But for at least some of these, it is possible to add the "ground"

^{17.} It is likely that some form of these suffixes reconstructs a long way back in the family, since Kómnzo (in the Tonda branch, whereas Nen is in the Nambu branch) has the forms $-\theta \partial \eta g \partial r$ (nondual) and $-\theta \partial \eta g \partial r \partial n \sim -\theta \partial \eta g \partial n$ (dual) (Christian Döhler, pers. comm.); apart from the initial element $\theta \partial_r$, these are close to the Nen forms, which would be rendered $-\eta g \partial r$ and $-\alpha r \alpha n$ in a phonemic orthography that includes the schwa.

^{18.} Men display the bones of the animals they have hunted in trees near their houses (typically the jaw bones of wild pigs), as trophies of their hunting prowess.

argument as an absolutive NP— not the ergative. Natural English translations of these sometimes employ a transitive verb, but the structure is more like a Japanese-style external possession structure, with two phrases each bearing the subject-marker *ga*; for example, *usage ga mimi ga nagai* [rabbit SUBJ ear SUBJ long] 'rabbits have long ears'.

- (10) a. Yna dmab spélng y-awas-ngr.

 DEM woman(ABS) basket(ABS) 3sgU.α-be.on-STAT.NDU

 'The woman has / is carrying a basket.' (N2:79)
 - b. *Yna dmab-m spélng y-awas-ngr.

 DEM woman-ERG basket(ABS) 3sgU.α-be.on-STAT.NDU

 Intended: 'The woman has / is carrying a basket.' (N2:79)

3.2 SPECIAL METHOD FOR CONSTRUCTING A FOUR-WAY NUMBER

CONTRAST. As mentioned in section 2, the basic number setup on the Nen verb distinguishes three values (singular, dual, plural) by crossing a singular/nonsingular with a dual/nondual system. But, for some verbal subsystems, four grammatical numbers can be distinguished, such as by using a nonsingular verbal prefix plus a singular suffix in middle verbs to give a (large) plural. Note in passing that, though there are several subsystems with four-number values, the data I have so far suggest that the typical number values of the two largest cardinalities are not identical in all subsystems: with middle verbs, for example, speakers stress the specificity of the largest value (all in a group, or a very large group like a whole village or a rugby team), while with the positionals they stress the specificity of the second largest value, as three or four. Nen positionals have another method of deriving a four-way number system, as I will now illustrate. This is a "special method" in the sense that four-valued number contrasts in Nen are constructed in a number of ways according to the verb type and the TAM value: for example, nonsingular plus plural in the case of future imperative, nonsingular prefix plus singular suffix for third person middles (see [3]), first singular prefix plus third singular suffix for first person middles, nonsingular prefix plus 'away' prefix for the verb 'to be' and its derivatives, and for objects of transitives. But only positional verbs form it by the combination of singular plus dual, which I now illustrate.19

Consider (11a–d). As illustrated, four numbers are distinguished: singular, dual, paucal, and plural.

- (11) a. Mng y-trom-ngr.
 house 3sgU.α-be.erected-STAT.NDU
 'A house is standing.'
 - b. Mng yä-trom-aran. house 3nsgU.α-be.erected-stat.du 'Two houses are standing.'

^{19.} An anonymous reviewer suggests that it is worth trying to derive the number effects by assigning relational or imprecise number values to the number categories—see Harbour (2014) for an interesting application of the latter approach—rather than precise values as done here. Although I am sympathetic to the quest for compositionality and whatever semantic values can be invoked to bring it about, the fact that so many different number combinations are used to achieve the same number contrasts in different constructions makes this seem prima facie unlikely in the Nen case. A full consideration of the complex facts of Nen number, however, would take us too far afield from the main theme of this article.

c. Mng yä-trom-ngr.

house 3nsgU.α-be.erected-STAT.NDU

'Three or more house(s) are standing.' (paucal)

d. Mng y-trom-aran.

house 3sgU.α-be.erected-STAT.DU

'All the houses are standing.' (exhaustive / large plural)

As the reader will note, the first three numbers are constructed by the methods we have seen for ambifixing verbs: singulars combine a singular pronominal prefix with a nondual suffix, duals a nonsingular with a dual, and normal plurals (behaving like the pattern for standard plural transitive subjects) combine a nonsingular pronominal prefix with a nondual suffix. In the large plural, however, a different pattern is used: the singular pronominal prefix is combined with the dual suffix. Viewed from one angle, this is a logical contradiction, ²⁰ but at the same time is a way of exploiting the product of two binary oppositions to give a four-way contrast, and elsewhere in the system "basic" semantic values get overridden in particular constructional contexts (such as the combination of the singular suffix with the nonsingular prefix in middle verbs to give large plurals). The situation is diagrammed in table 2.

A further example is given in (12a–d), with the slight difference that, like other roots beginning in \acute{e} -, this initial vowel is dropped after a preceding vowel.

- (12) a. Wagib nu-wan y-éser-ngr.
 fish water-Loc 3sgU.α-be.immersed-STAT.NDU

 'The fish is in the water.'
 - b. Sombes wagib nu-wan e-ser-aran.
 two fish water-LOC 3nsgU.α-be.immersed-STAT.DU

 'The two fish are in the water.'
 - c. Nambis wagib nu-wan e-ser-ngr.
 three fish water-LOC 3nsgU.α-be.immersed-STAT.NDU
 - 'The three fish are in the water.'

d. Terber wagib nu-wan y-éser-aran. many fish water-LOC $3sgU.\alpha$ -be.immersed-STAT.DU

'Many fish are in the water.'

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outery-odd-ngrsingularinnery\ddot{a}-even-arandualinnery\ddot{a}-odd-ngrpluraloutery-even-aranlarge plurals
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^{20.} Number in the positionals could be derived elegantly if we relabeled the SG vs. NSG contrast in the pronominals as something like 'outer' vs. 'inner', and the dual vs. nondual contrast as something like 'odd' vs 'even'. This would give us something like the following (a solution along these lines suggested by Bob Dixon, pers. comm.):

Elegant as it is, the trouble with this solution is that it does not generalize to the other ways of constructing large plurals: only in the positional construction do duals get recycled into large plurals, and there are many other types of pattern (such as those in the future imperative) that are structured on quite different patterns.

Composed number	Pronominal prefix	Stative suffix
singular	sg	ndu
dual	nsg	du
paucal	nsg	ndu
(large/exhaustive) plural	sg	du

TABLE 2. COMPOSING THE FOUR-VALUED NUMBER SYSTEM OF POSITIONALS

Related languages have a similar pattern, just for the positional set. Compare the patterning of the verb meaning 'to be up high' with third person subjects in Nen and in Nä (spoken in the village of Tais), as shown in table 3.

A further peculiarity of positional morphology is found in the stems of a few verbs. We have already seen that some prefixing verbs, such as 'be', exhibit suppletion between dual and nondual forms. However, a few positional verbs show stem alternations based on a different pattern: there is a singular vs. nonsingular distinction, with the singular form of the stem also being used in large plurals just like the singular form of the pronominal prefix. An example is \sqrt{lewa} 'be inside (SG)' vs. \sqrt{lawa} 'be inside (NSG)'. This combines with the full set of number indicators to give a four-way system in the way shown in table 4. No verb outside the positional set exhibits this particular number-based patterning.

TABLE 3. THE FOUR-VALUED NUMBER SYSTEM: NEN AND NÄ

Meaning	Nen √pi	Nä √фay [†]
(s)he is up high	y-pi-ngr	yə-фay-oŋg
they two are up high	e-pi-aran	e-фay-are
they (few) are up high	e-pi-ngr	e-фay-ong
they (many) are up high	y-pi-aran	yә-фау-are

[†] The phoneme shown here φ varies between [φ] and [β], with the voiced version preferred after short vowels like /a/, thus [yəβayong] and [yəβayare], and the voiceless version preferred after long vowels like /e/, thus [eφayare] and [eφayong].

TABLE 4. NUMBER-SENSITIVE STEM PATTERNING WITH \(\sqrt{lewa} \) \(\sqrt{lawa} \) 'BE INSIDE'

Person/number value of subject	'be inside'
3sg	y-lewa-ngr
3du	e-lawa-ran
3 plural	e-lawa-ngr
3 large plural	v-lewa-ran

3.3 NO INFINITIVE. Most verbs in Nen form infinitives by stripping all inflectional material (prefixes and suffixes), then adding the nominalizer -s to the remaining stem. Compare infinitive *owabs* 'to talk' with inflected forms like *nowabte* '(s)he is talking' in (2), and infinitive *awakaes* 'to see each other' with the inflected form in *nawakaewt* 'they two see each other' in (4). Virtually every verb has a distinct infinitive, and

^{21.} A slight complication arises from the fact that transitive stems beginning with w- (which may either be inherent, or a causativizer/transitivizer, depending on the verb) drop this after many inflectional prefixes, but always exhibit it in the infinitive.

argument-changing derivatives such as reflexive/reciprocals have their own distinct infinitives: compare *wakaes* 'to see, look at', *awakaes* 'to see/look at each other'.

Positional verbs, however, always lack infinitives. This property is shared with other prefixing verbs, except that the word *yls* is used as a de facto infinitive for the verbs 'come' and 'go', but bears no formal relation to their roots, so at best is a suppletive infinitive form. In any case, it cannot be used as an infinitive for 'be' even though 'come' and 'go' are simply directional forms of the verb 'be'.

As it happens, most Nen constructions employing infinitives denote dynamic rather than stative states of affairs in the infinitive clause: for example, wanting or moving to assume a position, or as phrasal complements of 'begin' or 'finish'. Since these all involve a change of state in the complement, they can be expressed using the corresponding middle or transitive forms of the lexeme (see section 4), which does have an infinitive.

The positional verb meaning 'sit', *erengr*, has a quasi-infinitive form *were* (this lacks the normal infinitive ending -s), which can be used in similar contexts to infinitives of concurrent action—for example, *were-tae zizi* [sit-TIME gossip(N)] 'gossip (N) while sitting around'—as well as in instrumental compounds normally formed with infinitives—for example, *were rokar* [sit thing] 'chair', cf. *zi watembser rokar* [speech send-INF-ACTION-NOMINALIZER thing] 'telephone', which is built with the infinitive *watembs* 'to send'. However, so far I have no evidence that other positional verbs have quasi-infinitives of this type.

3.4 SEMANTIC MAKEUP OF THE POSITIONAL CLASS. Verbs in the positional class fall into two main types: posture and position proper. So far, 45 verbs have been recorded, though since this is based on a total of only four months' fieldwork and each fieldtrip has brought in new verbs, the true number is likely to be considerably higher.

The first, postural, type refers to the internal disposition of the figure, without reference to its surroundings: whether I am sitting, standing, or lying depends on the arrangement of my own body, whatever is around me (for example, I can adopt any of these postures while floating in a vacuum). In Nen, the postural verbs are as follows (I show the root plus the nondual form of the stative): *akingr* 'to be standing (person or tree)'; *émnzngr* and *erengr* 'be sitting' (semantic difference not yet clear, though the latter is the one that gets extended to 'live at, reside at'); *tromngr* 'to be standing, be erected (house or other building)'; *kmangr* 'to be in a lying position (in whatever way; for example, on one's side), live, reside'; *éléngngr* 'to be lying on one's back'; *iyengr* 'be bending, be inclined'; *uwingr* 'be halfway up, like someone rising halfway from a chair'; *känngr* 'be coiled, rolled up (also: be coiled around)'.

The second, positional, type gives the position of a figure with respect to some ground. Beginning with examples we have already considered, the grave pit is open with respect to the surrounding covered ground, with *darngr* in (8), and the pig jaws are placed with respect to a tree fork (which may or may not be specified by a NP in the locative), with *zärngr* in (9). Likewise, the basket is located with respect to the carrying woman (specially: hanging from her head by a strap), with *awasngr* in (10), and the fish is placed with respect to the water in which it is immersed, with *éserngr* in (12). Table 5 gives other verbs of relative position, cited in the singular unless only some other num-

ber is available. They are grouped in semantic categories that roughly follow those of the Basic Locative Construction Hierarchy of Levinson and Wilkins (2006:16),²² supplemented by a couple of other categories where none of their characters are a good fit to the Nen semantics.

This division divides the set of positional verbs into two prototypical types, but in fact there are some verbs for which a case can be made either way. Thus *amangr* 'be hanging' is always with respect to something from which it is hanging (like a roof beam, and more proximately a rope), but also implies a particular disposition (pulled downwards by gravity more at points where it is away from the support—if I hang up a soft bag of fruit, these hang down more at points further away from the supporting string). Likewise, the nature of the figure (animate vs. inanimate) interacts with the relation to the ground (up high) in the contrast between *ypingr* 'be up high (stable), typically of inanimate' and *yprängr* 'be up high (maintaining balance), of animate', though there is no necessary implication of lack of animacy in the first case: a bird securely up high in a nest could be described with *ypingr*; whereas someone standing precariously on a log bridge could be described with *yprängr*.²³

TABLE 5. VERBS OF RELATIVE POSITION

Figure is impaled by ground:

argningr 'be hooked up, hanging'

känngr 'be coiled (typically around), be rolled up'

parngr 'be around, encircle'

Figure is stuck to or attached to ground:

ézénngr 'be tightly together, held together by pressure, e.g., an adze in a stump, or

papers in a prong)'

ingr 'be planted' (note also the phrase *ni ingr* 'be bending down')[†]

kingr 'be stuck up high, like an orchid or a tree-frog to a tree; be stuck at other angles

(e.g., stamp on envelope)'

mbangr 'be tied

plengr 'be tightly inside (e.g., a container), be between (e.g., tightly between legs)'

rmdrärngr 'be fastened, stuck'

snengr 'be attached; (metaph. be committed to, be involved with romantically)' wamangr 'be hanging, be attached up high (e.g., a flag [SUBJ] on a flagpole [LOC])'

zärngr 'be in the fork of a tree, typically wedged or clasped'

Figure is damage or negative space (e.g.,a hole):

darngr 'be open, be a hole, be unenclosed or uncovered'

- 22. Those at one end of the hierarchy (namely impalement) are least likely to employ the basic locative construction, while those at the other are most likely to employ it. Their hierarchy goes (from least to most likely in terms of employing the basic locative construction): impalement, being stuck / attachment, damage / negative space, part of a whole, adornment / clothing, inanimate movable entity in contact with the ground (Levinson and Wilkins 2006:17).
- 23. An anonymous referee raises the question of whether selectional restrictions form part of the semantic or syntactic representation of positional verbs; for example, should one have selectional restrictions stipulating 'tail feathers' as subject of wingr, 'house' as subject of tromngr, and 'inanimate' or 'animate', respectively, as subjects of pingr and prängr. This is an interesting question whose definitive answer must depend on a much bigger corpus than I currently have, but my initial impression is that the system works entirely by characterizing the semantics of the posture or positional relationship, and that typical subjects then fall out without the need for overt selectional restrictions.

TABLE 5. VERBS OF RELATIVE POSITION (CONTINUED)

Figure is part of whole (part of ground):

wateraran 'be a branch, be a fork, e.g., of creeks as one goes upstream' (only attested in

dual so far)

wingr 'be an upward-projecting part of, like tail feathers'

Figure is adornment or clothing:

esngr 'be on head, top part (e.g., hat)' wasngr 'have/be on (clothes, hat etc.)'

Figure is movable entity in contact with ground:

amangr 'be hanging, dangling' aparngr 'be under, be covered by' aplengr 'be loosely inside' ésérngr 'be immersed'

éténgr 'be lying up high (e.g., on a shelf); be on shoulders'

pingr 'be up high (typically inanimate)'

prängr 'be up high, maintaining balance (typically animate)'

gangr '(liquid) fill, fully occupy container or well'

Figure is part of spatial arrangement of entities:

atromngr 'be erected (house) in such a way that it towers above other houses, be erected

above':

éngrängr 'be lined up'

etngr# 'be at an end, be the end of'; metaph. 'be passed on through namesaking'

mängr 'be lying in a jumble' msengr 'be leaning against something'

psaran 'be mixed, combined' (does not occur in singular for semantic reasons; plural

is *yäpsngr*)

Figure is perceptually absent or undetectable:

égérngr 'be away, be off somewhere else (e.g., off in one's garden, out of the village)'

érningr 'be in hiding'

Orientation:

gärngngr 'be facing, facing toward' ngrängr 'be over to the side'

Other:

trengr 'be shining'

The first part, *ni*, remains invariant, while *ingr* inflects appropriately, e.g., *Zimi ni yingr* 'Jimmy is bending down'. Verb phrases made up of a coverb (often known as an adjunct in the Papuanist literature) and an inflecting verb do occur in Nen, though unlike in many Papuan languages, such as Kalam (Pawley 1994), they are not a central part of the lexicon, accounting for fewer than 10 percent of verb lexemes.

Unusually, this verb contains what appears to be the valency-increasing prefix a-, which generally adds benefactive arguments when added to transitive verbs; see Evans (to appear a). Here it adds the meaning 'with respect to others' to the basic 'be erected, be high' meaning of tromngr, though unlike with its regular valency-increasing use it does not add a further argument (e.g., the surrounding houses). Architectural note: houses in Bimadbn range from low-lying houses built on the ground or slightly raised, which is the most traditional style, to "Queenslander"-style houses where the floor is several meters off the ground, a type encouraged by the erstwhile colonial authorities. which brings the benefit of keeping dogs and snakes out. However, it is not uncommon for young men to flaunt their individuality and ambition by constructing much higher houses, sometimes running to three stories or standing atop long poles. It is to houses like this, which tower San Gimignano-style above their neighbors, that the verb atromngr is applied.

ätngr for some speakers.

†† The motivation for this semantic extension is that names stay inside clans, normally being transmitted from senior to junior members, so that in some sense their distribution "ends" at the clan boundary, and in addition, in the youngest recipients they are at the newest end of the genealogy.

The question might be asked whether the semantic difference between posture and relative position is mirrored in a syntactic difference, with the verbs of relative position required to take an overt locative expression denoting the ground. It is indeed common for verbs of relative position to take an overt locative, like (13a), and many posture-denoting expressions occur with no overt locative NP, like (11a–d). However, there are many exceptions in each direction. Thus, many verbs of attachment are attested in clauses with no overt locative NP: for example, *yna sod yargningr* [DEM shirt it.hangs] 'the shirt is hanging (from a hook)', *yna end yna bä etngr* [DEM road DEM FUT 3sg.be.an.end] 'the road comes to an end here', and *Binzawa gte aba yngrängr* [Binzawa there IMM 3sg.be.over.to.the.side] 'Binzawa is standing over to the side'. Conversely, locative NPs are frequently added to postural verbs to supply an overt ground: for example, *ynd sermban aba wkmangr Kawande mngn* 'last night I was asleep (lay) in Kawa's house' (*mng-n* [house-LOC]). There is, thus, no reason to introduce any syntactic stipulation to differentiate the presence or otherwise of locational NPs between the two types.

4. ALTERNATIONS WITH TRANSITIVE (CAUSATIVE) AND MIDDLE

VERBS. All positionals participate in a three-way alternation with transitive verbs having a causative reading (put in position/posture X) and middle verbs having an inceptive meaning (get oneself into position/posture X). Sample alternations are shown in table 6, followed by a representative triplet of examples. In this section, positionals will be cited using just the root (that is, shorn of their suffix *-ngr* or *-aran*), to better show the formal relation to the causative and middle forms derived from them.

Examples (13a-c) illustrate the workings of such a triplet:

- (13) a. Wagib nu-wan y-éser-ngr.
 fish water-LOC 3sgU.α-be.immersed-STAT.NDU
 'The fish is in the water.'
 - b. Ynd sombes wagib nu-wan e-ser-a-n.
 lsgERG two fish(ABS) water-LOC 3nsgU.α-put.in.water-DU.PFV-1sgA
 'I put two fish in the water.'

TABLE 6. SAMPLE ALTERNATIONS BETWEEN POSITIONALS, CAUSATIVES, AND MIDDLES

	Positional	Causative	Middle
meaning	'X be in location / position P'	Cause(Y, P(X)) (a) 'Y place X in location/ position P' (e.g., place up high) (b) 'Y cause X to have positional characteristic P' (e.g., cause to be open)	Become(P(X)) (a) 'X come to be in location/position P' (b) 'X come to have positional characteristics P' (e.g., become open, shattered)
verb structure	U[X]-V-STAT	U[X]-V-A[Y]	M-V-A[X]
sample infinitive / stem #1 'be erected'	trom	trongs	ätrongs
meaning	'be erected (e.g., a house)'	'erect, build (e.g., a house)'	'come to be erected, built'
sample infinitive / stem #2 'be in water, be immersed'	Îser	wésers 'put in water'	esers 'come to be in water, come to be immersed'

c. Wagib nu-wat n-eser-nd-a.
 fish(ABS) water-AL M.α-get.in.water-NDU.PFV-3sgA.P.PFV
 'The fish got into the water.'

In most cases, the causative infinitive is built from the positional stem, with the middle infinitive then derived from the causative. Consonant-initial positionals are simply taken over as the root of the causative (possibly with elision of final vowel), whereas positional roots beginning with a vowel add initial w- in the causative. This is illustrated in the first part of table 7.

If the positional root begins with the short, lax vowel \acute{e} , a different pattern of formation is found: the causative prefixes add w- in the way expected for a vowel-initial root, but the middle roots directly replace the initial \acute{e} - of the positional root with another, full vowel instead of being built from the causative form, as shown in the second part of table 7.

Sometimes, the infinitive of the causative and/or middle has elided the vowel found in the positional, but this reappears in some inflected forms such as the perfective: for example, \sqrt{ple} 'be inside', pls 'put inside', $\ddot{a}pls$ 'become inside, get inside', but y-ple-ndn [3sgU. α -put.inside-NDU.P.PFV-1sgA] 'I put it inside'.

There are also some sets where the relation is fully irregular—for example, *ere*-'be in a sitting position', *amzs* 'sit down'—or where there are other irregularities, such as the changes in final segments of *trom* > *tron\vec{g}s* (see above), *aki* 'be standing', middle *ungis* 'assume or maintain a standing position', but also *n\vec{g}a/n\vec{g}i* (infinitive *wn\vec{g}is*) 'stand s.t. up (TR), place in a standing position'.

The morphological considerations above show that the positional root is morphologically basic, in the sense that the causative and middle forms are derived from it (directly or indirectly) in ways that are conditioned by the phonological form of the positional root. Semantically, it is also clear that the positional verbs are basic: the state they describe (X be in position P / location L with respect to Y) serves as semantic input for the causative (Y cause X to be in position P / location L) and the middle (X change their position / location so as to be in position P / location L). Positionals denote states, while both their causative and middle counterparts denote achievements built up semantically from the positional states.

ES

Most cases									
POSITIONAL CAUSATIVE MIDDLE									
√dar	'be a hole, be open'	dars	'cause to be open'	adars	'become open'				
√kma	'be lying'	kms	'lay down, cause to lie'	äkms	'lie down'				
√mse	'be leaning'	mss	'lean, cause to lean'	emss	'lean, get into a leaning position'				
√et	'be the end'	wets	'finish, bring to an end'	ewets	'finish, come to an end'				
		V	erbs with initial é						
	POSITIONAL		CAUSATIVE		MIDDLE				
√ézén	'be tightly together'	wéznés	'put tightly together'	ezns	'get stuck tightly'				
√élén̄g	'be lying on back'	wéléngs	'lay on back'	uléngs	'lie down on one's back'				

There are two further considerations for taking the positionals as grammatically basic within this triple set. First, there are a number of cases where two positionals collapse to one causative and one middle: a more precise semantic contrast made in the positionals is neutralized in the derived achievement verbs. Thus both \sqrt{pi} 'be up high' and $\sqrt{pr\ddot{a}}$ 'be precariously up high' have the causative *pis* and the middle $\ddot{a}pis$, and both \sqrt{aki} 'be standing' and $\sqrt{\acute{e}n\ddot{g}ra}$ 'be standing in line' have the causative $w\acute{e}n\ddot{g}is$ 'to stand (TR)' and the middle ungis 'to get in a standing position'. This shortfall of causative and middle forms is what one would expect of a process of derivation that lacks some distinct outputs.

Second, as indicated above, some positionals have distinctive forms patterning with their odd way of forming a four-way number system, such as \sqrt{lewa} be inside', which uses \sqrt{lewa} for singulars and large plurals, but \sqrt{lawa} for duals and small plurals; likewise \sqrt{laar} be open, be a hole' for singulars and large plurals, but \sqrt{lair} for duals and small plurals. Causatives then inherit this pattern: ylewanda and yngleutan for 'I put it inside' and 'I put them (many) inside' (the u in leu is an orthographic variant of w in coda position), but elawan for 'I put them (two) inside' and elawandn for 'I put them (a few) inside'. The special number-sensitive patterning of such causatives can be accounted for if they are derived from the positionals (that is, they simply inherit number-sensitive alternations in the roots they are derived from), but if the direction of derivation goes the other way there would be no explanation for why it is only in transitive verbs with corresponding positionals that such number-sensitive stem variation is found.²⁴

- **5.** WHAT RESTRICTIONS ON POSITIONALS REVEAL ABOUT SEMANTICS. Compared to other verbs, positionals have two significant syntactic restrictions: they cannot form regular imperatives (though they can form future imperatives), and they cannot be the complements of phasals like 'begin to' and intention predicates like 'want to'. In this section, I treat each of these restrictions in turn and show how they derive from the strict stative semantics of positional predicates.
- **5.1 UNAVAILABILITY FOR REGULAR IMPERATIVES.** Statives do not form regular imperatives (whether perfective or imperfective). This reflects a conflict between the semantics of imperatives (which include some change, brought about by the addressee/actor) and the stative semantics of positionals. On the other hand, causative and middle verbs derived from positionals can form imperatives that focus on bringing about the necessary change of state, as exemplified in (14) and (15); note that regular imperatives employ the β form of the prefix and are further signaled by an imperative suffix.
 - Bun a Mesi äme-wan te-mz-ae!
 Bun and Mesi mat-Loc 3nsgU.β-sit(tr.)-PFV.IMP.Asg>Udu

 'Sit Bun and Mesi on the mat!'
 - (15) K-ungi-Ø!

 M.β-stand.up-PFV.IMP.sg

 'Stand up!' (<ungis 'stand up, assume standing position')

^{24.} There are other types of causatives not derived from conditionals: for example, quite a number are derived from motion verbs by the same method of prefixing w-, like armbs 'ascend', warmbs 'cause to ascend'; esrs 'descend', wesrs 'cause to descend'. See Evans (to appear a) for a fuller account of such valency alternations in Nen.

Although positionals cannot form normal imperatives, they can form "future imperatives," reflecting the fact that future imperatives call for a particular state of affairs to be in place at some future time, rather than initiating a change in state of affairs at the moment of the speech act.

First, consider the situation with regular verbs. Here, future imperatives are normally used to give commands to be carried out at some later point (typically removed from the place and time of the speech act), and are formed by combining the α -series form, the regular imperative suffix, and a special prefix *-ang* or *-and* (according to the number of the subject) between the undergoer prefix and the stem. The special future imperative prefix can be reduplicated to give an iterative reading. (16a–c) contrast a regular imperative, a basic future imperative, and an iterated future imperative.

(16) a. T-ng-aram-ta-Ø!3sgU.β-MANY-give-IPF.NDU-IMP.sgA'Give them to him/her (now)!

Y-ang-a-ram-ta-Ø!
 3sgU.α-sgA.F.IMP-give-IPF.NDU-IMP.sgA
 'Give him things in the future!'

c. Y-ng-ang-a-ram-ta-Ø!
3sgU.α-ITER-sgA.F.IMP-give-IPF.NDU-IMP.sgA
'Keep giving him things over and over again in the future!'

With positionals, future imperatives are formed by combining an α -series form of the prefix, ²⁵ plus the future imperative prefix *ang*- or *ong*-, but retaining the stative suffix. The preverbal prefix $m\acute{a}i \sim m\acute{a}$ 'still' may also be added to this construction.

(17) a. Bm mái n-ang-aki-ngr! 2ABS still 2sgU.α-sgA.F.IMP-stand-STAT.NDU 'You (SG) keep standing!'

> b. Bm mái y-ong-aki-ngr! 2ABS still 2nsgU.α-sgA.F.IMP-stand-STAT.NDU 'You (PL) keep standing!

c. Bm mai y-ong-aki-aran! 2ABS still 2nsgU.α-sgA.F.IMP-stand-STAT.DU

'You (DU) keep standing!'

(18) Bm n-n-ang-aki-ngr!

2ABS 2SG.U.α-TOW-FUT.IMP-SG.A-be.standing-STAT.NDU

'You keep standing to this side!'

(19) Yao n-ang-sne-ngr!
NEG 2SG.U.α-sgA.F.IMP-be.attached-STAT.NDU

'Don't remain attached!' (i.e., 'Break up your illicit relationship!')

(i) Bä gte mái yangakingr! 'He should keep standing there!'
(ii) Bä gte mái yongakiaran! 'Those two should keep standing there!'
(iii) Bä gte mái yongakingr! 'They should keep standing there!'

(iv) Bbe gbres mái yangakiaran! 'The whole group should keep standing there!'

^{25.} The same future imperative construction is also available with 3rd person subjects of positional verbs, with a jussive reading:

It is also revealing to compare the behavior of positional verbs with those of other prefixing verbs. The verb 'be' itself (m or ren, according to number) cannot be used in direct imperatives (20), but direct imperatives are fine for its directional derivatives $n-m \sim n-ren$ 'come' (lit. 'be hither') and n-ren 'go' (lit. 'be thither'), as in (21).

- (20) *Kores kn-m! careful 2sg.u.β-be.NDU Intended: 'Be careful!'
- (21) Kn-ng-m mnḡ-t!
 2SG.U.β-AWA-be.NDU house-AL
 'Go home!'

Future imperatives, on the other hand, are permitted with the verb 'be': (22) gives the acceptable future imperative counterpart of (20).

(22) Kores n-a-m!
careful 2sgU.α-F.IMP-be.NDU
'Be careful!'

We can make sense of all the above data if we contrast the semantics of the regular and future imperatives more precisely. Regular imperatives issue a command to do something now, here, bringing forth a change at the moment of the speech act. This makes them compatible with dynamic verbs (all ambifixing verbs, including middle and causative derivatives of positionals), but also with 'come' and 'go', which are—against the standard semantics of the prefixing verb set—also dynamic verbs. But they are incompatible with stative verbs—whether positionals or the verb 'be'—because to bring out the commanded state of affairs would require a change of state, and that would be expressed by a dynamic verb (such as a middle verb to express something like 'sit down!'). In this sense, regular imperatives have a narrower semantics than their English counterparts: the possibility of English commands like 'be good!', 'keep sitting here!', and 'put out the garbage tonight!' show that the looser anchoring of English imperatives to the action type and to the here and now permits their greater combinability, both with commanded states and commanded subsequent events.

Future imperatives, on the other hand, merely call for a commitment that a particular state of affairs obtain at some moment after the speech act, and do not call for any overt action now (other than, of course, social assent to the commitment). This makes them semantically compatible with all predicates expressible by verbs: with dynamic verbs, by dint of the same semantics as found in regular imperatives, but also with stative verbs (both positionals, and the verb 'be') because the future state can be made to hold without necessarily undertaking any change now. Used with positionals, future imperatives can either call for the maintenance of some state of affairs into the future (corresponding to what we would express in English by 'keep standing!', 'keep sitting!', and so on), or ask that such a state of affairs hold at some future point, without specifying how that state is reached, as in (19), which asks that at some future point the youth who is the recipient of the moral injunction no longer be attached to their sweetheart, while leaving it up to the youth to undertake the intervening steps needed to break off the relationship.

The interaction of the two imperative series with the positional class (and other prefixing verbs), thus, clearly reveals the unfailingly stative nature of positional predicates.

5.2 UNAVAILABILITY AS COMPLEMENTS OF PHASAL AND INTENTION PREDICATES. Complements of intention or of phasal verbs are likewise unattested with positionals, but are possible with their causative and middle derivatives.

- (23) Bä mñte y-m ungi-s-t.
 3ABS desirous 3sgU.α-be:NDU stand.up-INF-AL
 '(S)he wants to stand up.'
- (24) Ynd bä w-ngi-s-t y-apap-nd-n.
 1sgA 3ABs TR-stand.up-INF-AL 3sgU.α-begin-NDU.PFV-1sgA
 'I am beginning to stand him up.'

As was the case with imperatives, we can partially explain this restriction as resulting from the purely stative semantics of positionals. Wanting something (23) is construed as a desire to bring about a change from the present situation, so it is natural for the desire complement to be encoded as a dynamic event, which is incompatible with positional semantics. Likewise, phasal auxiliaries like 'begin to' (24) take dynamic predicates as their complements, and so do statements of present intent, expressed as in (25) by an allative-inflected infinitive followed by the verb 'be'. The sorts of spatial layouts denoted by positional verbs will, therefore, in the case of such complements, be expressed by their middle (23) or transitive (24)–(25) derivatives.

The reader will recall that positional verbs, along with virtually all prefixing verbs, lack infinitives. It is possible that this formal gap in the morphological possibilities of positionals is linked to their unavailability as complements: the commonest use of infinitives (duly inflected for case) is as complements of phasal or intentional predicates, so if semantic reasons rule out this function with positional predicates there would be no need to have an infinitive.

Looking at the unavailability of positionals as complements from the other angle, could this not simply result from a formal restriction, namely the lack of an infinitive to use in building the structure? There is evidence that this is not the case. An alternative way of expressing want-complements is to use conditionals, as in (26); these are formed by combining the preverbal particle *geä* with the future perfective form. Again, this construction is not available with positionals, but it can be used with derived middle forms denoting a transition into a state.

```
(26) Bä mñte y-m geä g-ungi-nga.

3ABS desirous 3sgU.α-be.NDU COND 3sgU.γ-stand.up-3sgA.F.PFV

'(S)he wants to stand up.'(= [23])
```

With complements as well, then, the restrictions on occurrence of positional verbs appears to follow from an incompatibility of their resolutely stative semantics with the dynamic semantics required by complement constructions of desire, intention, and phasal change.

6. POSITIONAL VERBS IN AREAL AND TYPOLOGICAL PER-SPECTIVE. I close this article by placing the Nen system in the perspective of global typologies of positional verbs on the one hand, and more specifically of Melanesia as a linguistic area (or non-area!) on the other.

The cross-linguistic typology of positional verbs has recently been boosted by a special issue of the journal *Linguistics* focusing on the typology and semantics of positional verbs in locative expressions, with the express purpose of remedying a lengthy neglect in the contribution of verbal expressions (as opposed to adpositions and case markers) to the encoding of spatial relationships. The introductory article by Ameka and Levinson proposes four basic types of system that are used in the "Basic Locative Construction," which can be identified as the construction used to locate a readily movable inanimate figure with respect to a ground to which it is not attached, in response to a 'where' question (Levinson and Wilkins 2006a; Levinson and Meira 2003; O'Meara 2008), though Ameka and Levinson (2007:852–53) mention three supplementary criteria: "how they were used to describe stereotypical vs. exceptional scenes, which construction was used in negative locative statements, and the frequency of use in the stimuli descriptions." In Nen, it is more common to use the copula verb plus a locative NP in answer to 'where' questions—positional verbs are commoner when existential statements are being made (for example, 'there is a house standing there')—so on that criterion it is the copula rather than the positional verbs that are relevant to their typology. The same goes for Ameka and Levinson's second criterion, of what gets chosen in negated location expressions: the copula is chosen, unless a specific position is being contrasted; see (d) below. The stereotypical vs. exceptional criterion is neutral: either the copula or a suitable positional verb can be used, regardless of whether the object being positioned is stereotypical or unusual. But in terms of frequency, the fact that positional verbs were used for 54 out of the 71 Bowped scenes places them firmly within the ambit of basic locative constructions, which is why I consider them relevant to the Ameka and Levinson typology that we now discuss, as well as the more general consideration that they are obviously relevant to the broader quest of understanding "the verbal component of locative statements" (Ameka and Levinson 2007:847).

Type 0, in the Ameka and Levinson classification, has no verb in the basic locative construction (for example, Saliba); Type I has a single locative verb (either the copula, as in English or Tamil, or a special locative verb determined by grammatical categories, as in Japanese and Chinese); Type II has a large or unlimited set of position verbs (9–100), such as Likpe in Ghana and Tzeltal (Brown 1994, 2006)²⁶ and Zapotec in Mexico;²⁷ and Type III has a small contrastive set of posture verbs (typically 'sit', 'stand', and 'lie'), as in Dutch, Arremte and Guugu Yimithirr (Australia), and Yeli-Dnye (Rossel Island, Papua New Guinea).

It is clear that Nen, along with related languages like Nambu, Nama, Nä, and Kómnzo, belongs to Type II—with 45 positional verbs reported for Nen so far, it falls

into the mid-range of this type in terms of number of verbs. For this type, Ameka and Levinson (2007:857) propose five characteristics:

- (a) They have a "general verb, or another verb like an existential predicate, [which] can be used if none of the more specific dispositional verbs is relevant." In Nen, this role is played by the verb 'be'—see its use, for example, in #26 of appendix 2 with the predicate 'be cracked', for which there is no positional verb.
- (b) "Some dozen of these dispositional predicates are frequent and may have a distinct status." This is less clear. It is too early in our documentation of Nen to have a reliable corpus over which frequency measures can be gathered, but although it is certainly the case that some positionals are more frequent than others, there does not appear to be any particular discontinuity in the frequency curve.
- (c) The use of these dispositional verbs is motivated by such factors as the need to distinguish between different parts of a masslike noun with different parts (for example, the leaf, stem, or fruit of a banana) or the need to compensate for the lack of a large contrastive set of adpositions or local cases. This does not square well with the Nen system: the use of positional verbs seems motivated, purely and simply, by the precise denotation of spatial layout. There is no evidence that it is used more to differentiate reference for such "mid-range" entities as bananas, nor is it true that there is a lack of other methods for encoding space, since there is a fairly large set of locational nouns, themselves inflectable for local cases, which can be used to express meanings like 'on top of', 'inside', 'beside', and 'underneath', which closely parallel those expressible by a subset of the dispositional verbs (see appendix 2 for many examples).
- (d) The use of one of these verbs asserts that the Figure object currently has the disposition described, rather than presupposing that the Figure normally would have this disposition. This is in contrast with systems like Dutch and the Chadic language Goemai (Hellwig 2003, 2006) in which objects have a stereotypical posture, and the corresponding verb will be used even in negative statements: to say 'there are no bottles on the table', one says something like 'no bottles are standing on the table' (Ameka and Levinson 2007:859). As far as this property goes, Nen conforms to the Ameka and Levinson typology. If a positional verb is negated, this negates the expected position rather than the presence of the Figure. Contrast the use of the copula ym' it is' and the positionals ykingr' it is (stuck up) high' and ypingr' it is high' in discussing the absence of a lizard or bird from a tree. One can either use the negated
- 26. The Tzeltal (Brown 1994, 2006) class of "dispositionals" is rather similar to the Nen positional class in much of their semantic range, and comprises "several hundred dispositional roots with highly specific meanings conveying shape, configuration, orientation, size, angle, and other spatial properties" (Brown 2006:246); of these, shape, size, and angle are not relevant in Nen, but the others are. Another important difference from Nen is that Tzeltal dispositionals are "not used in existential propositions" (Brown 2006:246). Grammatically, they resemble Nen positionals in being stative predicates, and in frequently combining with a locative NP. Formally, Tzeltal dispositionals are derived by adding the stative adjectival suffix -VI to dispositional roots; this suffix can also form stative adjectives from transitive and transitive/positional roots. In Nen, on the other hand, the stative suffixes -ngr and -aran found with positionals are not found in any other kind of stative or resultative constructions (e.g., 'be broken', 'be killed').
- 27. Recently, a number of languages from the Vaupes Region of the Amazon basin have also been described as exhibiting similar phenomena, such as Yuhup / Yuhupdeh (Ospina 2009, 2010; Ospina Bozzi 2011; Silva and Silva 2012).

copula, for example, *motae/amni yao wén-an ym* [motae.lizard/bird NEG tree-LOC it.is], or the negated positional, as in *motae/amni yao wénan ykingr*. The choice does not reflect the entity: different entities don't choose different verbs, except insofar as they would assume different positions. Rather, it reflects the speaker's expectation about where the entity was expected to be found: *motae yao wénan ykingr* would be used if the speaker had expected to see the motae lizard clinging to the tree, and *amni wén kapewan yao ypingr* would be used if the speaker had expected to see the bird up in the tree. Indeed, the copula is more likely to be used with a negative existential interpretation (there is no bird in the tree), while the positional verb is more likely to be used when the entity referred to is already given: talking about some bird, already established as a topic, it is not up in the tree (and must be somewhere else). Positional verbs also regularly contrast the locations/positions of the same object: for example, one could say *bende banban bandan ykmangr*, with *ykmangr* 'it is lying', to express 'your picture is lying on the ground', but *bende banban ykingr bédganewan*, with 'be stuck up high', for 'your photo is on the wall'.

(e) The final observation by Ameka and Levinson about this class (the type II positional verbs) is that, though their semantics is often very detailed and language specific, it is likely to include (i) canonical vs. noncanonical position (for example, upright vs. nonupright position for, say, containers); (ii) for flexible, articulated objects, how flexed or folded; (iii) volumetric and axial properties of objects (for example, 1D vs. 2D vs. 3D, solid objects vs. containers); and (iv) single vs. multiple or mass Figure, namely whether the Figure object is individuated.

Interestingly, though the semantics of Nen positionals is very detailed, the elaborations do not lie along the four avenues sketched by Ameka and Levinson. Taking (iv) first, number is, of course, shown inflectionally, as we have seen, but does not distinguish different stems. As to the others, (i) is not really applicable—one can always describe noncanonical positions with an appropriate positional verb, but furnishing ways of describing canonical positions is not a part of the system; (ii) is true to a limited extent—there is one positional verb referring to being coiled (*ykänngr*), but no other elaboration on this dimension; and (iii) shows Nen diverging from this typology perhaps most strikingly—positional verbs in Nen are not focused on the shape properties of the Figures themselves (in contrast to, for example, Tzeltal). It appears, therefore, that Nen has taken the dimensions of semantic elaboration in quite different directions from those found in large-set languages in the Ameka and Levinson typology, with the generalization being that the focus is on the spatial/topological relationships of the figure to the ground (whether overtly specified or simply implied).

Summarizing the fit between the Nen system and the Ameka and Levinson typology of positional verbs: it is intriguingly inexact. Like their large-class languages, there is no classifying function with respect to objects; there are alternatives to using them if no fitting verb is found (namely by using the copula); and spatial statements about entities do not presuppose particular dispositions so that negative statements will be made with the copula (unless there is some prior assumption about spatial layout), and different spatial arrangements of the same object will be expressed with different verbs. But unlike their large-class languages, there does not appear to be a particular cleavage with regard to fre-

quency (though this needs investigation once we have a bigger corpus), and there is no obvious semantic gap elsewhere in the language system crying out to be remedied by a developed system of positional verbs (since there is a parallel system of specific locational nouns, as well as a number of local cases). Finally, the dimensions of semantic elaboration are rather different from those found with the large-set languages reported in Ameka and Levinson's survey.

Having summarized the very useful Ameka and Levinson typology of positional verbs, we can locate Nen (and the other Morehead-Maro languages) more clearly in their Melanesian regional context.

By far the most common use of spatial verbs in the literature on Papuan languages is as a way of classifying objects—leading Piau (1981) and Merlan, Roberts, and Rumsey (1997) to call them "classificatory verbs"—typically based on their stereotypical positions or metaphorical extensions from this. Papuan languages for which such a system has been reported include a number of Trans-New Guinea languages, such as Ku Waru (Merlan, Roberts, and Rumsey 1997), Enga (Foley 1986; Lang 1975), and Imonda (Seiler 1985), as well as the isolate Yeli-Dnye on Rossel Island. These are all Type III languages in the Ameka and Levinson typology, and differ from the Nen system in the size of the inventory and in the stereotyped association of particular verbs with particular nouns that they "classify" through some stereotypical, metaphorical, or conventionalized association.

More similar to Nen, though further afield geographically, is Tidore (Van Staden 2007), which has a set of seven basic "locational verbs" that express the ground space in which the figure can be found; there is also a larger set of "dispositional verbs," though their use appears to be less frequent than in Nen.

But the geographically closest language with anything like the Nen system appears to be Meriam Mer (= Meryam Mer), described in Piper (1989 and pers. comm.), and belonging to the Eastern Trans-Fly family.²⁸ Meriam makes a rather similar distinction to Nen, between stative and dynamic predicates—Piper (1989) uses the terms atelic vs. telic, but it is not clear that this is the most accurate semantic characterization²⁹—and, as in Nen, there is a coding split so that intransitive stative predicates take argument prefixes while dynamic predicates take suffixes. Most of the stative predicates are positionals: *imiredi* 'be seated', *ikweiredi* 'be standing', *demargeredi* 'be resting upon', *adoredi* 'be inside of', *emeredi* 'be perching', *irdiredi* 'be lying (of place/reef)', *eweredi* 'be standing (of building)', *emargeredi* 'be anchored on water', *erairedi* 'be growing (of plant)', *eskedi* 'be sticking up (of spear, hill, upright object)', *egmedi* 'be lying (of water)', *erkedi* 'be enclosing', *dipwedi* 'be open (of space)', *iperedi* 'be lying', *akmeiredi* 'be submerged', *isigemertedi* 'be spread out'. Many of these correspond closely to meanings

^{28.} I thank Nicky Piper for drawing the Meriam Mer parallels to my attention and providing me with the list of positional verbs given here.

^{29.} And in a recent pers. comm. (email of January 11, 2014), she suggests a revised formulation for the two Meriam verb classes: "I was using the term 'atelic' with stative verbs to try & capture those outlier verbs such as *ikase* - be going along, *eskedi* - be flowing etc. What they have in common with the positional/stative verbs is that they don't focus on a beginning or an end but focus on the ongoingness. ... For this reason, I used the term 'atelic'. For the other verbal category, 'telic active', the verbs in this category can be atelic or telic so it was wrong to label them just 'telic'. It would be more accurate to call them stative & dynamic but to recognize that these are not always 2 neat categories."

expressed by Nen positionals, like 'be standing (of building)' and 'be sticking up'. However, there is some semantic leakage, and other members of this class that are not positionals are: *ikaseredi* 'be going along', *eskedi* 'be flowing', *ikeredi* 'be (of thing)', and *dikeredi* 'be (of word)'.

The semantic correspondence of the overall system to that found in Nen is striking,³⁰ particularly in the absence of other reported cases of large-inventory positional verbs on the New Guinea mainland. This is all the more intriguing, given that the Eastern Trans-Fly languages do not directly border on the Morehead-Maro family, but are separated from it by the Pahoturi River family, which appears to lack anything like positional verbs, and may reflect an earlier period of contact and structural convergence.

More broadly, many questions arise regarding the highly specific geographic and phylogenetic distribution of the Nen / Morehead-Maro system within New Guinea. Is it really so rare, or have comparable systems in other Papuan languages so far gone unnoticed or unreported? What particular historical developments led to this unusual system, from the special stative suffixes (which lack cognates elsewhere in Nen grammar), to the form of the roots (not relatable to other etyma, yet highly specific semantically), to the lack of infinitives and the very clear combinatoric delineation of the system? How far back can we reconstruct a system of positional verbs (to Proto-Morehead-Maro?), what has been the dynamic across the family (numbers of positional verbs tail off to the west of the family), and how many lexemes can we securely reconstruct? Can we find other large-class systems of positional verbs that exploit the semantic dimensions found in the Nen system rather than those more typical of the large-class systems investigated by Ameka and Levinson (2007)? This article aims to be a modest first step in taking such questions forward, and in the process contributing further to a developing view that sees Papuan languages as exhibiting as much diversity at the typological level as they do at the levels of sheer number of languages, and of language families.

APPENDIX 1. ORTHOGRAPHIC CONVENTIONS

(Consonants	(with	orthographi	c symbo	le in it	alice).
•	JOHNOHAIRIS	t willi	OHHOSTADIH	C SVIIIDO	18 111 113	ancsi

	Bila	abial		eolar ntal	Pala	tal	Ve	elar	Labi vel		Glottal
Voiceless stop	p	p	ť	t			k	k	kp ^w	q	
Voiced stop	b	b	d	d			g	g	gb ^w	ģ	
Prenasalized stop	mb	mb	nd	nd	nz ~ nd3	nz	ŋg	ng	ŋg͡bʷ	nğ	
Nasal	m	m	n	n	n	ñ					
Voiced fricative					z ~ d3	Z					
Voiceless fricative			S	S							h h
Lateral			1	1							
Trill			r	r							
Semivowel					j	y			W	W	

^{30.} At the time of writing, I have been unable to obtain information on whether comparable phenomena are found in other languages of the family, namely, Bine, Gidra, and Gizra.

W 7 W	/ 1.1	.1	1 .	1 1		* . 1	
Vowels	(with	orthogra	anhic s	symbols	ะาท	ıtal	1CS).

		Fre	ont			Ba	ck	
	Nonsl	nort	Sh	ort	(She	ort)†	Non	short
High	i	i	ι	é			u	и
Mid	e	e			в	á	0	0
Low	$\boldsymbol{æ} \sim \boldsymbol{\epsilon}$	ä					a	а

[†] This vowel can almost be eliminated as a phoneme, except in a couple of words, má and mái 'still', where the presence of á cannot be motivated by epenthesis.

In addition, note the marginal nasal vowels \tilde{e} in \tilde{e} 'yes' and $g\tilde{e}h\tilde{e}$ 'over there', and \tilde{a} in $\tilde{a}h\tilde{a}$ 'here you are'.

APPENDIX 2. DISTRIBUTION OF POSITIONAL VERBS IN BOWPED OUESTIONNAIRE

The Bowped questionnaire is a well-known tool for investigating the semantic typology of adpositions and other methods for encoding spatial location (http://fieldmanuals.mpi.nl/volumes/1992/bowped/). To facilitate comparison of the Nen system with other spatial-encoding systems, the following table gives the picture numbers for the Bowped Stimuli (column 1), the positional verb used (if any) in column 2, and any other spatially encoding devices (such as case, or spatial adpositions) in column 3.³¹ It will be noted that for 54 out of the 70 scenes for which descriptions were obtained, a positional verb was used. (Sometimes more than one description was offered; the above figure counts, as an occurrence, any case where at least one of the offered descriptions included a positional verb).

The material included here resulted from sessions from September 15–20, 2011, in Bimadbn village with Jimmy Nébni, Joseph Teräb, Nébni Mkao, Blag Teräb, Warapa Wlila, Zerus Kaeko, Gubae Gima, Amto Kaeko, Michael Binzawa, and Siba Nébni, all but Gubae being male L1 speakers of Nen aged between 35 and 70. The forms given represent the agreed result (that is, the agreed-upon best description) after a discussion between the people in this group on being presented with the given stimuli. The underscore _ links words in phrasal compounds.

Scen	e	Positional Verb	Other spatial encoding
1	cup on table	ypingr 'it is up high'	kitarakitara tqn [platform top-LOC]
2	apple in bowl	yaplengr 'it is loosely inside'	qéki-wan [container-LOC]
3	stamp on enve- lope	ykıngr 'ıt ıs stuck on'	bñe_yéb_got-an [envelope- LOC]
4	ribbon around candle	yparngr 'it is tied around, it encircles'	kiekte_är_znzkor-an [candle- LOC]
5	hat on head	ypingr 'it is on high' yesngr 'it is on'	ärände mrkp-an [man-GEN head- LOC]
6	dog beside ken- nel	erengr 'it is sitting'	zän_mng tondn [kennel beside- LOC]
7	spider on ceiling	— [Instead: narae 'it's mov- ing']	mng_kunz_apa_zég banbanan [ceiling beneath-LOC]
8	book on wall- shelf	ypingr 'it is up high'	kitarakitara tqn [table top-LOC]
9	coat on hanger	yargningr 'it is hanging'	i —
10	ring on finger	yawasngr 'it is on (clothing)'	bawar_pus-an [ring.finger- LOC]
11	yacht in sea	— [ym 'it is']	aragab-an [sea-LOC]
12	dried paint on knife	— [ym `it is']	znzn-ba [dɪrt-COM] (i.e., 'the knife is with dirt')

^{31.} Original fieldnotes: 2011 Field Notebook, pp. 40-43, 58-61, 64-66.

above table the book stuffed in handbag 15 Ience around house 16 ball under chair 17 tree on hillside 18 hole in towel 19 apple in circle 20 balloon tied to stick 21 shoe on lady's foot 122 papers on spike 22 papers on spike 23 hose colled on tree-trunk 24 spoon under tablecloth or table and on stamp head on stamp apple 25 telephone on wall 26 crack in cup 27 apple on branch head on stamp apple 38 to the day of the beautiful apple 39 carrow through apple 31 cat under table 35 peg on line 36 ykingr' it is stuck on' lyakingr' it is stuck on' ykingr' it is stuck on' lyakingr' it is stuch on' lyakingr' lyakingr' lyakingr' lyakingr' lyakingr' lyakingr' lyakingr' lyakingr' lyakingr' lyaki	13	light hanging	ytrengr 'it shines'	kıtarakıtara-wat [table-ALLatıve]
stuffed in handbag 15		above table		
house [Instead: thâm darende mng 'the fence will surround the house'] 16 ball under chair ykmangr 'it lies' ykmangr 'it ties' yymangr 'it is planted, it is growing ydarngr 'it is planted, it is growing ydarngr 'it is a hole' yoalde-LoC] 18 hole in towel ydarngr 'it is a hole' yaplengr 'it is spaciously ps. ågnänser_selemi-wan [towel-toc] yaplengr 'it is spaciously yek-man [basket-LoC] yaplengr 'it is tied' yeh-an [tree-LoC] yaplengr 'it is up high' yezenaran 'the two of them are on tight' ypingr 'it is up high' ypingr 'it is stuck on' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yakingr 'it is up high' yaplengr 'it is stuck on' yaplengr 'it is up high' yaplengr 'it is stuck on' yaplengr 'it is suck on' yaplengr 'it is waplengr		stuffed in hand-		
tree on hillside yingr 'it is planted, it is growing hole in towel yappengr 'it is a hole' papper on brike yawasngr 'it is on' — [ylawanda 'she entered it'] papers on spike ypingr 'it is under, it is covered tablecloth are on tight' ypingr 'it is under, it is covered tablecloth apple on branch head on stamp ysnegr 'it is attached' ysnegr 'it is sittack on' arrow through apple arrow through apple goldfish in bowl yaplengr 'it is sitting' yawasngr 'it is on' — [ylawanda 'she entered it'] ypingr 'it is under, it is covered it is covered in' telephone on wall 24 spoon under tablecloth on table loat on stamp ysnegr 'it is attached' ysnegr 'it is sittack on' apple goldfish in bowl yaplengr 'it is sitting' gor an [toot-LOC] gor gane-wan [shoe-LOC] tkr-an [spike-LOC] wen dbn_dembdemb-an (tree.stump-LOC] nne waparsmne selemi-wan (tablecloth on table loat on tatacked') ysnengr 'it is attached' ysnengr 'it is sittack on' apple arrow through apple goldfish in bowl yaplengr 'it is sitting' erengr 'it is sitting' yaplengr 'it is sitting' clothes on line mouth clothes on line mouth clad on man erengr 'it is sitting' erengr 'it is situck (of a dead leaf that could fall off)' wep-ama [hip-PERL] wep-ama [hip-PERL] wep-ama [hip-PERL]	15		[Instead: tñäm darende mng 'the fence will surround the	mng tondma [house beside]
hole in towel ydarngr 'it is a hole' apple in circle yaplengr 'it is spaciously inside' balloon tied to stick balloon tied to ymbangr 'it is tied' shoe on lady's foot — [ylawanda 'she entered it'] papers on spike are on tight' hose coiled on tree-trunk spoon under tablecloth ypingr 'it is up high' tree-trunk apple on branch head on stamp tablecloth on table arrow through apple arrow through app				
19 apple in circle yaplengr' it is spaciously inside' ymbangr' it is tied' ymbangr' it is tied' ymbangr' it is tied' ymbangr' it is tied' ymbangr' it is on' [ylawanda 'she entered it'] yezenaran' the two of them are on tight' ypingr' it is under, it is covered it beleeloth ypingr' it is under, it is covered it leephone on wall yaparngr' it is under, it is covered it leephone on wall ysenar it is tied' ymbangr' it is under, it is covered it leephone on wall ysenar it is under, it is covered it leephone on wall ysenar it is under, it is covered it leephone on wall ysenar it is under, it is covered it yaplengr' it is under, it is covered it leephone on wall ysenar it is under, it is covered it ysenar it is stuck on' ps-an [stem-LoC] pepa-wan [paper-LoC] pepa-wan [paper-LoC] year on table yaplengr' it is stuck on' pepa-wan [paper-LoC] yaplengr' it is stuck on' yaplengr' it is immersed' yeserngr' it is immersed' yeserngr' it is immersed' yakingr' it is statened' yakingr' it is statened' yakingr' it is statened' yakingr' it is under it is covered it'] yaplengr' it is statened' yakingr' it is statened' yakingr' it is immersed' yeserngr' it is immersed' yeserngr' it is immersed' yakingr' it is statened' yakingr' it is statened' yakingr' it is under it is yaplengr' it is under it is yaplengr' it is immersed' yeserngr' it is immersed' yapar it is statened' yapar it is statened' yapar it is under it is yapar it is adar it is yapar it is adar it is yapar it is yapar it is yapar it is yapar it			ing'	side-LOC]
balloon tied to stick 21			٦	LOC]
stick shoe on lady's foot		**	inside'	
foot		stick		
are on tight' ypingr 'it is up high' tree-trunk ypingr 'it is up high' tree-trunk ypingr 'it is under, it is covered tablecloth telephone on wall cracked'] ypingr 'it is up high' telephone on wall cracked'] ypingr 'it is up high' apple on branch ykingr 'it is statched' ypingr 'it is up high' bedgane tondn [wall side-LOC] bedgane tondn [wall side-LOC] ppa-an [stem-LOC] ppa-wan [paper-LOC] ppa-wan [paper-LOC] ppa-wan [paper-LOC] inu_dekr-wan [water-with container-LOC] nu_dekr-wan [water-with container-LOC] nu_dekr-wan [water-with container-LOC] nu_dekr-wan [water-with container-LOC] selemi zeg-an clothes line-LOC] mng apa zeg tq n [house roof top-LOC] shadage on ankle loud above mountain clothes on line man next to fire erengr 'he is sitting' pingr 'it is sitting' yezenarn 'it is sitting' pingr 'it is sitting' yezenarn 'it is sitting' pingr 'it is sitting' yezenarn 'it is sittin		foot	— [ylawanda 'she entered it']	gor_gane-wan [shoe-LOC]
tree-trunk spoon under tablecloth ered' tablecloth ered' ypaparngr 'it is under, it is coverablecloth ered' ypingr 'it is up high' 25 telephone on wall 26 crack in cup 27 apple on branch head on stamp ykingr 'it is attached' ykingr 'it is stuck on' 29 tablecloth on table 30 arrow through apple 31 cat under table 32 goldfish in bowl yaplengr 'it is stuck on' 33 peg on line 34 man on roof yakingr 'it is standing' 35 bandage on ankle [ykingr 'it is standing' 36 cloud above mountain 37 clothes on line 38 man next to fire erengr 'it is sitting' 39 cigarette in mouth 40 cat on mat erengr 'it is sitting' 40 girdle round waist 41 girdle round waist 42 girdle round waist 44 girdle round waist 45 goldrish in bowl yaplengr 'it is stuck on' pepa-wan [paper-LOC] 18 waparsmne selemi-wan [table clabed' pedagane tondin [wall side-LOC] 18 pédgane tondin [wall side-LOC] 19 bédgane tondin [wall side-LOC] 19 bédgane tondin [wall side-LOC] 10 pesa-wan [paper-LOC] 10 pesa-wan [paper-LOC] 10 pesa-wan [paper-LOC] 11 kitarakitara banban-an [table underneath-LOC] 11 nu-qéki-wan [water-with container-LOC] 12 nu-qéki-wan [water-with container-LOC] 13 selemi-zég-an clothes line-LOC] 13 bandage on ykingr 'it is stuck on' [ykinda 'he stuck it'] 14 leaf on branch 15 bandage on period ykingr 'it is sup high' [ykinda 'he stuck it'] 16 cloud above mountain 17 clothes on line period yezenaran 'it is sitting' [yezenaran 'it is sitting'] 18 cat under table pepa-wan [paper-LOC] 29 cigarette in period yezenaran 'it is sitting' [yezenaran 'it is sitting'] 29 cigarette in period yezenaran 'it is sitting' [yezenaran 'it is sitting'] 20 period 'it is sitting' [yezenaran 'it is sitting'] 21 period 'it is sitting' [yezenaran 'it is sitting'] 22 period 'it is sitting' [yezenaran 'it is sitting'] 23 peg on line [yapete 'blow'] [yezenaran 'it is sitting'] 24 period 'it is period 'it is on the blood 'it is yezenaran 'it is sitting'] 25 period 'it is yezenaran 'it is sitting' [yezenaran 'it is yezenaran 'it is yezenaran 'it is yezenaran 'it is yezenaran 'it is			are on tight'	
tablecloth telephone on wall crack in cup - [adarsmne ym 'it is cracked'] ysnengr 'it is attached' head on stamp tablecloth on table arrow through apple goldfish in bowl goldfish in bowl apple goldfish in bowl apple seengr 'it is is sitting' goldfish in bowl yaplengr 'it is stuck on' - [yramanda 'it did it'] apple goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' yéserngr 'it is immersed' yéserngr 'it is stastened' yakingr 'he is standing' bedgane tondn [wall side-LoC] ps-an [stem-LoC] pepa-wan [paper-LoC] kittarakitara banban-an [table underneath-LoC] nu qéki-wan [water-container-LoC] nu-ba qéki-wan [water-with container-LoC] nu-ba qéki-wan [water-with container-LoC] selemi zég-an clothes line-LoC] mng apa zég tqn [house roof top-LoC] ykingr 'it is stuck on' [ykingr 'it is up high' selemi zég-an [toot-LoC] pend-an [sore-LoC] gurgur tqn [mountain top-LoC] selemi zég-an [toot-LoC] pend-an [sore-LoC] permber-an [lip-LoC] man next to fire cat on mat erengr 'it is sitting' - [yapete 'blow'] leaf on branch selemi zég-an clothes line-LoC] permber-an [toot-LoC] permber-an [lip-LoC] wén_san tqn [leaf top-LoC] wén_kape-wan [branch-LoC] wén_kape-wan [branch-LoC] wén_kape-wan [branch-LoC] wén_kape-wan [hip-PERL] wén_ana [hip-PERL]		tree-trunk		[tree.stump- LOC]
wall 26 crack in cup — [adarsmne ym 'it is cracked'] 27 apple on branch head on stamp ykingr 'it is stuck on' 28 head on stamp ykingr 'it is stuck on' 29 tablecloth on table it'] 30 arrow through apple 31 cat under table erengr 'it is sitting' 32 goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' yeserngr 'it is immersed' yeserngr 'it is is immersed' yakingr 'he is standing' 33 peg on line ymrdrärngr 'it is fastened' yakingr 'he is standing' man on roof 35 bandage on ankle [ykinda 'he stuck it'] ykingr 'it is up high' gurgur tqn [mountain cat on line aman next to fire erengr 'he is sitting' bnz widma-n [tire side-LOC] 36 cloud above mountain erengr 'he is sitting' bnz widma-n [tire side-LOC] permbér-an [lip-LOC] 40 cat on mat erengr 'it is situck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist hered wist wid in the blood [i.e., sap] system'), ykingr 'it is stuck around waist hered we'n we'p-ama [hip-PERL]	24	tablecloth	ered'	[tablecloth-LOC]
cracked'] ysnengr 'it is statched' ps-an [stem-LOC]	25		ypingr 'it is up high'	bédgane tondn [wall side-LOC]
28		crack in cup	cracked']	
tablecloth on table 30 arrow through apple 31 cat under table 32 goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' yakingr 'it is immersed' yakingr 'he is standing' man on roof 33 peg on line yrmdrärngr 'it is fastened' yakingr 'he is standing' man on roof 34 man on roof yakingr 'he is standing' man bandan-an [table underneath-LOC] 35 bandage on ykingr 'it is stuck on' kaep-an [toot-LOC] 36 cloud above mountain 37 clothes on line man next to fire erengr 'he is sitting' binend-an [sore-LOC] 38 man next to fire erengr 'he is sitting' binend-an [tire side-LOC] 40 cat on mat erengr 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist mendan it has covered it'] it's stuck tight' (of a dead leaf that could fall off)' 42 girdle round waist websale it's sittled around herself']				
table arrow through apple 31 cat under table erengr 'it is sitting' kitarakitara banban-an [table underneath-LoC] 32 goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' nu-ba qéki-wan [water-with container-LoC] nu-ba qéki-wan [water-with container-LoC] nu-ba qéki-wan [water-with container-LoC] yrmdrärngr 'it is fastened' selemi zèg-an clothes line-LoC] 34 man on roof yakingr 'he is standing' mig apa zég tqn [house roof top-LoC] 35 bandage on ykingr 'it is stuck on' kaep-an [toot-LoC] bnend-an [sore-LoC] ykingr 'it is up high' gurgur tqn [mountain top-LoC] 36 cloud above mountain 37 clothes on line — — — — — — — — — — — — — — — — — — —				pepa-wan [paper-LOC]
apple 31 cat under table erengr 'it is sitting' kitarakitara banban-an [table underneath-LoC] 32 goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' nu-ba qéki-wan [water-container-LoC] nu-ba qéki-wan [water-with container-LoC] 33 peg on line yrmdrärngr 'it is tastened' selemi_zég-an clothes line-LoC] 34 man on roof yakingr 'he is standing' mng apa_zég tqn [house roof top-LoC] 35 bandage on ankle [ykinda 'he stuck it'] bandage on [ykingr 'it is up high' gurgur tqn [mountain or lothes on line mountain selement of the erengr 'he is sitting' pérmbér-an [lip-LoC] 36 cloud above mountain ———————————————————————————————————		table	it']	
goldfish in bowl yaplengr 'it is spaciously inside' yéserngr 'it is immersed' container-LOC] 33 peg on line yrmdrärngr 'it is fastened' selemi_zég_an clothes line-LOC] 34 man on roof yakingr 'he is standing' mig apa zég tqn [house roof top-LOC] 35 bandage on ykingr 'it is stuck on' [ykinda 'he stuck it'] bnend-an [sore-LOC] 36 cloud above mountain 37 clothes on line man next to fire erengr 'he is sitting' erengr 'he is sitting' pérmbér-an [lip-LOC] 39 cigarette in mouth 40 cat on mat erengr 'it is sitting' pérmbér-an [lip-LOC] 41 leaf on branch yézénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [neparnda 'she tied around herself']		apple		
inside' yéserngr 'it is immersed' yéserngr 'it is immersed' yéserngr 'it is immersed' yéserngr 'it is immersed' yéserngr 'it is fastened' yakingr 'he is standing' man on roof bandage on ankle ykingr 'it is stuck on' [ykinda 'he stuck it'] bandage on ankle ykingr 'it is up high' cloud above mountain clothes on line man next to fire man next to fire yerengr 'he is sitting' clagarette in mouth mouth do cat on mat leaf on branch erengr 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' gurgur tqn [mountain top-LOC] bnz widma-n [fire side-LOC] yèrmbér-an [lip-LOC] wén_kape-wan [branch-LOC] wén_kape-wan [branch-LOC] wén_kape-wan [hip-PERL]	31	cat under table	erengr 'it is sitting'	underneath-LOC]
34 man on roof yakingr 'he is standing' mng apa zég tqn [house roof top-LOC]	32	goldfish in bowl	inside'	nu-ba qéki-wan [water-with container-LOC]
top-LOC] top-LOC] top-LOC] top-LOC] top-LOC]			yrmdrärngr 'it is fastened'	selemi_zég-an clothes line-LOC]
ankle [ykinda 'he stuck it'] bnend-an [sore-LoC] 36 cloud above mountain 37 clothes on line — — — bnz widma-n [fire side-LoC] 38 man next to fire erengr 'he is sitting' bnz widma-n [fire side-LoC] 39 cigarette in mouth 40 cat on mat erengr 'it is sitting' pérmbér-an [lip-LoC] 41 leaf on branch yezénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [paparnda 'she tied around weep-ama [hip-PERL]	34	man on roof	yakingr 'he is standing'	top-LOC]
mountain 37 clothes on line 38 man next to fire erengr 'he is sitting' bnz widma-n [fire side-LOC] 39 cigarette in mouth 40 cat on mat erengr 'it is sitting' wén_san tqn [leaf top-LOC] 41 leaf on branch yézénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist herself'] wen_kape-wan [branch-LOC] wen_kape-wan [branch-LOC] wen_kape-wan [branch-LOC] wen_kape-wan [branch-LOC]	35			
38 man next to fire erengr 'he is sitting' bnz widma-n [fire side-LOC] 39 cigarette in mouth — [yapete 'blow'] pérmbér-an [lip-LOC] 40 cat on mat erengr 'it is sitting' wén_san tqn [leaf top-LOC] 41 leaf on branch yézénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [neparnda 'she tied around weép-ama [hip-PERL]			ykingr 'it is up high'	gurgur tqn [mountain top-LOC]
39 cigarette in mouth 40 cat on mat erengr 'it is sitting' wen_san tqn [leaf top-LOC] 41 leaf on branch yezenaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [neparnda 'she tied around weep-ama [hip-PERL]			_	_
mouth 40 cat on mat erengr 'it is sitting' wen_san tqn [leaf top-LOC] 41 leaf on branch yezenaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [neparnda 'she tied around weep-ama [hip-PERL]				
41 leaf on branch yézénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), ykingr 'it is stuck (of a dead leaf that could fall off)' 42 girdle round waist — [neparnda 'she tied around weép-ama [hip-PERL]		mouth	13 1	
waist herself']	41	leaf on branch	yézénaran 'it is stuck tight' (of a living leaf that's still 'in the blood [i.e., sap] system'), yki- ngr 'it is stuck (of a dead leaf that could fall off)'	wén_kape-wan [branch-LOC]
12 hose garage tree vmingr (of top part on top of vvian dámh dámh 1-t		waist	herself']	
trunk stump); ykmangr (of lower perkl]; yuwan [below-PERL]	43		part trailing on ground)	
44 painting on wall ykingr 'it is stuck up high' bédgane-wan [wall-LOC]				
45 fruit on tree ysnaran 'they are suspended' wén-an [tree-LOC]	45	iruit on tree	ysnaran 'they are suspended'	wen-an [tree-LOC]

46 headband on head dog in basket yaplengr 'it is (loosely) inside'; erengr 'it is (loosely) qeki-wan [container inside-LoC] qéki kunz-n [container inside-LoC] qéki-wan [container inside-LoC] glasan 'on the glass' ykiaran 'they are all stuck up high' ses tond-n [church side-LoC] to hooks on wall yezénngr 'it is fastened' problem yawasngr 'it is on her' qmban-an [neck-LoC] yawasngr 'it is on her' qmban-an [neck-LoC] to hook on wall yawarae 'they are moving' yngkiaran 'they are stuck up high' ykingr 'it is stuck up high' kitarakitara banban-an [table under-LoC] to hook around tree trunk ykänngr 'it is inside' till kunz-n [cage-inside] till kunz-n [cage-inside] wén_dbn-an [tree.stump-LoC] (equally applicable with both verbs) wen wngri tq-n [tree tall top-LoC] pendant on yamangr 'it is hanging' kmboke zèg-an [necklace-LoC] till kmboke zèg-an [neckl
raindrops on window-pane 49 tree beside church 50 hooks on wall yezénngr 'it is fastened' 51 necklace around neck 52 bugs on wall 53 gum under table 54 rabbit in cage yläwangr 'it is stuck up high' 55 hose around tree trunk 56 flag on pole 57 pendant on ykiaran 'they are all stuck up high' yakingr 'it stands' yakingr 'it is statened' yawasngr 'it is statened' yawasngr 'it is nside' yawarae 'they are moving' yngkiaran 'they are stuck up high' ykingr 'it is stuck up high' ykingr 'it is inside' yiäwangr 'it is inside' till kunz-n [container inside-LOC] glasan 'on the glass' kunz-n [container inside-LOC] glasan 'on the glass' ses tond-n [church side-LOC] mmg kunz bédgane-wan [internal house wall-LOC] (equally applicable with both verbs) kitarakitara banban-an [table under-LOC] till kunz-n [cage-inside] wén dbn-an [tree stump-LOC] (equally applicable with both verbs) wén wngri tq-n [tree tall top-LOC] yamangr 'it is hanging' kmboke zég-an [necklace-LOC]
window-pane tree beside church 50 hooks on wall yézénngr 'it is fastened' bédgane-wan [wall-LoC] 51 necklace around neck 52 bugs on wall yawasngr 'it is on her' qmban-an [neck-LoC] 53 gum under table ykingr 'it is stuck up high' maguran (they are stuck up high' whose around tree trunk ymbangr 'it is is stuck up high' wen dbn-an [tree stump-LoC] 54 rabbit in cage yläwangr 'it is is stuck up high' wen dbn-an [tree stump-LoC] (equally applicable with both verbs) 55 flag on pole ysnengr 'it is attached' yamangr 'it is hanging' yamangr 'it is hanging' kmboke zég-an [necklace-LoC] 56 pendant on yamangr 'it is hanging' kmboke zég-an [necklace-LoC]
church hooks on wall pecklace around neck bédgane-wan [wall-LOC] qmban-an [neck-LOC] mage wall-LOC] gum under table ykingr 'it is stuck up high' rabbit in cage hose around tree trunk figh on pole ysnegr 'it is attached' ywanagr 'it is attached' ywanagr 'it is attached' yamangr 'it is hanging' ywanagr 'it is hanging' kmboke zég-an [necklace-LOC]
51 necklace around neck 52 bugs on wall yawasngr 'it is on her' gmban-an [neck-LOC] mng kunz_bédgane-wan [internal house wall-LOC] (equally applicable with both verbs) 53 gum under table ykingr 'it is stuck up high' trabbit in cage yläwangr 'it is inside' trunk ywhangr 'it is inside' ykänngr 'it is coiled' ykänngr 'it is attached' yamangr 'it is attached' yamangr 'it is hanging' yamangr 'it is hanging' yamangr 'it is hanging' kmboke zég-an [necklace-LOC]
neck 52 bugs on wall yawarae 'they are moving' yngkiaran 'they are stuck up high' 53 gum under table ykingr 'it is stuck up high' those around tree trunk ymangr 'it is attached' yamangr 'it is hanging' 56 flag on pole ysnengr 'it is hanging' yawarae 'they are moving' mng kunz bédgane-wan [internal house wall-LOC] (equally applicable with both verbs) kitarakitara banban-an [table under-LOC] thil kunz-n [cage-inside] wén dbn-an [tree.stump-LOC] (equally applicable with both verbs) wén wngri tq-n [tree tall top-LOC] wén wngri tq-n [tree tall top-LOC] kmboke zég-an [necklace-LOC]
yngkiaran 'they are stuck up high' gum under table ykingr 'it is stuck up high' kitarakitara banban-an [table under-LOC] rabbit in cage yläwangr 'it is inside' tlil kunz-n [cage-inside] hose around tree trunk ykänngr 'it is coiled' wén_dbn-an [tree.stump-LOC] (equally applicable with both verbs) flag on pole ysnengr 'it is attached' yamangr 'it is hanging' yamangr 'it is hanging' kmboke zég-an [necklace-LOC]
under-LOC
55 hose around tree trunk ymbangr 'it is tied' ykänngr 'it is coiled' wén_dbn-an [tree.stump-LOC] (equally applicable with both verbs) 56 flag on pole ysnengr 'it is attached' yamangr 'it is hanging' wén wngri tq-n [tree tall top-LOC] 57 pendant on yamangr 'it is hanging' kmboke zég-an [necklace-LOC]
trunk ykänngr 'it is coiled' (equally applicable with both' verbs) 56 flag on pole ysnengr 'it is attached' wén wngri tq-n [tree tall top-yamangr 'it is hanging' LOC] 57 pendant on yamangr 'it is hanging' kmboke zéğ-an [necklace-LOC]
yamangr 'it is hanging' LOC] 57 pendant on yamangr 'it is hanging' kmboke zėḡ-an [necklace-LOC]
necklace
58 ladder against ymsengr `it is leaning' bédgane-wan [wall-LOC] ~ wall bédgane tond-n [wall side-LOC]
59 pencil on table ykmangr 'it is lying' kitarakitara tq-n [table top-LOC]
60 house inside ytromngr 'it stands erected' tñ kunz-n [fence inside-LOC] fence
61 handle on door yézénngr 'it is tightly wedged' mng_bene_pap-n [window-LOC
62 cork in bottle — [wembesmne ym 'it is closed']
63 lamp hanging from ceiling yamangr 'it is hanging' mn\(\tilde{g} \) kunz-n [house inside-LOC]
64 boy behind chair yérningr 'it is hidden' mlegände wingsdbn-an [girl-GE see-CAUS-LOC], i.e., from being seen by the girl
65 tree on hilltop yakingr 'it stands' gurgur tq-n [mountain top-LOC] 66 handle on hand- — [näpnande 'it is swinging'] bag
67 owl in tree hol- low yläwangr 'it is inside' wén_ben-an [tree.hole-LOC]
68 writing on T- — yétqén-ba ym [name-with it.is]
69 earring in ear- lobe yläwangr 'it is inside' tangan-an [ear-LOC]
70 apple on skewer — [térgéz-ba ym 'bro-ken.off.piece-with it.is']
71 dog in kennel — [nnopne 'it is peeping out'] benepap-n [window-LOC]

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