The subject inflections of the Mek languages: a comparative reconstruction

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The Mek languages are a family of Papuan languages spoken in the eastern highlands of the Indonesian province Papua. They have a rich verb morphology with subject and object indexation and numerous temporal, modal, and aspectual categories. In this paper, I focus on the subject inflections, which are combined with tense or mood. Six paradigms of subject person-number endings are reconstructed. In addition, I reconstruct the personal pronouns. Shared innovations that emerge from the reconstructions are used to subgroup the Mek languages.

1. Introduction[1]

The Mek language family is situated in the eastern highlands of the Indonesian province Papua (see Map below). In the highlands to the west lie the languages of the Dani family, to the east and south Ok languages are spoken, a far-flung family straddling the border between Indonesia and Papua New Guinea. The Mek peoples long remained uncontacted and descriptive work on their languages, by missionaries, only began around 1970. The anthropological linguist Volker Heeschen (1978) surveyed the languages and produced a lexicostatistical classification of them. Usher (2021a, 2021b) identified lexical cognates and worked out the comparative phonology of the eight languages of the family. In this paper, I rely on the sound correspondences he established. The Mek languages are relatively closely related to one another, as is apparent not only from the lexicon but also from the verb morphology, which is the subject of this paper.

As I try to show in the final section of this paper, the primary division within the Mek family separates the eastern languages Una and Ketengban from the rest. Henceforth, I subsume Una and Ketengban under the name Eastern Mek (EM) languages and call the remaining six languages the Western Mek (WM) family. A more or less complete description of the verb morphology is available for both Eastern Mek languages but only for four of the six Western Mek languages: Kimyal, Yale, Nalca, and Eipo. Only lexical data but no grammatical data is available for Sela and Nipsan. The morphosyntax of the Eastern Mek language Una has been described in detail in a monograph by Louwerse (1988). For the other Eastern Mek language, Ketengban, we have a description of the phonology and grammar by Fowler et al. (1972) and a grammar paper containing some verb paradigms by Sims (1986). The best described Western Mek language is Eipo, for which there is a comprehensive grammar (Heeschen 1998). Murray and Joan Rule, who were co-authors of the Ketengban grammar sketch, also co-authored a description of the phonology and grammar of Nalca (Rule, Rule & Cutting 1972). Information on the verb morphology of Yale is contained in a short overview (Heeschen 2000) and in the

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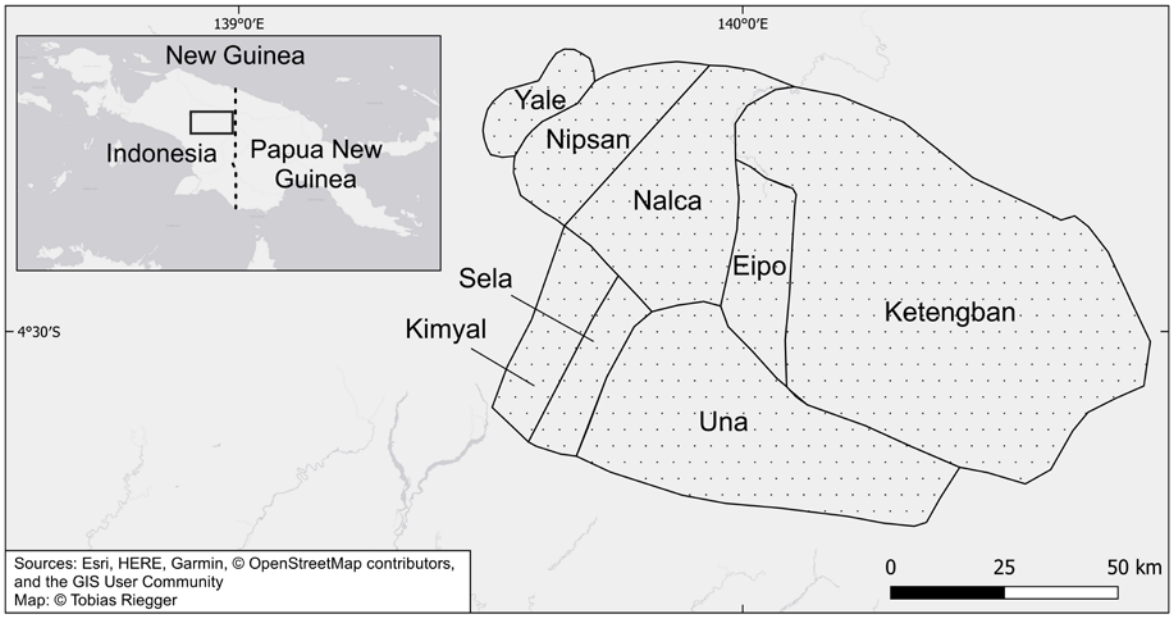
introduction to a dictionary (Heeschen 1992). Finally, some Kimyal verb endings can be gleaned from the dictionary by Young (1986).



Map: The Mek languages of Papua Province

The Mek languages and the grammatical data available for them are introduced in §1. In §2 the subject-indexing suffixes of the verb are presented and six paradigms of them are reconstructed to Proto-Mek. In §3 the free personal pronouns of the Mek languages and their nearest relative Momuna are presented and reconstructed. The results of this study, particularly clues to the subgrouping of the Mek languages, are discussed in §4.

2. Reconstruction of the tense and mood paradigms of the subject inflections

The verb morphology of the Mek languages is moderately complex. The subject as well as the object of a clause are indexed in the verb that is the predicate of the clause. In addition, the verb contains aspectual and tense or mood specifications. All these grammatical categories are expressed by suffixes. The following examples show a transitive verb form in Yale (1) and in Una (2).

Yale (Heeschen 2000:767)

(1) O-lam-se-ok.
hit-DUR-1PL:OBJ-F.PST:3SG:SUBJ
'He was hitting us.'

Una (Louwerse 1988:32)

(2) Er-cɪ nɪ ob-ma-nɪ-r.
3SG-ERG 1SG hurt-INCOMP-1SG:OBJ-PRS:3SG:SUBJ
'He hurts me.'

The Yale and Una verb forms in (1) and (2) have the same structure, consisting of a verb root and three suffixes. The first suffix slot contains tense/aspect markers such as Yale *-lam* 'durative aspect' (1) and Una *-ma* 'incomplete aspect' (2). The second suffix slot contains object/benefactive markers such as Yale *-se* for first or second person plural object (1) and Una *-ni* for first person singular object (2). The final suffix of the verb forms indexes the person and number of the subject of the clause. At the same time, these suffixes expound a particular tense or mood. Thus, the final suffix *-ok* (1) in Yale indicates third person singular subject and far past tense and Una *-r* (2) indicates third person singular subject and present tense. It is these subject-tense inflections that are the object of study of this paper.

There are six sets of subject-tense endings lending themselves to comparative reconstruction. They are presented in Tables 1 through 6. The first four of them are attested in all six languages for which we have morphological data (Tables 1 to 4). The potential mood (Table 5) has not been recorded for Kimyal and is only fragmentarily attested for Una. The medial verb (Table 6) is not attested for Kimyal and Ketengban. In both these cases we have full paradigms for one Eastern Mek language and three Western Mek languages, which makes a Proto-Mek reconstruction possible. Further tenses, aspects, and moods could be reconstructed, but their reconstruction would hinge on the tense/aspect markers of the first suffix slot, which are not considered here. I only reconstruct the different sets of subject-indexing suffixes. The label they are given refers to the function they have when they occur without accompanying tense/aspect suffix. For Yale, Heeschen (1992:26) states: "The absence of tense-aspect suffixes indicates that an activity is completed, that something is done once only or that the duration of this activity is believed to be not important (punctiliar aspect)." The same holds true for the other Mek languages.

In the following tables with reflexes and reconstructions, parentheses ( ) as well as square brackets [ ] are used. Parentheses indicate that the enclosed phoneme can be present or absent in a form. Thus, in the far past tense reconstructed in Table 1, the reconstructed first person dual ending pWM *-num(u) contains a variable final *u*; the reflexes in Yale and Eipo suggest its presence, but the reflexes in Kimyal and Nalca suggest its absence. Square brackets enclose parts of a form that do not derive from the superordinate reconstruction. Thus, the far past tense first person endings *-s[-e]* 1SG, *-numw[-e]* 1DU, *-up[-e]* 1PL of Eipo end in a vowel *-e* that is not part of the Proto-Western Mek proto-forms from which they descend. Such an added final vowel *-e* can also be found in many Eipo nouns. It has been termed an "augment" as no synchronic function is apparent. Historically, it must have been an enclitic with a grammatical function.

2.1 Far past tense

The far past tense adjoins the near past tense and covers the time that is too distant from the moment of speaking to be indicated with the near past tense. This period of time extends as far into the past as memory or imagination reaches. Its other end differs from language to language. In Nalca (Rule, Rule & Cutting 1972:44) and Una (Louwerse 1988:38) the far past tense is used of events happening at least two days ago, in Eipo (Heeschen 1998:257) it begins four to seven days ago, in Ketengban (Fowler et al. 1972:33) two to three days ago, and in Yale (Heeschen 1992:27) as much as two years ago (see §2.3).

All nine forms of the paradigm of far past tense endings can be reconstructed to Proto-Mek (Table 1). The first person singular form pMek *-si is reflected in Kimyal, Yale, and Ketengban. In Nalca and Eipo, the original vowel *i* has been elided owing to the addition

of the augment *-a* or *-e*, respectively. The vowel in Una *-se* 1SG is unexpected and recalls the equally unexpected vowel in the near past tense ending *-ne* 1SG (cf. Table 4), but I have no explanation for this deviance. In the second person singular, the Western Mek languages reflect *-lum, but for pEM *-ʊm, lacking an initial *l*, must be reconstructed. It is conceivable that the initial *l* has been introduced into the Western Mek ending in analogy with the present tense ending pWM *-lam 2SG (cf. Table 2), but as this is uncertain I reconstruct pMek *-(l)um 2SG. The deviant Ketengban ending *-mum* 2SG most likely arose as a reinterpretation of the continuous aspect ending *-mum* < *-ma-um containing the tense/aspect suffix *-ma*. When this form lost its continuous aspect meaning, one would have expected a reinforced form *-ma-mum to take its place in the continuous paradigm, but Sims (1986:30) gives the form *-mume* 2SG (with final augment *-e*) both for the continuous and for the aspectually unmarked paradigm. The third person singular form pMek *-ok is straightforwardly reflected in all daughter languages. The Eastern Mek languages regularly lose word-final *k*.

Table 1. Far past tense

			1SG	**2SG**	**3SG**
1	pMek	far past	*-si	*-(l)um	*-ok
2	pWM	far past	*-si	*-lum	*-ok
3	Kimyal	far past	-si	-lum	-og
4	Yale	remote past	-si	-lum	-ok
5	Nalca	far past punctiliar	-s[-a]	-lum	-ok
6	Eipo	past III	-s[-e]	-lum	-uk
7	pEM	far past	*-si	*-ʊm	*-ʊ
8	Una	remote past complete	[-se]	V-m[-a], C-ʊm[-a]	V-w, C-w[-a]
9	Ketengban	far past	-si	-[m]um	-u

	1DU	**2DU**	**3DU**	**1PL**	**2PL**	**3PL**
1	*-numu	*-dum	*-dek	*-ubu	*-lum	*-ek
2	*-num(u)	*-dum	*-dek	*-ub(u)	*-lum	*-ek
3	-num	-dum	-deg	-ub	-lum	-eg
4	-numu	-dum	-dek	-ubu	-lum	-ek
5	-num	-rum	-rek	-ub	-lum	-ek
6	-numw[-e]	-dum	-dik	-up[-e]	-lum	-ik
7	*-nʊm(ʊ)	*-[rʊ]rʊm	*-re[ɪ]	*-(ʊ)bʊ	*-rʊm	*-ɪ
8	-nʊm[-a]	-rʊrʊm[-a]	-rej	V-bw[-a], C-owbw[-a]	[V-ndaw, C-daw]	V-j, C-jɪ
9	-n[e]mu	-r[e]rum	-rei	-pu	-rum	-i

In the first person dual and plural, reflexes with final *u* stand beside reflexes without final *u*. Final *u* in both forms is found in Yale and Ketengban, a Western Mek and an Eastern Mek language, respectively, and is therefore reconstructed to Proto-Mek (*-numu 1DU and *-ubu 1PL). Kimyal and Nalca have lost the vowel in both endings, Eipo only in the first person plural ending and Una only in the first person dual ending. The sound laws that led to this complex situation are ill understood. The first vowel in Ketengban *-nemu* 1DU is *e* instead of the expected *u*, presumably in analogy to the present tense form *-nem(e)* 1DU (cf. Table 2). Una *-num-a* 1DU and *-bw-a* 1PL end in the augment *-a*, as do the endings of the second person singular and dual.

In the second person non-singular, *-dum 2DU and *-lum 2PL can be reconstructed to Proto-Western Mek. These forms would have become homonymous in the Eastern Mek languages following the sound laws. This did not, however, happen. Rather, the second person dual ending was enlarged through reduplication: pEM *-rʊrʊm 2DU versus *-rʊm 2PL. The Ketengban second person dual ending *-rerum* changed its first vowel in analogy to the third person dual form (*-rei* 3DU : *-i* 3PL = *-rerum* 2DU : *-rum* 2PL). The second person plural ending of Una is an innovation. The third person plural ending pMek *-ek is reflected in all daughter languages. After the final *k* in the second person dual ending pMek *-dek had dropped in the Eastern Mek languages, the third person plural ending *-ɪ was added to it. This analogy involves the present tense (cf. Table 2): present *-rɪŋ 3DU : *-ŋ 3PL = far past *-reɪ 3DU : *-ɪ 3PL.

2.2 Present tense and hortative mood

The present tense and the hortative mood are formally related. The endings of the hortative mood consist of the present tense endings plus an additional hortative marker preceding them. The hortative mood is discussed further below. First, I turn to the present tense. This tense combines the functions of a present tense proper and an immediate past tense. In Nalca (Rule, Rule & Cutting 1972:38) and Eipo (Heeschen 1998:257) the present tense is used for events happening at the moment of speaking or earlier on the same day. In Ketengban (Fowler et al. 1972:32) the time period covered by the present tense extends two or three hours into the past. Heeschen pointed out that the present time and immediate past interpretations of the present tense correlate with the presence or absence of the durative aspect marker in Yale (3 and 4) and Eipo (5 and 6). It is not known whether the same holds true for the other Mek languages.

Yale (Heeschen 1992:26)

(3) ja-lam-la
come-DUR-PRS:3SG:SUBJ
'He is coming.'

(4) ja-l
come-PRS:3SG:SUBJ
'He has come (today).'

Eipo (Heeschen 1998:248)

(5) jan-ma-n
come-DUR-PRS:1SG:SUBJ
'I am coming.'

(6) ja-n
come-PRS:1SG:SUBJ
'I have come.'

The whole paradigm of present tense endings can be reconstructed to Proto-Mek (Table 2). The Ketengban endings variously occur with or without the augment *-e* appended. The same situation must have obtained in Proto-Eastern Mek, for the presence of the augment pEM *-ɪ left a mark on three endings in both Una and Ketengban. It umlauted the vowel *a* of the second person singular, the first person dual, and the third person dual endings: *-ram-ɪ 2SG > pEM *-rɪm(-ɪ), *-nam-ɪ 1DU > pEM *-nɪm(-ɪ), *-raŋ-ɪ 3DU > pEM *-rɪŋ(-ɪ). These Eastern Mek endings undoubtedly derive from pMek *-lam 2SG, *-nam 1DU, and *-daŋ 3DU, which are continued in unaltered form in the Western Mek languages.

Table 2. Present tense

			1SG	**2SG**	**3SG**
1	pMek	present	*-(V)n	*-lam	*-(V)l
2	pWM	present	*-n(-a)	*-lam	*-l(-a)
3	Kimyal	present	V-n, C-na	-lam	V-l, C-la
4	Yale	today's past	V-n, C-na	-lam	V-l, C-la
5	Nalca	present punctiliar	V-n, C-na	-lam	V-l, C-la
6	Eipo	today's past	V-n, C-n[e]	-lam	V-l, C-l[e]
7	pEM	present	*-n(-ɪ)	*-rɪm(-ɪ)	*-r(-ɪ)
8	Una	present complete	-n	-rɪm	-r
9	Ketengban	present	-n(e)	-rem(e)	-r(e)

	1DU	**2DU**	**3DU**	**1PL**	**2PL**	**3PL**
1	*-nam	*-dom	*-daŋ	*-(a)b	*-lom	*-(a)ŋ
2	*-nam	*-dom	*-da(ŋ,k)	*-ab	*-lom	*-a(ŋ,k)
3	-nam	-dom	-daŋ	-ab		-aŋ
4	-nam	-dom	-daŋ	-ab	-lom	-aŋ
5	-nam	-rum	-rak	-ab	-lum	-ak
6	-nam	-dum	-dak	-ab	-lum	-ak
7	*-nɪm(-ɪ)	*-[rʊ]rʊm(-ɪ)	*-rɪŋ(-ɪ)	*-b(-ɪ)	*-rʊm(-ɪ)	*-ŋ(-ɪ)
8	-nɪm	-rʊrʊm	-rɪŋ	-b	-rʊm	-ŋ
9	-nem(e)	-r[e]rum(e)	-reŋ(e)	-p(e)	-rum(e)	-ŋ(e)

The first person singular and the third person singular endings have two allomorphs in the Western Mek languages, one occurring after vowels, the other after consonants. The postconsonantal allomorph contains the augment pWM *-a, replaced in Eipo by *-e*, which is presumably a loan from the neighboring Eastern Mek language Ketengban. It is doubtful whether the augment can be projected to Proto-Mek and I forbear from doing

that here. I tentatively reconstruct pMek *-(V)n 1SG and *-(V)l 3SG assuming that, while the postvocalic allomorph was pMek *-n 1SG and *-l 3SG as in the Western Mek languages, the postconsonantal allomorph was this consonant preceded by a vowel, as in the first and third person plural endings pMek *-(a)b 1PL and *-(a)ŋ 3PL.

In the third person dual and plural there is a discrepancy between the reflexes in Kimyal and Yale, on the one hand, and Nalca and Eipo, on the other. Kimyal and Yale have the endings *-daŋ* 3DU and *-aŋ* 3PL, Nalca and Eipo have *-dak* 3DU and *-ak* 3PL. The discrepancy between the final consonants in these Western Mek languages cannot be resolved phonologically. As the pEM forms *-rɪŋ 3DU and *-ŋ 3PL match the reflexes of Kimyal and Yale, we can reconstruct *-daŋ 3DU and *-(a)ŋ 3PL to Proto-Mek. Nalca and Eipo irregularly changed the final consonant of these endings from *ŋ* to *k*, perhaps under the influence of the similar far past tense endings pWM *-dek 3DU and *-ek 3PL (cf. Table 1). As in the far past tense, the present tense endings pMek *-dom 2DU and *-lom 2PL would have become homonymous in the Eastern Mek languages following the sound laws. To avoid such an outcome, the second person dual form was reduplicated. Again, Ketengban has replaced the first *ʊ with *e* in analogy with the third person dual ending (*-reŋ* 3DU : *-ŋ* 3PL = *-rerum* 2DU : *-rum* 2PL).

The paradigm of verb forms I term “hortative” here, following the label Heeschen (1998) gave to the Eipo reflexes, has been given different names in different Mek languages. In Kimyal and Yale it is called a “future tense”, but Heeschen (1992:27) adds that “the forms of the remote future are also used for a polite imperative” in Yale. In Nalca, Rule, Rule & Cutting (1972:26, 46) treat the first and the third person forms as a future tense but the second person forms as an imperative. The functions are presumably similar to those in Yale and can often be rendered with ‘let’s’ in the first person non-singular and ‘let him/them’ in the third person. The Eipo hortative mood is characterized as follows by Heeschen (1998:257): “The feature “voluntative” appears in the first person singular, dual, and plural. The second persons form a polite imperative, …”. No description of the uses of the “immediate imperative” is available for Una. The Ketengban “customary present tense” (Fowler et al. 1972:39) is presumably a further development of the future tense function. Apart from Ketengban, where a semantic change must have taken place, the functions of the hortative mood seem to be roughly comparable between the Mek languages despite the different labels.

The first and the third person singular endings pMek *-nun 1SG and *-lul 3SG of the hortative mood are straightforwardly reflected in all six Mek languages for which we have morphological data (Table 3). The second person singular and plural forms are *-lulam* 2SG and *-lulom* 2PL in Yale. These forms are made up of *-lu* plus the present tense endings *-lam* 2SG and *-lom* 2PL (cf. Table 2). I take these endings to be old, inherited at least from Proto-Western Mek. pWM *-lulom 2PL is also reflected in the other Western Mek languages, but Yale *-lulam* 2SG has no exact counterpart in any other Western Mek language. Eipo *-ljam* 2SG is a different formation, to be discussed below. The form *-lɔm* 2SG, attested in Kimyal and Nalca, might be a contraction of pWM *-lulam 2SG. The pEM form *-rʊm 2SG, too, may be a contraction of *-lulam 2SG, but whereas the elimination of the second vowel *a had the effect of lowering the first vowel *u in Kimyal and Nalca *-lɔm* 2SG to *ɔ*, no such effect can be observed in pEM *-rʊm 2SG. The second person plural ending *-rum* of Ketengban, in turn, may be a contraction of *-lulom 2PL. However, as there are no uncontracted reflexes either for the second person singular or for the second person plural in Eastern Mek, I refrain from projecting the reconstructions pWM *-lulam 2SG and pWM *-lulom 2PL to Proto-Mek.

The first person dual ending pMek *-nunam is retained in Yale, Eipo, and Una. The Una reflex *-nʊnʊm* 1DU shows an assimilation of the second vowel to the first. Kimyal and Nalca have again contracted the ending, with concomitant lowering of the first vowel, to *-nɔm* 1DU. Ketengban has a contracted form *-num* 1DU, without vowel lowering. The second person dual ending pMek *-dudom is reflected by all languages. The first vowel in Ketengban *-rerum* 2DU has been changed to *e* as in the present tense and the far past tense (cf. Tables 1 and 2).

Table 3. Hortative mood

			1SG	**2SG**	**3SG**
1	pMek	hortative	*-nu-n		*-lu-l
2	pWM	hortative	*-nun	*-lulam	*-lul
3	Kimyal	future	-nun	-lɔm	-lul
4	Yale	future	-nun	-lulam	-lul
5	Nalca	future punctiliar (1, 3) / imperative (2)	-non	-lɔm	-lul
6	Eipo	hortative	-nun, [-njam]	[-ljam]	-lul
7	pEM	hortative	*-nʊn	*-rʊm	*-rʊr
8	Una	immediate imperative	-nʊn	-rʊm	-rʊr
9	Ketengban	customary present	-nun	-rum	-rur

	1DU	**2DU**	**3DU**	**1PL**	**2PL**	**3PL**
1	*-nu-nam	*-du-dom	*-du-daŋ	*-nu-b		*-nu-ŋ
2	*-nunam	*-dudom	*duda(ŋ,k)	*-nub	*-lulom	*nu(ŋ,k)
3	-nɔm	-durum	[-dugɔŋ]	[-gɔb]	-lulum	[-gɔŋ]
4	-nunam	-dudom	[-dukaŋ]	[-ukab]	-lulom	[-ukaŋ]
5	-nɔm	-rurum	-ruruk	-nob	-lulum	-nok
6	[-njam], -nunam	-durum	-durak	[-njab]	-lulum	[-njak]
7	*-nʊnʊm	*-rʊrʊm	*-rʊrʊŋ	*-nʊb		*-nʊŋ
8	-nʊnʊm	-rʊrʊm	-rʊrʊŋ	-nʊb	-darʊt	-nʊŋ
9	-num	-r[e]rum	[-renuŋ]	-nup	-rum	-nuŋ

The reconstruction of the third person dual is less obvious than that of the first and the second person dual. Assuming that it had the same composition as the second person dual form, namely *du plus the corresponding ending of the present tense, leads to the

postulation of pMek *-dudaŋ 3DU. This proto-form is reflected by Una *-rʊrʊŋ*, which assimilated the second vowel to the first like the first person dual form *-nʊnʊm* < *-nunam. The Ketengban ending *-renung* 3DU is an analogical re-formation. It is made up of *-re* plus the ending of the third person plural (hortative *-renuŋ* 3DU : *-nuŋ* 3PL = present *-reŋ* 3DU : *-ŋ* 3PL). Nalca and Eipo have *-ruruk* 3DU and *-durak* 3DU, respectively, with final *k* instead of *ŋ*. The same deviation occurs in the present tense endings *-rak* 3DU and *-dak* 3DU while Kimyal and Yale preserved the original ending *-daŋ* 3DU. Whatever the reason for the replacement of final *ŋ* with *k* in Nalca and Eipo may be, it applies equally to the present tense and the hortative mood.

The third person dual as well as the first person and the third person plural endings of Kimyal and Nalca are aberrant; they cannot be derived from the Proto-Mek reconstructions given in Table 3. Presumably, they are intrusions from a different paradigm containing a tense/aspect marker *-(u)g^{w}a > Kimyal *-gɔ*, Yale *-uka*. The third person dual form *-dug^{w}aŋ > Kimyal *-dugɔŋ*, Yale *-dukaŋ* is in all likelihood a contamination with the old form *-dudaŋ 3DU, otherwise it is hard to explain its initial *d-. This *d- marks dual number and belongs together with the final part *-aŋ of the ending, but here these person-number formatives are interrupted by the former tense/aspect marker *-ug^{w}a. The first and the third person plural forms are made up of the innovative suffix *-(u)g^{w}a and the present tense endings *-ab 1PL and *-aŋ 3PL, respectively. The presumptive tense/aspect marker *-(u)g^{w}a does not recur in another function in either Kimyal or Yale, but it has a possible cognate in the Eastern Mek future marker pEM *-k^{w}a > Una *-ku* (near future), *-kw[-am]* (remote future), Ketengban *-ko* (today future), *-k[-am]* (far future).

No matter whether the explanation given above of the Kimyal and Yale first and third person plural endings is correct, it is clear that these endings are innovations. They have no counterpart in any other Mek language. In fact, the only Western Mek language that has endings matching those of the Eastern Mek languages is Nalca. From Nalca *-nob* 1PL and pEM *-nʊb 1PL we can reconstruct pMek *-nub 1PL. The third person plural form Nalca *-nok* shows final *k*, like the third person dual form discussed above. I presume that, if this ending were attested in Kimal and Yale, it would show final *ŋ* like Proto-Eastern Mek *-nʊŋ 3PL. For this reason, I reconstruct pMek *-nuŋ 3PL.

In addition to the hortative paradigm, Eipo has an immediate future paradigm which is a regularized version of the original hortative paradigm (Heeschen 1998:254). It is composed of the tense marker *-nu* followed by the present tense endings. In other words, the fused tense/aspect marker, which varied between *-nu, *-lu, and *-du in the original hortative mood, was leveled to *-nu* in the immediate future paradigm. The Eipo hortative mood paradigm is a mixture of inherited and innovated forms. The innovative forms have been imported from the immediate future paradigm. The first and the third person plural forms *-nujab* and *-nujak* of the immediate future tense had the contracted versions *-ŋjab* 1PL and *-ŋjak* 3PL. These contracted forms came to replace the inherited hortative mood forms. By analogy, the similar endings *-ljam* 2SG and *-ŋjam* 1DU were formed, the former replacing inherited *-lulam*, the latter standing beside inherited *-nunam*. The variant *-ŋjam* for the first person singular is surprising. It is identical with the first person dual form, which seems to have been extended to the singular number. One wonders if Eipo women had the habit of referring to themselves in the dual number when they had a baby, a custom Pilhofer (1933:109) described for the speakers of the Finisterre-Huon language Kâte.

2.3 Near past tense and potential mood

The near past tense and the potential mood are treated together because they are formally related. The endings of the potential mood are made up of a mood marker plus the original endings of the near past tense. This will be discussed after the reconstruction of both paradigms. The near past tense stands between the present tense and the far past tense and covers the time period not covered by those tenses. In Nalca, it is used of events that happened on the day prior to the day of speaking (Rule, Rule & Cutting 1972:43), in Eipo it includes one to four or seven days before the time of speaking (Heeschen 1998:257), in Una it covers the time from eight to 48 hours ago (Louwerse 1988:38), and in Ketengban it extends two or three days into the past (Fowler et al. 1972:33). In Yale, the time span covered is much longer, reaching from yesterday to approximately two years ago (Heeschen 1992:27). The wider extension of the near past tense in Yale, which is much longer than the time span that must be reconstructed for Proto-Mek, seems to be due to areal influence from the neighboring Dani language Yali. Yali has three past tenses (Fahner 1979:46-57). The first past tense is used for events having happened earlier today, the second past tense extends from yesterday to several years ago, and the third past tense covers the remote past, i.e. it is used to report deeds done by the ancestors and mythical events. Bilingual Yale speakers must have identified the Yale near past tense with the Yali second past tense. As a result, the time span covered by the Yale near past tense was considerably extended beyond its inherited value.

Table 4. Near past tense

			1SG	**2SG**	**3SG**
1	pMek	near past	*-no	*-om	*-o
2	pWM	near past	*-no	*-om	*-o
3	Kimyal	recent past	-no	-om	-o
4	Yale	near past	-no	-om	-o
5	Nalca	near past punctiliar	-no	-om	-o
6	Eipo	past II	-nw[-e]	-um	-o, -w[-e]
7	pEM	near past	*-nʊ	*-ʊm	*-ʊ
8	Una	regular past complete	[-ne]	V-m[-a], C-ʊm[-a]	V-w, C-w[-a]
9	Ketengban	near past	-nu	-[m]um	-u

	1DU	2DU	3DU	1PL	2PL	3PL
1	*-nomo	*-dom	*-doŋ(o)	*-obo	*-om	*-oŋ(o)
2	*-nom(o)	*-dom	*-doŋ	*-ob(o)	*-om	*-oŋ
3	-nom	-dom		-ob		-oŋ
4	-nomo	-dom	-doŋ	-obo	-om	-oŋ
5	-num	-rum	-roŋ	-ub	-[l]um	-oŋ
6	-num	-dum	-duŋ	-(u)p[-e]	-[l]um	-uŋ
7	*-nʊm(ʊ)	*-[rʊ]rʊm	*-rʊŋʊ	*-ʊbʊ	*-[r]ʊm	*-ʊŋʊ
8	-nʊm[-a]	-rʊrʊm[-a]	-rʊŋw[-a]	V-bw[-a], C-ʊbw[-a]	[V-ndaw, C-daw]	V-ŋw[-a], C-ʊnw[-a]
9	-numu	-r[e]rum	-r[e]ŋu	-pu	-rum	-ŋu

The whole near past tense paradigm can be reconstructed to Proto-Mek (Table 4). The first person singular ending pMek *-no is reflected by all languages except Una. The aberrant vowel of Una *-ne* is hard to explain. Conceivably, this is a relic form preserving the *e*-vocalism of the original near past tense endings (see below). In Eipo, the augment vowel *-e* has been attached to the endings of the first and the third person singular as well as the first person plural, and in Una the augment vowel *-a* is attached to nearly all forms of the paradigm. In the second person singular, the continuous aspect form *-mum* has replaced the inherited ending *-um* in Ketengban, much like in the far past tense (cf. § 2.1). Apart from this, all languages retain pMek *-om 2SG. The third person singular ending pMek *-o is reflected by all languages without exception.

The first person dual and plural endings pMek *-nomo and *-obo are attested in all languages though the final vowel *o* is only retained in Yale and Ketengban and partly in Una. It is not known why the vowel drops in the other languages. In the third person dual and plural, pMek *-doŋ(o) and *-oŋ(o), the Eastern Mek languages reflect final *o* whereas such a vowel is absent in the Western Mek languages. The second person dual ending was pMek *-dom, as witnessed by the Western Mek languages. The Eastern Mek languages show a reduplication of the ending like in the far past tense (cf. Table 1) and the present tense (cf. Table 2). In Ketengban, the first syllable pEM *-rʊ of the second and the third person dual endings has been replaced with *-re* in analogy with the far past and the present tense. The ending of the second person plural seems at first sight to have been pMek *-lom, reflected in Nalca, Eipo, and Ketengban. However, a look at the potential mood form pMek *-t-om 2PL (cf. Table 5), which preserves the original ending *-om, suggests that Yale *-om* is a relic form. Unfortunately, the Kimyal second person plural form is not attested in the data. The form *-lum* in Nalca and Eipo and the form *-rum* in Ketengban were transferred from the far past tense and the present tense paradigms.

The descendants of the Proto-Mek potential mood have been given different names which seem to reflect partly different functions. For Yale, Heeschen (1992:27) states: “The potential mood expresses wishes, something longed for or imagined, or it is used in conditional sentences”. Rule, Rule & Cutting (1972:59) only observed a desiderative function in Nalca. The optative mood of Eipo has much the same functions as the potential mood of Yale (Heeschen 1998:258). The Ketengban abilitative mood is used to speak about something that can or cannot be done (Fowler et al. 1972:40). The same function

has been observed in Una (Louwerse 1988:27). In addition, the same forms can have a desiderative function (Louwerse 1988:33). The Una paradigm is only fragmentarily attested and no related forms can be found in the Kimyal dictionary.

In several languages the augment vowel has been attached to some or all of the forms of the potential mood. In Nalca, the augment *-a* is found in the first person singular and the first person plural. In Eipo, the augment *-e* is found in all three first person forms as well as in one variant of the third person form. In Una, the augment *-ɪ* occurs in two of the three attested forms and in Ketengban all forms of the paradigm are suffixed with the augment *-e*.

The first person singular ending pMek *-tene is reflected by all languages. The second vowel *e is replaced by the glide *j* in the languages that attach an augment vowel. The second and the third person singular endings pMek *-tom and *-to are retained in Yale, Eipo and Ketengban. Nalca has introduced a third person singular ending *-si*, which is the mood marker *-si* plus a zero person-number suffix. In the second person singular and the second person plural, Nalca has formed new endings consisting of the mood marker *-si* and the person-number formatives *-lim* 2SG and *-lum* 2PL. These formatives come from the present tense (cf. Table 2). The first person dual ending pMek *-teneme is reflected by all languages in which this form is attested. In the second and the third person dual, Ketengban has the endings *-retum-e* and *-reteŋj-e* starting with *-re* like all endings of these two categories in all tense/mood paradigms. It seems that the first two consonants of the inherited forms *-terum-e 2DU and *-tereŋj-e 3DU were metathesized to make them conform to the general shape of these endings. In the second person dual, the Una ending *-tʊ-rʊrʊm*, with reduplication of the person-number component like in all other tenses and moods and with assimilation of the vowel of the mood marker to that of the person-number component, corresponds to the forms of the Western Mek languages and allows the reconstruction of pMek *-tedom. The first person plural ending pMek *-tebe is reflected by all languages. The second person plural ending pMek *-tom is identical with the ending of the second person singular. In the third person plural, there is a small disagreement between the Western and the Eastern Mek forms. A final vowel is reflected in pEM *-tɪŋɪ but not in pWM *-teŋ.

Table 5. Potential mood

			1SG	**2SG**	**3SG**
1	pMek	potential	*-te-ne	*-t-om	*-t-o
2	pWM	potential	*-tene	*-tom	*-to
4	Yale	potential	-sene	-som	-so
5	Nalca	desiderative	-sinj[-a]	[-silim]	[-si]
6	Eipo	optative	-tinj[-e]	-tum	-to, -tw[-e]
7	pEM	abilitative	*-tɪnɪ	*-tʊm	*-tʊ
8	Una	abilitative, desiderative	-tɪnj[-ɪ]		
9	Ketengban	abillitative	-tenj[-e]	-tum[-e]	-tu[-e]

	1DU	**2DU**	**3DU**	**1PL**	**2PL**	**3PL**
1	*-te-neme	*-te-dom		*-t-ebe	*-t-om	*-t-eŋ(e)
2	*-teneme	*-tedom	*-tedeŋ	*-tebe	*-tom	*-teŋ
4	-seneme	-sedom	-sedeŋ	-sebe	-som	-seŋ
5	-sinim	-sirum	-siriŋ	-sibj[-a]	[-silum]	-siŋ
6	-tenimj[-e]	-turum, -terum	-teriŋ	-teibj[-e]	-tum	-tiŋ
7	*-tınımı	*-tʊ[rʊ]rʊm		*-tıbı	*-tʊm	*-tıŋı
8		-tʊrʊrʊm		-tɛjbj[-ɪ]		
9	-tenemj[-e]	[-retum-e]	-reteŋj[-e]	-tepj[-e]	-tum[-e]	-teŋj[-e]

The endings of the potential mood are made up of a mood marker *-t(e) and person-number formatives that recall the endings of the near past tense (cf. Table 4). However, the first person forms and the third person dual and plural forms of the person-number formatives of the potential mood differ in their vocalism from the endings of the near past tense, e.g., potential mood *-ne 1SG, *-neme 1DU, and *-ebe 1PL versus near past *-no 1SG, *-nomo 1DU, and *-obo 1PL. Turning to internal reconstruction, we can derive the present-day near past tense endings from the forms preserved in the potential mood. Under this assumption, the near past tense endings underwent a change caused by the suffixation of *-o. This vowel, which may etymologically have been the third person singular ending, elided the final vowel of the forms with *e*-vocalism and then umlauted the *e* of the penultimate syllable, thereby creating consonantally identical forms with *o*-vocalism. The three second person endings already had *o*-vocalism in the original paradigm preserved in the potential mood. Remarkably, there is no hint in the near past tense forms given in Table 4 that a final vowel *o* was attached to them. That the second person singular ending and the second person plural ending of the potential mood are identical is an archaism in my view, confirmed by the Yale near past tense relic form *-om* 2PL (cf. Table 4). The original second person singular as well as plural ending of the near past tense was pMek *-om.

2.4 Medial verb

Beside the tense- or mood-inflected verb forms we have studied so far, occurring at the end of a sentence, there is also a set of sentence medial verb forms. They occur in a clause preceding the final clause of a sentence and are only inflected for aspect, person, and number. The sentence final verb usually is in the present or future tense. The medial verb can carry connectives or a marker of successivity, like Una *-ijɪ* in the forms given in Table 6. No medial verb forms have been found in the data for Kimyal and Ketengban.

Table 6. Medial verb

			1SG	2SG	3SG
1	pMek	medial	*-ne	*-men	*-le
2	pWM	medial	*-ne	*-men	*-le
4	Yale	medial	-ne	-men	-le
5	Nalca	sequence punctiliar	-nj[-a]	-men	-lj[-a]
6	Eipo	medial	-nj[-e]	-min	-lj[-e]
7	pEM	medial	*-nɪ	*-mɪn	*-rɪ
8	Una	successive	-n[-iɟɪ]	-mɪn[-cɪ]	-d[-iɟɪ]

	1DU	2DU	3DU	1PL	2PL	3PL
1	*-neme			*-ebe	*-mun	
2	*-neme	*-dumun	*-dek	*-(e)be	*-mun	
4	-neme	-dumun	-dek	-be	-mun	-ek
5	-nim	-rumun	-rikj[-a]	-bj[-a]	-mun	-ija
6	-nimj[-e], neme	[-dumin], -dumun	-dik	-eibj[-e]	-mun	-ik
7	*-nɪmɪ		*-rɪŋɪ	*-ɪbɪ	*-mʊn	*-ɪŋɪ
8	-nɪm[-iɟɪ]	-dʊrʊm[-cɪ]	-dɪŋ[-iɟɪ]	-ɪb[-iɟɪ]	-mʊn[-cɪ]	-ɪŋ-iɟɪ

A paradigm with gaps can be reconstructed for the Mek medial verb (Table 6). Some of the Nalca endings are suffixed with the augment *-a* and some of the Eipo endings with the augment *-e*. Subtracting this secondary accretion, we can reconstruct pMek *-ne 1SG and *-le 3SG. While these endings are similar to the present tense endings, the second person forms pMek *-men 2SG and *-mun 2PL are distinctive of the medial verb. In the second person dual, the Western Mek languages have the distinctive ending pWM *-dumun, but there is no corresponding Eastern Mek form. Presumably, Una has replaced it with the general second person dual ending *-rʊrʊm*. The first person dual ending pMek *-neme and the first person plural ending pMek *-ebe are reflected by all languages for which we have data. They are identical to the person-number formatives of the potential mood. The third person dual and plural endings are difficult to evaluate. The Proto-Western Mek ending *-dek 3DU, reflected in Yale and Eipo, is identical with the corresponding far past tense ending (cf. Table 1), but Una *-dɪŋ-* 3DU rather resembles the corresponding present tense ending (cf. Table 2). For the third person plural, parallel and equally mismatching endings pWM *-ek and pEM *-ɪŋɪ might be postulated, but the Nalca form *-ij[-a]* 3PL poses an additional problem. This ending cannot be derived from pWM *-ek and it is unclear where it might come from. For these reasons, I refrain from reconstructing Proto-Mek endings of the third person dual and plural.

As we have seen in §2.1 to §2.4, the Mek languages have six sets of subject-indexing suffixes that can be combined into four diachronically different sets. Two of the

synchronic sets, the hortative mood and the potential mood, arose through the fusion of a tense/aspect marker with a set of subject-indexing suffixes. The object-indexing suffixes cannot be inserted between the mood marker and the subject-indexing suffixes of the hortative and the potential mood as they can in the case of regular tense/aspect markers. Some of the same or similar suffixes for certain person-number combinations recur in different sets. But most sets also have some distinctive forms. Thus, the endings *-si 1SG and *-ok 3SG only occur in the far past tense, the endings *-o 3SG and *-om 2SG and 2PL are characteristic of the near past tense and the potential mood, and the endings *-men 2SG and *-mun 2PL are distinctive of the medial verb. The present tense and the hortative mood have some endings with distinctive vocalism but whose consonants recur in other categories, e.g. *-lam 2SG, *-nam 1DU, and *-daŋ 3DU. This leads over to forms that recur in two or more categories, like *-ebe 1PL (potential mood and medial verb) or *-dom 2DU (present tense and hortative mood as well as near past tense and potential mood). This pattern of distinction, similarity, and syncretism speaks for a long formation history of the Mek subject inflections.

3. The personal pronouns of the Mek languages and of Momuna

There is another set of person-number composites in the Mek languages, the free personal pronoun. Whereas the subject inflections of the verb are obligatory, the personal pronouns in subject function are optional in the clause. They agree with the subject inflections in person and number. In contradistinction to the subject inflections, which show three number categories, the personal pronoun is limited to singular and plural forms; there is no dual number. The personal pronouns are more widely attested than the subject inflections. In addition to the six languages for which there is morphological data, some, albeit not all, personal pronouns are attested for Sela (Godschalk 1984) and Nipsan (Wälchli 2020). The reconstruction of the Proto-Mek personal pronouns profits from a consideration of Momuna, a language spoken to the southwest of the Mek languages. Usher (2021c) has shown that Momuna is the nearest relative of the Mek languages by reconstructing shared vocabulary and determining the sound correspondences. He calls the common ancestral language Proto-Momuna-Mek (pMM).

The personal pronouns of Momuna and the Mek languages are juxtaposed in Table 7. In the first person singular there is a straightforward match between Momuna *nà* and pWM *na. This suggests that Una *nî* 1SG and Ketengban *ne* 1SG have changed their vowel. The change is not a regular phonological change. Rather, it came about through suffixation with the optional ergative marker pEM *-di. This suffix induced umlaut in the root vowel of the pronoun: *na-di > pEM *nɪ-di. Eventually, the umlauted vowel was transferred to the unsuffixed form of the pronoun. The same effect can be observed in the third person singular. But here, not only the Eastern Mek languages show umlaut but also several Western Mek languages. The original vowel of Proto-Mek *al 3SG is only preserved in Kimyal and Nalca. In fact, Kimyal has both the unaffected form *al* without suffixation and the umlauted form *eil-* with suffixation. In Yale, Nipsan, and Eipo the umlauted form *el* 3SG has replaced the original form *al 3SG. The optional ergative suffix pMek *-di, which plays a crucial role in this sporadic sound change, has been preserved unchanged in Yale *-di* (Heeschen 2000:765) and Ketengban *-di* (Fowler et al. 1972:20). It has a probable cognate in Momuna *-re*, glossed as “agent” by Reimer (1986).

Table 7. Momuna-Mek personal pronouns

	1SG	**2SG**	**3SG**	**1PL**	**2PL**	**3PL**
pMM	*na	*kɒn			*kun	*tun
Momuna	nà	kɔ̀	mɔ̀	ìN	kuN	tùN
pMek	*na	*kan	*al	*nun	*kun	*sun
pWM	*na	*an	*al[-di]	*nun	*[a(n)-] kun	[*sik]
Kimyal	na	àn, en-	al, eil-	nun	aʔun	sig
Sela	na	an			haun	
Yale	na (1)	an (2)	el (1)	nu(n)	ʕaun (2)	sikin (2), [sin (2)]
Nipsan	na	an	el		aun	sik
Nalca	na	an	al	nu	ugun	sik
Eipo	na	an	el	nun	angun	sik
pEM	*nɪ[-di]	*kan	*ɛr[-di]	*nun	[*sun]	*sun
Una	nî	kân	ɛ̂r	nŭn	sûn	sŭn
Ketengban	ne	kan	er	nun	sun	sun

For the second person singular, *kɒn can be reconstructed to Proto-Momuna-Mek, reflected by *kɔ̀* in Momuna and by *kan in Proto-Mek. The third person singular form Momuna *mɔ̀* does not match pMek *al, discussed above. Likewise, the first person plural form Momuna *ìN* and pMek *nun mismatch. I should mention that the Kimyal dictionary (Young 1986) records two first person plural forms, the exclusive form *nun* given in Table 7 and an inclusive form *nùn*, but such an opposition has no parallel in any of the other Mek languages. In the second person plural, the match between Proto-Western Mek and Momuna leading to the reconstruction of pMM *kun is not immediately obvious. The Eipo reflex *angun* 2PL, with the unusual consonant cluster [ng] in its middle (Heeschen 1998:120), gives away the historical composition of this pronominal form in the Western Mek languages. The original second person plural pronoun pMM *kun, directly attested in Momuna *kuN*, was reinforced by the second person singular pronoun pWM *(k)an. The resulting form *an-kun fused to a single morpheme and all Western Mek languages except Eipo simplified the internal consonant cluster by eliminating the nasal *n* of *an-. The Eastern Mek languages replaced pMM *kun 2PL with the third person plural form pEM *sun. There is now a tonal difference in Una between *sûn* 2PL (with falling tone) and *sŭn* 3PL (with rising tone), a secondary differentiation. The Proto-Eastern Mek third person plural form *sun matches Momuna *tùN* 3PL so that we can reconstruct pMM *tun 3PL. The Proto-Western Mek third person plural form *sik is an innovation.

If we compare the Proto-Mek personal pronouns reconstructed in Table 7 with the subject inflections reconstructed in §2, we only find sporadic similarity. Notably the first person singular personal pronoun pMek *na has the same consonant as all tenses or moods except for the far past tense: present tense pMek *-(V)n 1SG, near past tense pMek *-no 1SG,

medial verb pMek *-ne 1SG. Furthermore, the third person singular personal pronoun pMek *al has the same consonant as the present tense (pMek *-(V)l 3SG) and the medial verb (pMek *-le 3SG). The remaining personal pronouns are completely different from any of the corresponding subject-indexing endings. It is not known whether there is an etymological connection between the similar pronominal and verbal first person and third person singular forms. But it is clear that the subject inflections as a whole cannot be derived from the personal pronouns. They did not come into being by way of the encliticization of the personal pronouns in the reconstructible past. In the case of the dual number, there are not even any corresponding personal pronoun forms.

4. Conclusions

The Mek languages share six different sets of subject-indexing suffixes, which cannot be reduced to a single set diachronically. The subject person-number inflections show allomorphy across different tenses and moods ranging from vocalic alternation to suppletion. Such a diversified system of subject inflections does not arise within a generation or two. Rather, at least some of the Mek subject inflections appear to be of great antiquity. This impression is confirmed by a faint echo in a far-away language (Table 8).

Table 8. Similar subject inflections in Proto-Mek and Mombum

		1SG	2SG	3SG	1PL	2PL	3PL
Proto-Mek	near past	*-no	***-om**	***-o**	*-obo	***-om**	*-oŋ(o)
Mombum	hesternal past	-ew	**-em**	**-e**	-em	**-em**	-e

Mombum is spoken on Komoran Island in the south of Papua Province and belongs to the Asmat-Muli language family (Usher and Suter 2020). Its verb morphology has been described by Drabbe (1950:564). In Table 8, the hesternal past tense endings of Mombum are put next to the singular and plural endings of the Proto-Mek near past tense. We note a similarity between three forms: the second person singular, the third person singular, and the second person plural. The forms of the second person singular and plural have the sound shape *-Vm* in Proto-Mek as well as in Mombum. Note that whereas the first person singular and plural forms are different from each other in both languages, the second person forms of both numbers are homonymous. The third person singular ending has the same vowel as the second person endings but lacks a final consonant. This similarity in three of six forms may of course be coincidence. It is, however, remarkable enough to make one suspect that it is a signal of a common origin. That there is a remote genealogical relationship between the Mek and the Asmat-Muli languages has also been suggested by proponents of the Trans-New Guinea hypothesis (Pawley and Hammarström 2018).

Morphology may not only preserve information about ancient linguistic relationships but it can also give clues about subgrouping. The Mek languages are closely related and have a lot of their morphology in common. This is fertile ground for the genesis of shared innovations. In fact, the person-number composites we studied in §2 and §3 reveal numerous innovations, listed below in (7) to (18). The lion's share of these innovations suggests that Una and Ketengban form a subgroup against the remaining languages. A primary division of the Mek languages into an Eastern Mek subfamily and a Western

Mek subfamily was presupposed throughout this paper. The following nine morphological innovations support it. Innovations (7) to (11) are shared by the two Eastern Mek languages, Una and Ketengban. Innovation (12) is shared by the Western Mek languages, though we lack the relevant data point for Sela. In the case of innovations (13) to (15), either the Eastern Mek or the Western Mek languages have innovated, but it is not entirely clear which subfamily is innovative and which is conservative. Together, the innovations (7) to (15) support the conclusion that the primary genealogical division within the Mek language family is that between the Eastern Mek languages (Una and Ketengban) and the Western Mek languages (Kimyal, Sela, Yale, Nipsan, Nalca, and Eipo).

(7) far past 3DU pMek *-dek > pEM *-re[ɪ] (Table 1)
(8a) present 2SG pMek *-lam > pEM *-rɪm[-ɪ] (Table 2)
(8b) present 1DU pMek *-nam > pEM *-nɪm[-ɪ] (Table 2)
(8c) present 3DU pMek *-daŋ > pEM *-rɪŋ[-ɪ] (Table 2)
(9a) far past 2DU pMek *-dum > pEM *-[rʊ]rʊm (Table 1)
(9b) present 2DU pMek *-dom > pEM *-[rʊ]rʊm[-ɪ] (Table 2)
(9c) near past 2DU pMek *-dom > pEM *-[rʊ]rʊm (Table 4)
(10) pronoun 1SG pMek *na replaced by pEM *nɪ (Table 7)
(11) pronoun 2PL pMek *kun replaced by pEM *sun (Table 7)
(12) pronoun 3PL pMek *sun replaced by pWM *sik (Table 7)
(13) far past 2SG pMek *-(l)um > pWM *-lum, pEM *-ʊm (Table 1)
(14a) near past 3DU pMek *-doŋ(o) > pWM *-doŋ, pEM *-rʊŋʊ (Table 4)
(14b) near past 3PL pMek *-oŋ(o) > pWM *-oŋ, pEM *-ʊŋʊ (Table 4)
(15) medial verb 3DU pWM *-dek, pEM *-dɪŋɪ (Table 6)

The innovation in (7) is that the Eastern Mek languages added the third person plural ending *-ɪ to the regular reflex of the third person dual far past tense ending pMek *-dek. The Proto-Mek present tense endings in (8a) through (8c) contain the vowel *a. This vowel was changed to *ɪ in the Eastern Mek languages owing to umlaut induced by the augment pEM *-ɪ. In the three cases combined under (9), the second person dual ending pMek *-dum or *-dom was extended to pEM *-rʊrʊm through a reduplication of the first syllable. The first person singular pronoun pMek *na in (10) was umlauted to pEM *nɪ because of its frequent co-occurrence with the ergative suffix *-di. The second person plural pronoun pMek *kun in (11) was replaced by the third person plural pronoun pEM *sun, and the third person plural pronoun pMek *sun in (12) was replaced by pWM *sik, whose origin is unknown. The latter is the only clear case of a shared innovation of the Western Mek languages. The innovations in (13) to (15) cannot be attributed to either or the other subgroup with confidence. It is hard to tell whether the far past tense second person singular ending pWM *-lum or pEM *-ʊm in (13) is innovative, but one of them must be an innovation. Similarly, the near past tense third person dual and plural endings are pWM *-doŋ 3DU and *-oŋ 3PL, but the Proto-Eastern Mek reflexes *-rʊŋʊ 3DU and *-ʊŋʊ 3PL show an additional final vowel whose age is uncertain. In the medial verb in (15), it is unclear whether the third person dual form pWM *-dek or pEM *-dɪŋɪ must be projected to Proto-Mek.

There are also a few innovations within the Western Mek family, presented in (16) to (18). Unfortunately, we only have morphological data for four of the six Western Mek languages; it is not known whether the innovations extend to Sela or Nipsan. Innovation (16) singles out Kimyal and Yale, innovation (17) connects Nalca and Eipo. The two innovations are therefore complementary, suggesting that Kimyal and Yale belong to one

subgroup and Nalca and Eipo to another. However, innovation (18) crosscuts this division, uniting Kimyal with Nalca.

(16a) hortative 3DU pMek *-dudaŋ replaced by Kimyal *-dugɔŋ*, Yale *-dukaŋ* (Table 3)
(16b) hortative 1PL pMek *-nub replaced by Kimyal *-gɔb*, Yale *-ukab* (Table 3)
(16c) hortative 3PL pMek *-nuŋ replaced by Kimyal *-gɔŋ*, Yale *-ukaŋ* (Table 3)
(17a) present 3DU pMek *-daŋ replaced by Nalca *-rak*, Eipo *-dak* (Table 2)
(17b) present 3PL pMek *-(a)ŋ replaced by Nalca *-ak*, Eipo *-ak* (Table 2)
(18a) hortative 2SG pWM *-lulam contracted to Kimyal *-lɔm*, Nalca *-lɔm* (Table 3)
(18b) hortative 1DU pWM *-nunam contracted to Kimyal *-nɔm*, Nalca *-nɔm* (Table 3)

Innovation (16) is unusual and therefore particularly significant. A former tense/aspect marker *-(u)g^{w}a intruded into the hortative paradigm and replaced the inherited forms in the third person dual and the first and the third person plural (16a–c). The complementary innovation (17), in which the final consonant of the present tense third person dual and plural endings is replaced, is probably an analogical change. The cross-cutting innovation (18) is a contraction of disyllabic to monosyllabic endings. It is not unique to Kimyal and Nalca, but a similar contraction can also be observed in the first person dual form of the hortative mood in Ketengban (*-num* replaces pMek *-nunam 1DU) and probably also in the second person singular form of both Una and Ketengban. Hence the contraction took place twice independently, in the Eastern Mek family and in the Western Mek family. It is not far-fetched to assume that the contraction happened not only twice but three times independently, in Eastern Mek, in Kimyal, and in Nalca. Consequently, innovation (18) has no significance for subgrouping.

Shared morphological innovations are among the best indicators of the structure of a genealogical tree. The subject inflections and the personal pronouns of the Mek languages display a number of innovations that are not due to regular phonological change. Several of them are shared by the Eastern Mek languages and one is shared by the Western Mek languages. This is strong evidence that the primary division within the Mek family separates the Eastern Mek languages Una and Ketengban from the remaining languages, which form the Western Mek subfamily. The evidence for subgrouping Western Mek is weaker and does not include all languages because of a lack of data. There is a striking innovation uniting Kimyal and Yale and another one shared by Nalca and Eipo. These four languages appear therefore to belong to two different subfamilies. Further studies, not least of the lexicon, must confirm this division and find a place for Sela and Nipsan before it can be considered established.

Abbreviations

DU	dual	PL	plural
DUR	durative aspect	pMM	Proto-Momuna-Mek
ERG	ergative	PRS	present tense
F.PST	far past tense	pWM	Proto-Western Mek
INCOMP	incomplete aspect	SG	singular
OBJ	object	SUBJ	subject
pEM	Proto-Eastern Mek		

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