Resulting States in Niuean*

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In this paper we examine the prefix *ma-* in Niuean, a Polynesian language. *Ma-* has been described in the literature as a prefix forming a participle, in particular, a passive participle. We argue that this is not the right characterization of *ma-* in addition, we demonstrate that *ma-* is not a stativizer either, nor a detransitivizer. Once we have ruled out so many possible functions, the true character of *ma-* is puzzling, but we hypothesize that verbs with *ma-* can be understood as expressing resulting states. While this hypothesis requires further testing, it has the advantage of being consistent with a fuller range of *ma-* examples than previous characterizations.

1. Introduction

Niuean is a Polynesian language, chiefly spoken in Niue and New Zealand, having close ties with Tongan, and more distant ties with Maori, Samoan, and Hawaiian. It is a VSO language with an ergative case marking system. It has isolating morphology with no inflection. There are some derivational morphemes: the ones relevant for this paper are transitivity-affecting prefixes and a robust reduplication system. On verbs, reduplication indicates iterativity, pluractionality, or intensity. Most of the data used in this research, and all of the examples in this paper are from the Niuean dictionary (Sperlich 1997). From the dictionary we developed a database containing approximately 220 relevant sentences.

This paper focuses on one of the transitivity-affecting prefixes, *ma-* A typical example of *ma-* is shown in (2), in contrast with (1) where we see the same verb without *ma-* The verb without *ma-* is transitive, whereas the one with the prefix is intransitive, with no agent expressed.¹

(1) Kua hēhē e ia e tāpulu he ita.
PERF tear ERG.P 3.SG ABS.C shirt because angry
“He tore his shirt because he was angry.”

(2) Kua mahēhē e tāpulu haaku ne tui.
PERF *ma-*tear ABS.C shirt 1.SG.GEN NONFUT wear
“The shirt I am wearing is torn.”

¹ Abbreviations used in this paper are as follows: ABS: absolutive, C: common, DIR: directional, ERG: ergative, EXCL: exclusive, GEN: genitive, GL: goal, LIG: ligature, NONFUT: nonfuture, P = proper, PERF: perfect, PERS: personal, PL: plural, PST: past, SBJV: subjunctive, SG = singular, 1: first person, 2: second person, 3: third person. Information about the meanings and uses of most of the morphemes can be found in Seiter (1980).

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Several scholars have commented on this morpheme. McEwen (1970) claims that *ma-* is a morpheme that turns a verb into a past participle or a passive counterpart of its original form. He also adds that sometimes it deletes outside agency, creating a notion of “a spontaneous happening” (McEwen 1970:170). Sperlich (1997) regards *ma-* as a morpheme that creates participles with diminished agentivity. He notes, however, that there are many idiosyncrasies where the expected participial reading is not found. Whittaker (1982) builds on McEwen’s observations and claims that *ma-* “transforms the verb into its appropriate past participle,” allowing a little more space for numerous idiosyncrasies. He suggests that these participles are frequently related to “scratches, chips, cracks, breakages, splits and the like”. Krupa (1982), takes a different view; in his examination of *ma-* across Polynesian languages, he claims that it is a morpheme that creates a stative result, but he does not elaborate on this statement. Our research supports Krupa’s characterization.

In summary, most authors consider *ma-* to be a participial prefix or a passive morpheme. In the next two sections, we argue neither of these is the correct characterization of this morpheme. We then go on to demonstrate that *ma-* also cannot be considered a detransitivizer, nor a stativizer. In Section 5 we will hypothesize that *ma-* expresses a resulting state.

2. *[ma-X] is not a Participle*

Participles are characterized as being deverbal in their syntactic and morphological characteristics, displaying characteristics in common with adjectives or nominals. They are non-finite in that they do not take tense morphology. Generally, they form compound verbs with auxiliaries, and they do not appear in the same position as verbs. In English, for example, participles, such as the progressive particle (with –*ing* (3.a)) and the passive and perfect participles (with –*ed* or –*en* (3.b), (3.c)) do not take inflection, and require auxiliary verbs. Participles generally do not appear in the same position as verbs; for example, in French, participles appear after negation (*pas*) rather than before it, as shown in (4.a) in contrast to (4.b).

(3)  a. He is running.
   b. It was eaten.
   c. She has sneezed.

(4)  a. Elle ne *mange* pas.
   “She doesn’t eat.”
   b. Elle n’a pas *mangé*.
   “She has not eaten.”

*[ma-X] does not have the characteristics of a participle, as *[ma-X]* parallels verbal behaviour exactly, being no less finite or verbal. No auxiliary is employed with *ma-* verbs. In the following examples the verb with and without *ma-* occurs in the same slot – between the TAM (Tense/Aspect/Mood) marker *kua* and the subject. This is the normal position for a verb in Niuean.

(5)  *Kua maniko e ulu haana he kona.*
    PERF *ma.*dazzle ABS.C head 3.SG.GEN because drunk
    “His head is giddy because he is drunk.”

(6)  *Kua niniko e tau mata he laā.*
    PERF dazzle ABS.C PL eye because sun.
    “The eyes are dazzled by the sun.”
A negative morpheme can appear between the TAM (which can be null) and the verb, as shown in (7), and in this too, the [ma-X] word patterns identically with verbs, as shown in (8).

(7) Nakai mafa'ai haana a gutu ke vagahau he mā.
   not ma.open 3.SG.GEN LIG mouth SBJV speak because shy
   “He didn’t open his mouth to speak because he was shy.”

(8) Nakai fagahuatia haana tau lima.
   not move.about 3.SG.GEN PL hand
   “His hands don’t move about.”

In addition, both verbs and [ma-X] words can undergo reduplication, a common process for verbs.

(9) a. aki “to take out”
    b. akiaki “to take out (plural)"
    c. maaki “to fall out”
    d. maakiaki “to fall out (plural)”

Another similarity is found in that [ma-X] can be modified by the same adverbs as a verb. For example, the adverb mitaki “well” appears in both (10) and (11). (12)-(13) shows that the directional particle atu “away from first person” can be employed equally with a bare verb, and a verb with ma-.

(10) Kua maueue mitaki e tau tino he tau fānau fifine he koli.
    PERF ma.move well ABS.C PL body GEN.C PL person female at dance
    “The girls kept swaying very well in their dancing.”

(11) kua nakai moui mitaki e futi…
    PERF not grow well ABS.C banana
    “Bananas don't grow well…”

(12) Maunuunu atu foki ka e nonofo a mautolu.
    ma.shift DIR again so sit ABS.P 1.PL.EXCL
    “Shift further over so that we can sit down!”

(13) ke fakagali atu ki a ia.
    SBJV please DIR GL.P PERS 3.SG
    “to please her”

While it is true that ma-words can modify nouns, as might be expected of participles, this is not an argument for participle status, as this is the case for regular verbs as well in Niuean (Sperlich 1997:16). This is due to the fact that generally, there is no clear part-of-speech “adjective” in Niuean, as verbs and adjectives are not clearly distinguished (if at all).

In summary, the parallels demonstrated above between regular verbs and ma-words indicate that lexical items with ma- do not display characteristics of participles. In fact, it is unclear what a ‘participle’ would be in a language without verbal inflection, and which makes no distinction between verbs and adjectives, which are expressed as stative verbs. We conclude from this that ma-
is simply a prefix that attaches to a verb to create a new verb, and that it does not form a distinct part of speech such as a participle.

3. $[ma-X]$ is not Passive

In addition to not forming a participle, -$ma$ is not a passivizing morpheme. The principal argument for this is that $ma$- can apply to unaccusative statives as in (14). The subject, an article of clothing, remains the subject in both (14) with $ma$- and (15), which shows the same verb without $ma$-.

In neither case is a patient promoted, nor is the agent demoted to an oblique status, as would be the case with passive. $Ma$- can also be prefixed to active intransitives (16) and even to nominals as in (17). This shows that the addition of $ma$- need not change transitivity or suppress an agent, the two characterizing effects of passivization.

(14) Kua mafege e lima he tāpulu ne tuitui.  
PERF $ma$.crinkly ABS.C sleeve GEN.C shirt NONFUT sew  
“The sleeve of the sewn shirt is crinkled.”

(15) (fege (vi) – “to be crinkled/crinkly”)  
Ne fege e tautetaha.  
PST crinkly ABS.C suit  
“The suit is crinkled.”

(16) (from: puna “to rise up”)  
Kua mapuna hake e laā.  
PERF $ma$.rise up ABS.C sun  
“The sun has risen.”

(17) (from: tila “edge”)  
Kua matila haana a pelu.  
PERF $ma$.edge 3.SG.GEN LIG knife  
“His bushknife is sharp.”

Further to this point is the fact that $[ma-X]$ does not take by-phrases. This might appear to be falsified in (18).

(18) Kua mahamu e pou he matagi  
PERF $ma$.snatch ABS.C post because wind  
“The post was ripped out as a result of the wind.”

(18) appears with $ma$- on the verb, and with a causal $he$- phrase. We construe these structures as causation phrases, not by-phrases, given that the object of $he$ is most often not animate or agentive. The following examples illustrate that $he$ can appear with a sentential or verbal object, arguing against a by-phrase analysis of $he$-clauses.

(19) Kua maifaifa a ia he oti e poi  
PERF $ma$.breathless ABS.P 3.SG because finish ABS.C run  
“He was totally breathless after his run.”
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(20) Kua maihi e fua meleni he to
PERF ma.split ABS.C fruit melon because drop
“The melon was split from being dropped.”

We conclude from the examples presented above, that ma- is not a passive morpheme, and furthermore that it is not a detransitivizer. While in many cases it does appear to have the properties of a passivizer or detransitivizer, as in (2), other examples with ma- illustrate that this is not the case. If ma- is not a passivizer, detransitiviser, or participle, might it be a stativizer? In the next two sections we argue against such a view.

4. ma- is not a Stativizer

Canonical examples such as (2) above suggest that ma- might be a prefix that takes an active verb and turns it into a stative descriptive verb. This analysis can be ruled out, however, because ma- can attach to verbs that are already stative. One example of this can be seen in (14), and (21) provides a further example. We see from (22) that the stem in (21) figofigo “be wrinkled” is already stative, hence it seems clear that ma- cannot be contributing stativity.

(21) Kua mafigofigo haana a tau lima he leva e pala.
PERF ma.wrinkled 3.SG.GEN LIG PL hand because long.time ABS.C wet
“Her hands are wrinkled after being wet.”

(22) Kua figofigo haana a tau lima he leva e unu.
PERF wrinkled 3.SG.GEN LIG PL hand because long.time ABS.C wash
“Her hands were wrinkled after spending long hours doing her washing.”

We are left with a mystery as to just what the function of this morpheme is. We have argued that ma- is not a detransitivizer or a stativizer, yet, in its canonical use, ma- seems to be just that, as in (2). In the following section, we will present a hypothesis as to the nature of ma-.

5. ma- Expresses a State Resulting from an Action

In examining a wide range of sentences with ma-, we hypothesize that its function is to express a state, which is the result of an action – in other words, a state that is the result of some change. This explains why it can attach to a verb that is already stative ((14), (21)), as well as to active verbs (2). In the former case, ma- adds the concept of a state resulting from an action, that is, a change of state, whereas in the latter, it seems more like a typical stativizer. The relevant concepts are schematized in (23). The inputs are different for the transitive and intransitive cases, but the outputs are the same.

(23) a. Transitive verb: X tear shirt
   [ma-V]: Shirt is in a torn state, as a result of some action

b. Stative verb: Shirt is wrinkled
   [ma-V]: Shirt is in a wrinkled state, as a result of some action

The claim that the state expressed by a verb prefixed with ma- is a state that has resulted from some action accounts for the common appearance we observed of causal he clauses with ma-verbs, as seen in (18)-(21), since the he-clause spells out the nature of the action that has taken place to
result in the expressed state. However, we note also that stative verbs without *ma-* can also appear with *he* clauses, as in (22).

We can formally represent the contribution of *ma-* by adopting the structural analysis of Embick (2004), as in (24) for the verb *mafuli* “to be turned over”. *Ma-* here encodes stative aspect, and it selects a change-of-state complement, where the change is coded in the FIENT head, as in Embick (2004). The nature of the resulting state is provided by the complement. *Ma-*verbs are intransitive, taking a single argument, merged in (24) into the specifier position. The FIENT+root node moves up to join the prefix, as indicated.

(24) Structural Analysis of *ma-* (based on Embick 2004)

\[
\begin{array}{c}
\text{AspP} \\
\text{DP} \\
\text{Asp} \\
e \text{ maka} \\
\text{Asp} \\
\text{vP} \\
\text{v} \\
\text{fuali} \\
\text{FIENT}
\end{array}
\]

\[
\begin{array}{c}
\text{‘mafuli’ – ‘to be turned over’} \\
\text{‘the stone’} \\
\text{‘to turn over’}
\end{array}
\]

6. Some Problems for the Hypothesis

Our hypothesis is consistent with most of the data. All sentences with *ma-* are intransitive, and in general, they express a descriptive state. In many cases, the fact that the expressed state has resulted from an action is spelled out overtly by a *he* clause. The fact that *ma-* can prefix to stative (unaccusative) verbs, unergative verbs, and transitive verbs is allowed in this analysis. In each case *ma-* contributes meaning, namely the resultative meaning, and in some cases it contributes the stative meaning also, hence its affixation is never vacuous. There are a few remaining problems, however.

One problem is that some uses of *ma-* seem to be active, rather than stative. An example is given in (25).

(25) matike ke ō a tautolu ki tahi
\[\text{*ma.arise SBJV go.PL ABS.P 2.PL GL.P sea} \]
“Get up and let’s go to the sea.”

It is possible, though, that this should be translated as “Be arisen so that we can go to the sea”. In this case, it is consistent with our claim. The translations in the dictionary are often far from literal, but more research would be needed to determine if the subtle differences in meaning predicted by our analysis are supported by speaker intuition. A similar example appears in (7) above. Again, this
might be more literally translated as “The girls’ bodies were in a state (i.e. had the property) of having been moved well while dancing.”

Another problem is that some uses of *ma-* are idiosyncratic, as in (26).

    b. *mataka* “to have dandruff” – from *take* (vi) “to wander, rove, move around”
    c. *matagataga* “to improve from illness” – from *tagataga* (vi) “to be loose”

In some cases it is possible to discern the connection; for example, dandruff involves skin that ‘wanders’ and Sperlich (1997) notes that in (26.c), the sense is that the illness has ‘loosened’ its grip. But the connections are not fully regular. It is difficult to draw any generalizations to include such examples, however, so we might put these aside.

Finally, sometimes it is hard to tease apart the stative and resultative readings, as in examples (21) and (22), which, as we noted above, both appear with a causal phrase. In such cases also, our hypothesis needs testing with native speaker commentary on meanings.

7. Further Research and Conclusion

There are several aspects of *ma-* that deserve further research. In particular, *ma-* shows interesting interactions with other morphemes in Niuean.

First, *ma-* can co-occur with causative *faka-* (Gould, Massam, and Patchin 2008, this volume). Since *faka-* is generally described as a morpheme that creates transitive verbs from intransitive ones, and *ma-* is generally described as a detransitivizing morpheme, it is interesting that they can co-occur. When they co-occur, *ma-* always occurs inside *faka-* as in (27.c).

(27) (definitions from Sperlich 1997)
    a. *hika* (vt) “to scratch”
    b. *mahika* (vi) “to be scratched”
    c. *fakamahika* (vt) “to make a scratch”

The translations suggest that we end up in the same place we started; that is, it seems that (27.a) and (27.c) mean the same thing. Our analysis of *ma-* however, indicates that these should be translated as in (28), with subtly different meanings from those in the dictionary. More work is needed to determine if these are correct definitions.

(28) (hypothesized definitions)
    *hika* (vt) “to scratch something” (i.e. to undertake an action)
    *mahika* (vi) “to be in a scratched state as a result of an action”
    *fakamahika* (vt) “to cause something to be in a scratched state as a result of an action”

Our hypothesis is schematized in (29).

(29) [*faka-* [ma-* [STEM]] – X causes that Y is in STATE, as a result of some action. 
    (X = causer)]

In addition, *ma-* can co-occur with reduplication, as can be seen in examples (2), (10), (12), (19) and (21) above, and also in (30) below.
The fact that the stem that ma- attaches to can be reduplicated shows clearly that the element embedded under FIENT in (24) is a stem, and not a root, contrary to the analysis adopted from Embick (2004) illustrated in (24), as roots do not bear morphology, including reduplication. This argues that there is further structure under FIENT than the analysis adopted from Embick analysis allows for, and that the ‘root’ is in fact a verbal stem. More exploration is needed to determine exactly the size and nature of this stem.

This paper has revealed that previous analyses of the Niuean prefix ma- as a passive or participle are inadequate to account for the full range of data, and that it cannot be considered a detransitivizer or stativizer either. We have proposed instead that ma- is a prefix that contributes the meaning of a resulting state. Although our hypothesis is preliminary, and cannot be fully confirmed without further research, it has the advantage of accounting for the range of data discussed above. While a participle-forming suffix would not be expected to appear on a true verb, our hypothesis allows this. While a passive morpheme would not be expected to attach to an unaccusative verb, a morpheme expressing a resulting state would be expected to appear on such verbs. While a detransitiviser should not appear on intransitive verbs, and a stativizer should not appear on stative verbs, a morpheme expressing a resulting state would be expected to appear on such verbs. Finally, it is possible to explain how a resulting state prefix could affix to nouns, as in (17), whereas passives and detransitivizers would not be expected to have this ability. In support, the majority of our examples indicate that the resulting state reading is consistent with the translations for ma- verbs. Further work is needed, however, to determine if the hypothesis is correct.

References