3: SOURCES OF PROTO-OCEANIC INITIAL PRENASALIZATION: THE VIEW FROM OUTSIDE OCEANIC

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1. Introduction

One of the foremost contributions of Stan Starosta to the study of language change has been his insistence on motivated analyses of the structures under consideration within a constrained linguistic theory in order to provide sets of comparably analyzed data. His version of dependency grammar, Lexicase, provides such a framework for the study of syntactic change. In this paper, I attempt to show, using Lexicase analyses of the relevant structures, that certain syntactic changes in early stages of Austronesian languages, specifically the development of determiners from earlier demonstrative nouns, were accompanied by varying patterns of loss of the prepositions that had earlier functioned as either case markers of their following noun phrases, or had connected them to following (nominal) relative clauses. In some languages, the preposition was lost. In others, it became fused with the demonstrative noun, while in others it became a proclitic to what was earlier the head of the following relative clause. It was the latter process, still in operation in some of the Minahasan languages, that ultimately led in Proto-Oceanic to the development of a set of initial prenasalized consonants.

These patterns of grammaticalization are not at all uncommon in languages of the world, and have been discussed widely in the literature (e.g., Hopper and Traugott 1993; Heine, Claudi, and Hünnemeyer 1991), but usually without the benefit of an explicit grammatical framework within which to determine the lexical categories of the forms under consideration. Heine, Claudi, and Hünnemeyer in fact call for a "framework of linguistic descriptions that is not confined to static, discrete units such as word classes or constituent types but rather includes dynamic entities such as chains of grammaticalization" (1991:231–233). Such a framework, they believe, is required because grammaticalization chains are continua, with fuzzy, nondiscrete boundaries between the stages. Such analyses imply "hybrid" forms, such as "part verb, part preposition," or "part demonstrative, part determiner," for example, at intermediate stages of the grammaticalization process. Starosta's version of dependency grammar rejects intermediate, hybrid forms that are neither one thing nor the other. It permits a constrained set of only seven lexical categories (noun, verb, adjective, adverb, pre/postposition, conjunction, and sentence particle), which are claimed to have universal properties. Specific forms cannot be a member of more than one lexical category at the same time. The theory, however, does allow for sets of homophonous, derivationally related forms. It is the availability to children of this process of "zero-derivation" that provides them with one of the mechanisms by which they can reinterpret syntactically ambiguous structures in the process of acquiring their language.

Changes in lexical category often result in changes in dependency relations. Thus a noun that is the head of its construction may end up as a determiner, a form that can only be a dependent. Heine, Claudi, and Hünnemeyer (1991:220) note also that "dependency forms a parameter that is of immediate relevance to our discussion. Whether a given entity governs or is governed by another entity is likely to determine its fate in the process of metaphorical use and of grammaticalization." Lexicase provides us with a dependency grammar framework within which to describe such grammaticalization processes.

Proto-Oceanic (POC), as reconstructed by various scholars beginning with Dempwolff (1969) and continuing through to the recent work of Ross (1988), has been shown to contain a contrasting series of obstruents, reconstructed by Ross (1988:93) as *p/b, *t/d, and *k/g, the voiced members of which had their origins in prenasalized versions of their voiceless counterparts, *mp, *nt, and *ŋk. In addition, there were two other contrasting pairs: *r/dr, traditionally symbolized as *d/nd, and *c/j, the second member of which developed from prenasalized *ns. These prenasalized consonants could occur only in syllable-initial positions, either word initially or word medially.

Ross's (1988) work provides us with the most thorough overview to date of this so-called "oral grade–nasal grade" phenomenon, including an excellent discussion of what have been termed the "cross-over" reflexes, where some Oceanic languages show an oral-grade reflex of a form reconstructed with a prenasalized obstruent, while others show a nasal-grade reflex of a form reconstructed with a nonprenasalized obstruent. He also provides a full discussion of what he refers to as the "fortis grade–lenis grade" developments in many Oceanic languages that have contributed to confusion in understanding the reflexes of the oral grade–nasal grade phenomenon. In the course of his discussion, Ross (1988:39–45) suggests that one of the explanations for cross-over had its origins in Pre-POc and possibly even earlier. He suggests that there were alternating forms attributable to morphophonemic variation that were "quite possibly fossilized" by POC times.

In this essay, I review earlier proposals for the origins of prenasalization in Proto-Oceanic, and examine Ross's explanation for the variation associated with prenasalization. I suggest that the explanations that Ross and others have provided do not adequately account for the variation, at least in some of the items they discuss. I attempt to show that it is more likely that the development of at least some of the prenasalized obstruents in word-initial positions[1] in Proto-Oceanic was the result of a process of grammaticalization in the structure of the noun phrase. Under this process, a nasal that at an earlier stage formed the final consonant of a determiner marking a definite noun became prefixed to definite nouns. Contexts in which indefinite nouns were

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1. The origin of prenasalized obstruents in word medial position has been discussed fairly fully in the literature, beginning at least with Dempwolff (1969:96–115) who posits a "facultative" or optionally occurring nasal for reconstructed forms whose reflexes were ambiguous, some languages having doublets with and without the nasal, with other languages showing either one or the other. The situation is somewhat analogous to the Oceanic cross-over phenomenon. At any rate, the sources of POc medial prenasalized consonants appear to be quite different from those in initial position and will not be further discussed in this paper.

required would not have allowed nouns having initial prenasalized obstruents to occur in them. After definiteness became marked by some grammatical feature other than prenasalization, this alternation between prenasalized definite nouns and nonprenasalized indefinite nouns appears to have persisted as free variation between the two classes of forms, providing a reasonable explanation for the variation in POC that could have resulted in cross-over.

2. Earlier Views of the Sources of POC Prenasalization

Although there are numerous publications examining the development of nasal-oral grade consonants in Oceanic languages (see, for example, Lynch 1975, Grace 1990) very few go beyond the level of Proto-Oceanic to try to account for their development in Proto-Oceanic. There have been two opposing views expressed regarding the nature of prenasalization in Western Austronesian languages. One treats prenasalization as a process associated with certain verbal affixes that, along with those affixes, is reconstructable to their parent language. The other treats prenasalization as originally a phonetic feature that only after the breakup of POC acquired grammatical significance in Western Austronesian languages.

2.1 Prenasalization as a Phonological Process

Dempwolff (1969:30–33), in his discussion of the phonologies of his "Indonesian" languages, Tagalog, Toba-Batak, and Javanese, notes that all three languages share a phonological process affecting the initial segments of words. He labels the processes NASAL ACCRETION for cases in which a homorganic nasal preceded the initial segment, and NASAL SUBSTITUTION for those cases in which a (homorganic) nasal replaced the initial segment. He further notes that these processes are associated with certain prefixes in Tagalog (*ma-*, *na-*, and *pa-*) and in Toba-Batak (*ma-* and *pa-*), but occur without an associated prefix in Javanese. He labels both processes PRENASALIZATION and reconstructed the process to the parent language, Proto-Extra-Formosan (PEF).[2] In his summary (Dempwolff 1969:124), he states that the original grammatical function of prenasalization (and also the grammatical function of the nasal increment responsible for word medial nasal-obstruent clusters) remains a problem.

2.2 Prenasalization as a Phonetic Feature

Milner (1965), apparently working with the assumption that Oceanic (the "Eastern Austronesian" of his title) and Western Austronesian are coordinate branches of the Austronesian family, reexamines the nature and distribution of prenasalization in the two branches. Although Milner notes that in the Western languages from which Dempwolff cited data, nasal accretion has "morphophonemic" or grammatical functions only in initial position, he claims that in medial position it is only a "phonetically distinct feature", without apparent grammatical function. In Oceanic, moreover, prenasalization

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2. Dempwolff's UIN (Urindonesisch).

had no grammatical function; it was a phonetically distinct feature initially as well as medially. He notes also the presence in Hova (an isolated "peripheral" language spoken in Madagascar) of initial prenasalized consonants "in contexts [that] cannot be accounted for by reference to the regular morphophonemic processes [that] Hova shares with other Western Austronesian languages" (Milner 1965:428). Prenasalization in initial position in Hova then, as in Oceanic languages, is also a phonetically distinct feature rather than a morphophonemic process. He concludes that "it is therefore reasonable to suppose that at a very early date throughout the entire Austronesian region there was (as there still is frequently in contemporary Oceanic languages) the possibility of a phonemic distinction between prenasalized voiced stops in free distribution and nonprenasalized voiceless stops, also in free distribution" (Milner 1965:428). Initial prenasalized obstruents then, according to Milner, should be reconstructed to PAN. Their shift in the "central" Indonesian languages, from phonetically unrestricted distribution to grammatically conditioned distribution, was an innovation in those languages.

With the more commonly accepted subgrouping hypotheses that today place Proto-Oceanic in a far more subordinate position in the Austronesian family tree, Milner's arguments no longer carry much weight. There is no evidence from earlier stages of Austronesian that the grammatical functions associated with prenasalization in the Western languages were subsequent developments from earlier phonemically distinct prenasalized voiced stops.

3. The Prefix *maN- in Pre-Oceanic

Dempwolff's view that prenasalization of initial obstruents developed out of the accretion of the final nasal element of the prefixes *maN- and *paN- provided the foundation for Ross's explanation for some of the forms that appear to constitute evidence for the cross-over phenomenon in Oceanic languages. Ross notes (1988:41) that, in Western Austronesian languages, addition of the prefixes to stem-initial voiceless obstruents always results in homorganic nasal substitution, whereas their addition to stem-initial voiced obstruents results in either a nasal-obstruent sequence or homorganic nasal substitution. It is to this (predictable) alternation, Ross claims, that at least some cases of cross-over can be attributed.

The forms in question (cited from Ross 1988) are:

Gela, West Guadalcanal, Talise *mabulu* 'rotten'. Ross suggests that this form reflects Pre-POC *mampuRu(k) (< PAN (?) *maN- + buRuk).[3]

Bilbil, Takia *madid*; Manam *madidi*, Kaiep *marir*, Kairiru *merīr̃*, Ulau-Suain *madid*; Tolai, Duke of York *madiriŋ;* and Halia (Haku) *maririŋ* 'cold'. Ross suggests that these forms reflect Pre-POC *mandindiŋ 'cold' (< *mandiŋdiŋ < PAN (?) *maN- + diŋdiŋ 'cold').

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3. Regular devoicing of PAN voiced bilabial (and velar) stops is one of the defining features of POC.

Bariai *mad-madid;* Kilenge, Maleu *mari;* Tami *moji;* Sio *madi;* Mangap *meder;* Mari, Adzera *munti;* Wampur *monti;* Sukurum *mundi;* Dangal *mundik;* Wampar *mondeŋ;* Sirak *mindiŋ;* Yalu *midiŋ(te)* 'stand'. Ross suggests that all of these forms reflect POc *mandiʀi 'stand' (< *mandiʀi < PAN (?) *maN- + diʀi 'stand').

According to Ross (1988), each of the above forms results from prenasalization through the prefixing of *maN-. The difficulty with this explanation is that none of the meanings 'rotten', 'cold', and 'stand' satisfy what appear to be the semantic conditions for the appearance of *maN-. Ross states (as does Dempwolff 1969) that the original meaning of *maN- is unclear. However, in none of the Western Austronesian languages that I have looked at is this a prefix that typically occurs on descriptive terms such as 'rotten' and 'cold'. Nor does it occur on bodily-action verbs such as 'stand'. The former stems typically require a reflex of the stative prefix PAN *ma-, and in fact a number of other Western Melanesian languages cited by Ross still retain a frozen *ma-* prefix on them (without evidence of prenasalization). There is no evidence that either Pre-POc or POc had alternate forms of the stative prefix, either *ma- or *maN-. It is only in the South-east Solomonic subgroup that the apparently prenasalized forms occur. Thus a local explanation is probably better than appealing to variation in Pre-POc. Either some now unrecognizable analogical process in the immediate parent of the languages introduced a prenasalized stop, or perhaps the medial *-b-* can be attributed to an intervocalic lenition process that has not gone all the way to *-v-*.

Prenasalization of the initial segment of the stem for 'cold' is more likely to be the result of a spread of the medial prenasalization to the first segment of the reduplicated syllable, than of the affixation of *maN-*. Thus PMP *ma-diŋ.diŋ > *ma-di.ndiŋ > *ma-ndi.ndiŋ > POc *ma.ndi.ndiŋ.

Bodily-action verbs such as 'stand' are typically affixed with a reflex of PAN *mu-/ -um-. The prefix *maN-, at least in PMP if not in PEF, derived verbs with distributive action. They could be intransitive, such as 'cognate object' verbs, whose derivational source was nouns of the sort that could be gathered or collected, such as 'wood', 'taro', and so forth. But more commonly they were antipassive (pseudo-transitive) verbs having an actor subject and an implied, if not always expressed, additional NP translatable as an indefinite but specific object.[4] The source of such verbs was grammatically transitive forms requiring a definite Patient. The semantics of 'stand' do not fit either type. However, I have no alternate explanation for the data Ross provides.

Other forms that Ross (1988:41–42) attributes to *N- substitution are also questionable. In particular, the bilabial nasal substitution in forms that are reflexes of PAN *buni 'hide' (> Pre-POc *muni) with intransitive interpretation (i.e., 's.o. hides'— another bodily-action verb) are far more likely to be the result of affixation with PAN *mu-/-um- than with *N-, because this type of nasal substitution involving labial obstruents (e.g., *b-um-uni > *muni) is widespread in Western Austronesian languages (including Formosan) and is independent of the nasal substitution processes

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4. Such NPs, although indefinite, could not refer to generic, or nonspecific, entities of the sort that could only occur as the notional object of grammatically intransitive verbs derived with the *-um-* infix.

associated with *maN- that developed at a much later stage in the family, and affected obstruents at all points of articulation.

4. Proto-Oceanic Phrase Structure

Despite the comments in section 3, it is likely that at least some of the forms reconstructable to POC with prenasalized stem-initial consonants had their origin in verbs derived with a *maN- prefix, as suggested by Dempwolff and also by Ross. Some POC nouns with prenasalized stem-initial consonants could also have resulted from affixation of the *paN- instrumental prefix, which brought about similar morphophonemic changes to stem-initial obstruents. However, these two affixes alone cannot account for the majority of Pre-POC forms reconstructed with prenasalized stem-initial obstruents, such as *mpanij 'wing', *mpune 'pigeon', *mpoʀok 'pig' (each of which also has at least one Oceanic reflex without a prenasalized initial consonant); *mpuaq 'areca nut', *mpoŋi 'night', *ndaʀaq 'blood', *ndanum 'water', *ŋkudu 'thunder', *ŋkapu 'mist', etc. (cited from Ross 1988:34–39). To account for forms such as these, it is necessary to consider the structure of the noun phrase from which the POC noun phrase developed.

4.1 Overview

In section 4.2, I outline relevant aspects of the structure of the Proto-Oceanic noun phrase as discussed by Ross (1988:96–100). In section 5, I present evidence for corresponding structures from Western Austronesian languages, which appear to be ancestral to the Oceanic structures. Finally, in section 6, I show how, in at least some western Austronesian languages, processes of phonologization have resulted in prenasalization of initial obstruents, and I draw the conclusion that the same processes probably brought about prenasalization of stem-initial consonants in Pre-POC.

4.2 The Proto-Oceanic Noun Phrase

Ross (1988) compares the noun phrase structures of the languages of the Central-Malayo-Polynesian and South Halmahera-West New Guinea subgroups with Oceanic languages, and concludes that, whereas the former languages have innovated certain aspects of the noun phrase, Proto-Oceanic has retained structures that are widespread in other Western Austronesian areas. In particular, he notes the retention in Proto-Oceanic of preposed articles that mark the head noun as common or personal, and the order of possessed-possessor where a possessor occurs in the noun phrase. Crowley (1985) reconstructs for Proto-Oceanic a "Type III" noun-marking system, with "two classes of common nouns, determined by whether the noun is marked by a reflex of *na/a, or by zero, in most (but not all) syntactically unmarked environments" (Crowley 1985:173–174, 176). He considers the form *na/a to be "actually a marker of a specific or a definite noun phrase (or something semantically close to either of these functions)" (Crowley 1985:176–177). He also looks for Oceanic evidence to account for the alternate forms *na and *a, but is unable to determine whether, in Proto-Oceanic, they were separate morphemes with related but separate

meanings, or whether they were variants of a single morpheme. I claim that, at least in Proto-Extra-Formosan, they were phonologically conditioned allomorphs. Expressed in a dependency grammar stemma, the structure of Pre-POC *na/a *mpoʀok 'the pig' would appear as in (1).

(1)

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        ┌───────────────┐
        │           *mpoʀok        'the pig'
   *na/a                [N]
   [Det]
   [−prsn]
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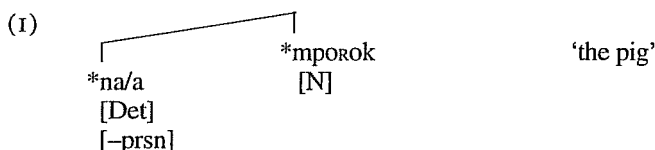
5. The Proto–Extra Formosan Noun Phrase

Western Austronesian languages show a wide variety of forms that appear to be determiners preposed to head nouns.[5] Although the forms vary considerably, the distinctions they mark frequently include those reconstructed for POC, that is, common ([-prsn]) versus personal ([+prsn]). Nominative noun phrases in PAN, although not case-marked and possibly not containing a determiner (Starosta 1993), probably followed a case-marking preposition in PEF, the ancestral language of the Philippines and other non-Formosan languages. The form of the nominative case-marking preposition before common nouns was probably *i, still retained as the initial formant of nominative pronouns and/or demonstratives in languages such as Ilokano and Tagalog, and as a nominative noun phrase marker in some environments in Pangasinan and other languages (Reid 1978, 1979). A dependency stemma of the exocentric[6] prepositional phrase *i balay 'the house' in PEF would be as in (2).

Because nominative complements usually required head nouns to be interpreted as definite,[7] demonstrative nouns ('this one', 'that one') and personal pronouns would have frequently appeared in the head-noun position following the preposition, as in (3a, b). This construction, however, was ambiguous (because *i was also a locative case-marking preposition), and probably lost its case marking function fairly early, but not before the preposition had become cliticized to demonstratives and pronouns that followed, where it remained in some languages as a distinguishing nominative (and/or predicative) formant, as in (4a, b). In other languages, however, even these

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5. Much of the discussion in this section, although differing in a number of details, was presented in an informal way in Reid 1978. That study provides more extensive Philippine language evidence for the forms cited.

6. Exocentric constructions are shown in lexicase dependency grammar stemmas with horizontal rather than slanting lines joining the head of the construction and its dependent.

7. That not all nominative complements were interpreted as definite is clear from structures with existential verbs, as in the following Bontok sentence, which still retains a reflex of *i as a postclitic to the existential verb *wáda* 'there is', here interpreted as a possessive: *Wadʔa-y ábuŋ-da* 'They have a house. (lit. There is a house of theirs.)' (Reid 1979:14). Mamanwa similarly maintains a reflex of *i as a postclitic to the negative existential verb *wara* 'there is none' before an indefinite nominative NP: *Wara-y daro.* 'There is no plow.' (Svelmoe and Svelmoe 1974:61).
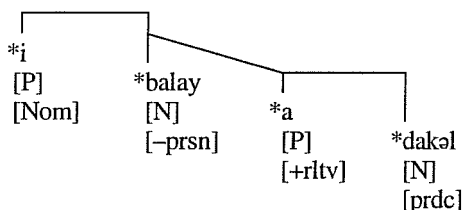
forms became unmarked and could appear as plain nouns, without prepositions or determiners, in positions where they could be interpreted as either Nominative or predicate, as in (5a, b).

(2)   ┌─────────────┐
         *i   │   'the house'
         [P]   *balay
         [Nom]   [N]
                       [–prsn]

(3a)   ┌─────────────┐
         *i   │   'this one'
         [P]   *ni
         [Nom]   [N]
                       [+dmns]

(3b)   ┌─────────────┐
         *i   │   'I'
         [P]   *akən
         [Nom]   [N]
                       [+prnn]

(4a)   *i.ni   >   Tagalog *ini* 'this one'
         [N]
         [+dmns]
         [Nom]

(4b)   *i.akən   >   Ivatan *yakən* 'I'
         [N]
         [+prnn]
         [Nom]

(5a)   *na   >   Bontok *ná* 'this one'
         [N]   e.g., *ʔiláʔəm ná* 'Look at this.'
         [+dmns]

(5b)   *akən   >   Cotabato Manobo *akən* 'I'
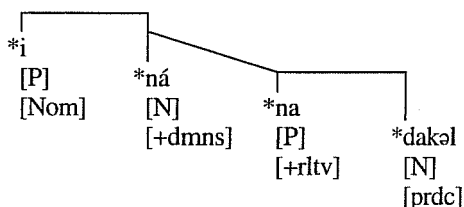   [N]
         [+prnn]

In PEF, head nouns, including demonstratives but possibly not personal pronouns, could be modified by a following relative clause, the predicate of which could be either a noun or a verb. A relative clause was a reduced clause (missing its Nominative constituent) and formed part of an exocentric construction, headed by a preposition, the form commonly referred to in the literature as "the ligature." The form of this preposition in PEF was probably the phonologically conditioned *na/a, with *na occurring following stems ending in a vowel, and *a occurring following stems ending in a consonant.[8] The

stemmas in (6) and (7) illustrate the structure of (nominal) relative clauses dependent on common noun and demonstrative noun heads, respectively.

(6) 'the big house' (lit. 'the house which is a big one')

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        ┌──────────┐
       *i        *balay ──────┐
      [P]         [N]        *a ────────┐
      [Nom]      [−prsn]    [P]       *dakəl
                            [+rltv]    [N]
                                      [prdc]
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(7) 'that big one' (lit. 'that one which is a big one')

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        ┌──────────┐
       *i         *ná ──────┐
      [P]         [N]       *na ────────┐
      [Nom]      [+dmns]    [P]       *dakəl
                            [+rltv]    [N]
                                      [prdc]
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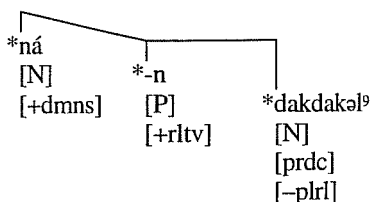
In some of the northern Philippine languages, such as those belonging to the Central Cordilleran subgroup (including Bontok, Kankanay, and Ifugao), prepositions became postclitics to the preceding noun, with subsequent loss of the final vowel, as in (8). Now, however, BON, KNK, IFG *nan* is no longer a sequence of noun plus preposition. It has become grammaticalized as a single morpheme functioning as a definite determiner, as in (9). In Bontok (and Kankanay), the demonstrative *ná* has replaced the earlier close-to-speaker form *ni, and now means 'this one', as in (5a), and a new preposition introducing relative clauses, *ay*, has developed, as in (10). This preposition, in normal speech, is also phonologically attached to the preceding noun.
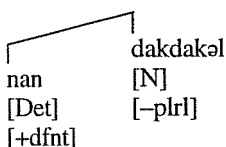
The process of reduction of a morphological sequence of demonstrative noun plus preposition to a determiner shown in (9) continues in Bontok, with casual speech forms of (10) occurring as (11), in which the sequence *ná* + *-ay* occurs as a single morpheme *náʔay*, often reduced to *nay*, and constituting part of the complex determiner *nannay*.

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8. This reconstruction is different from that given in Reid 1979, where the forms were *ŋa/a. The latter reconstruction was implicit in the work of Wolff (1967:72–24), and is cited by Zorc (1977:230): "The shape of the markers with final *n*, . . . which are probably cognate with forms [that] have final *ng* in other languages, indicates a change of *ng* to *n* under certain conditions. . . . [W]hat the conditions are is not clear." Blust (1974:7) also reconstructed a "linker" of the same shape for PAN. He stated, "Apart from the *ni phrase, at least one other feature of organization transcending the level of the word can be reconstructed and assigned with equal confidence to Proto-Austronesian. Thus the use of a linker *ng(a) to connect two numerals in a multiplicative relationship is attested in a number of widespread Austronesian languages." Foley (1976) reconstructed a ligature *ña (with a variant *-ng occurring after vowels) for PAN. The evidence for the reconstruction given in this study is presented in Reid 1983.
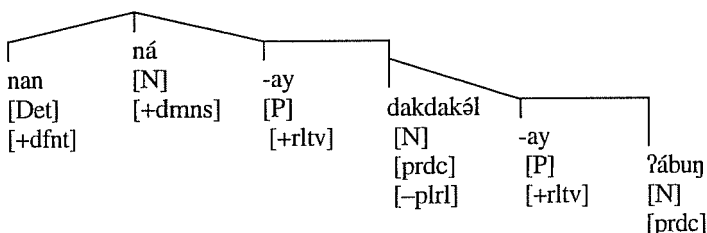
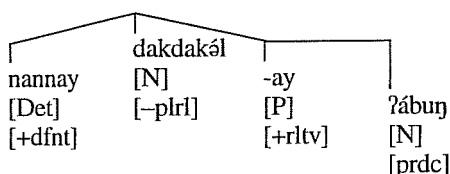(8) Pre-Bontok 'that big one' (lit. 'that one which is a big one')

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    ┌─────────┬──────────────┐
  *ná        *-n
  [N]        [P]           *dakdakəl⁹
  [+dmns]    [+rltv]        [N]
                            [prdc]
                            [–plrl]
```

(9) Bontok 'the big one'

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    ┌──────────────┐
                 dakdakəl
  nan            [N]
  [Det]          [–plrl]
  [+dfnt]
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(10) Bontok *nan náʔay dakdakálay ʔábuŋ* 'this big house'
   (lit. 'the this one which is a big one which is a house')

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    ┌──────┬───────────────┬──────────────────────┐
         ná              -ay
  nan    [N]             [P]          dakdakál
  [Det]  [+dmns]         [+rltv]      [N]        ┌──────────┐
  [+dfnt]                             [prdc]    -ay
                                      [–plrl]   [P]        ʔábuŋ
                                                [+rltv]    [N]
                                                           [prdc]
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(11) Bontok *nannay dakdakálay ʔábuŋ* 'this big house'
   (lit. 'this big one which is a house')

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    ┌──────────┬──────────────┐
             dakdakəl
  nannay     [N]            -ay
  [Det]      [–plrl]        [P]        ʔábuŋ
  [+dfnt]                   [+rltv]    [N]
                                       [prdc]
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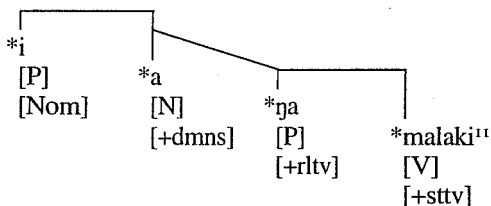
Precisely the same kinds of changes have operated to produce the well-known *aŋ* and *naŋ* determiners found in Tagalog, except that there was an innovation in the form of the relative preposition (ligature) *na. The postconsonantal variant *a was lost, and *na was generalized to all positions. Subsequently, the initial nasal of *na became a velar in postvocalic position (12).[10] The relative preposition became a postclitic to the preceding noun, losing its final vowel (13), although a relic of the earlier stage

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9. Many Bontok "adjectival nouns," such as *dakəl* 'big', are now obligatorily marked for number, thus *dakdakəl* 'big one', but *danakkəl* 'big ones'.
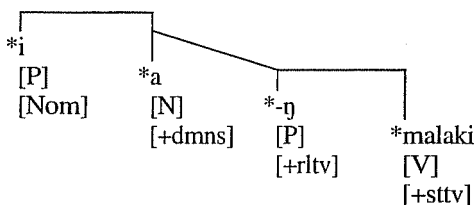
10. This was an innovation, the cause of which is still obscure.

remains frozen on the Tagalog plural determiner *maŋa*. Nominative noun phrases lost their case-marking, and the demonstrative noun plus preposition sequence *a-ŋ became a morphologically simple determiner *aŋ* (14).
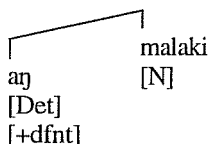
(12) Pre-Tagalog 'that big one' (lit. 'that one which is big')

```
*i
[P]          *a
[Nom]        [N]       *ŋa
             [+dmns]   [P]       *malaki[11]
                       [+rltv]   [V]
                                 [+sttv]
```

(13) Pre-Tagalog 'that big one' (lit. 'that one which is big')

```
*i
[P]          *a
[Nom]        [N]       *-ŋ
             [+dmns]   [P]       *malaki
                       [+rltv]   [V]
                                 [+sttv]
```

(14) Tagalog 'the big one'

```
              malaki
aŋ            [N]
[Det]
[+dfnt]
```
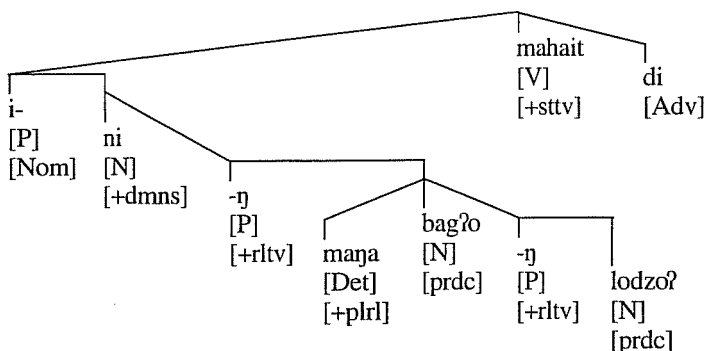
The stage represented in (13) is still present in Mamanwa in structures such as (15) and (16), in which a demonstrative noun occurs.
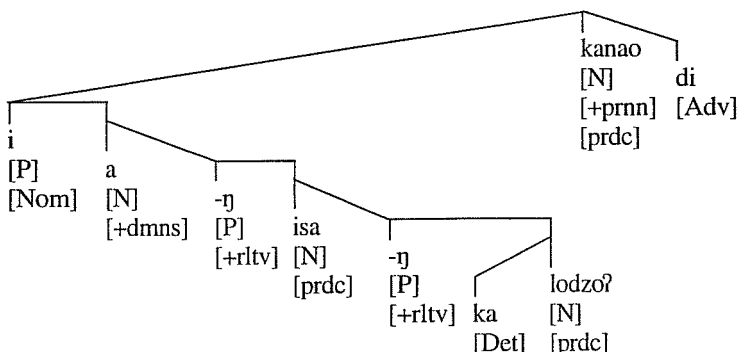
(15) Mamanwa (Miller and Miller 1976:33):[12]

Iniŋ	maŋa	bag?oŋ	lodzo?	mahait	di.
this	plural	new	bolo	sharp	already

'These new bolo-knives are sharp.'

---

11. The analysis of *malaki* 'big' as a stative ([+sttv]) verb in Tagalog, rather than as a noun as in the Bontok examples above, is motivated by the presence in Tagalog of the stative verbal prefix *ma-* in the form. Following a Determiner, however, it is analyzed as a deverbal noun, as in (14).

12. Phonemic representation and analysis in this and the following examples are mine.
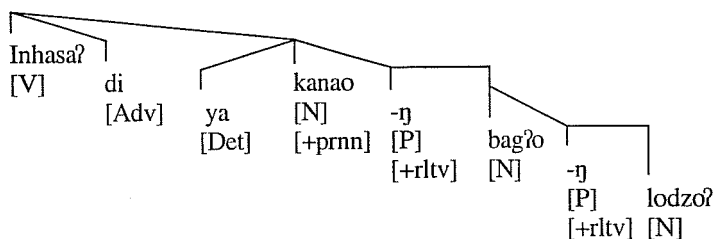
```
                                                    mahait
                                                    [V]        di
i-                                                  [+sttv]    [Adv]
[P]        ni
[Nom]      [N]
           [+dmns]   -ŋ
                     [P]             bagʔo
                     [+rltv]  maŋa   [N]      -ŋ
                              [Det]  [prdc]   [P]        lodzoʔ
                              [+plrl]         [+rltv]    [N]
                                                         [prdc]
```

(16) Mamanwa (Miller and Miller 1976:33):
    Iyaŋ isaŋ   ka   lodzoʔ   kanao   di.
    that one   Det   bolo   mine   already
    'That one bolo is mine already.'

```
                                                    kanao
                                                    [N]        di
i                                                   [+prnn]    [Adv]
[P]        a                                        [prdc]
[Nom]      [N]
           [+dmns]   -ŋ
                     [P]    isa
                     [+rltv] [N]     -ŋ
                            [prdc]   [P]        lodzoʔ
                                     [+rltv] ka [N]
                                            [Det] [prdc]
```

Nominative phrases without a demonstrative, however, show a pattern of reduction different from Tagalog. In Mamanwa, with loss of nominative case-marking and the development of the demonstrative as a determiner, the high front glide between the case marker and the demonstrative was retained as the initial consonant of the stem.

(17) Mamanwa (Miller and Miller 1976:33):
    Inhasaʔ   di   ya kanaoŋ bagʔoŋ lodzoʔ.
    sharpened already Det mine   new   bolo
    'My new bolo is sharpened already.'

```
Inhasaʔ
[V]        di
           [Adv]     ya    kanao   -ŋ
                     [Det]  [N]     [P]
                            [+prnn] [+rltv]  bagʔo
                                             [N]      -ŋ
                                                      [P]        lodzoʔ
                                                      [+rltv]    [N]
```

The relative preposition, which in Tagalog had become a postclitic and remained as a formant on the determiner, was lost in this position in Mamanwa. Thus the phonetic sequence [*iyaŋ*] (*i* + *a* + *-ŋ*) was reduced to *ya*, as in (17).

In Mansaka, both the earlier nominative case marker *i* and the velar nasal postvocalic variant of the relative preposition remain as frozen clitics on the definite determiner *yaŋ*, as in (18).

(18) Mansaka (Svelmoe and Svelmoe 1974:51):
 yaŋ baray na madyaw
 the house good
 'the good house' (lit. 'the house which is good')
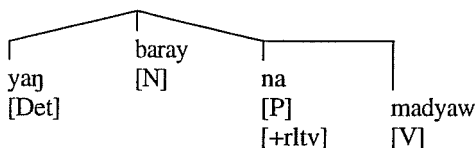
The above discussion has dealt only with some of the processes that resulted in the development of determiners in nominative common noun complements. Similar developments affected genitive case-marked complements, with what were originally genitive prepositions fusing in many languages with demonstratives to become genitive determiners, as in the case of the Tagalog genitive determiner *naŋ*.

6. Prenasalization in Proto-Minahasan

On the basis of data from the languages of Minahasa in Northeast Sulawesi, Sneddon (1978) reconstructs a series of nasal-obstruent clusters for Proto-Minahasan. The clusters could occur in both word-initial, as well as word-medial positions. Examples of forms with word-initial nasal-obstruent clusters are given in (19).

(19) Proto-Minahasan (Sneddon 1978:36, 77)

*mpelaʔ	'wound'	*nsuŋe	'horn'
*mbale	'house'	*ŋkaso	'rafters'
*ntali	'rope'	*ŋgio	'face'
*nduhi	'bone'		

Sneddon (1978:55) states that in initial position, the nasal was a morpheme separate from that of the following stop. He reconstructs it as *N-, a nasal that assimilates to the point of articulation of the following obstruent. The meaning of this morpheme is not clear, he says, because its functions in the various daughter languages differ. In Tombulu, Tonsea, and Tondano, the languages that constitute Proto–Northeast Minahasan, *N-* is a morpheme that signals the inanimate noun class. Sneddon notes (1978:36) that in Tombulu "when not preceded by a locative or instrumental preposition, inanimate nouns appear to always require a preceding particle, *u* indicating singularity and *a* indicating plurality," as in (20).

(20) Tombulu (Sneddon 1978:36)

u mbale	'a house'
a mbale	'houses'

However, in Tontemboan (which with Northeast Minahasan constitutes North Minahasan), the nasal is an indefinite noun marker, and follows one of a number of prepositions, as in (21).

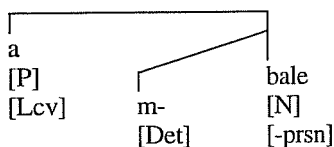(21) Tontemboan (Sneddon 1978:41)

N- + wale	→	mbale	'a house'
N- + rano	→	ndano	'water'

Although Sneddon states that the function of *N-* in Tonsawang (the language coordinate with North Minahasan) has not been fully determined, the examples cited in (22) show that it is neither a marker of indefinite nouns, as in Tontemboan, nor of inanimate nouns, as in the Northeast Minahasan languages. From these limited data, it appears to be a marker of definite, common nouns.

It seems probable, then, that Proto-Minahasan *N- is a continuation of the postvocalic variant of the nasal relative preposition, which has become a proclitic to the following noun rather than a postclitic to the preceding form, as happened in many Philippine languages. Syntactically, it is probably still a clitic determiner, rather than a prefix to the following noun, as in (22').

(22) Tonsawang (Sneddon 1978:57)

a N- + bale	→	a mbale	'to the house'
a N- + kedong	→	a kedong[13]	'to the child'

(22')

```
        ┌─────────────────┐
        a                 │
        [P]        ┌──────┤
        [Lcv]      m-     bale
                   [Det]  [N]
                          [-prsn]
```

If the Philippine languages that mark a distinction between personal ([+prsn]) and common ([-prsn]) categories are retentions of the PEF system, then Tonsawang is probably the most conservative of the Minahasan languages in this respect, and each of the other Minahasan languages has innovated. There are two other facts about the distribution of *N-* that are relevant. The first is that in all of the languages there are conditions under which the nasal is optionally or obligatorily absent. In Tonsea, for example, Sneddon (1978:22) notes that "[the nasal] is sometimes absent, for instance, when the noun is in an attributive position, e.g., *mbale,* sometimes *bale* 'house'." Typically, a predicate noun in an attributive structure is indefinite, and would not be preceded by a definite determiner (see, for example, [11] and [17], for instances of

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13. Initial nasals have been lost before voiceless stops in Tonsawang. However, the fact that the form begins with a stop, rather than with a fricative is evidence that it derives from a nasalstop cluster (Sneddon 1978:57).

indefinite predicate nouns in Bontok and Mamanwa). Another position in which an indefinite noun would appear would be in the predicate position of nominal "descriptive" sentences. If Proto-Minahasan was a predicate-initial language, then unmarked nouns would probably have also appeared in this position. Sneddon (1978:52) states: "It is probable that in PNM [Proto-North-Minahasan] the prenasalised form of the word never began an utterance but that it always followed a particle. This is the case in TTB and probabl[y] also in PNE."

The second fact that is relevant is stated in the previous quote. It is that prenasalized forms probably all originally followed a "particle." One can assume from this that the particle being referred to must have been a definite determiner, having an origin, as in the other languages cited above, in an original demonstrative cum determiner.

7. Conclusion

I have attempted to show that prenasalization as it occurs in the Minahasan languages resulted from the stranding of what must have originally been a postclitic nasal that had its origins in the relative preposition, typically referred to as the ligature in Philippine languages. In these languages, the determiners of which they were probably originally a part have either been lost or have had their functions modified, stranding the nasal to become proclitic to the head noun of the construction. The function of the nasal, while originally agreeing with its head noun in terms of common versus personal, has now changed its meaning in various Minahasan languages to agree with the head noun in either animateness or definiteness.

Second, I have tried to show that there are grammatical conditions that require the presence of an indefinite noun, conditions under which the determiner would not normally have appeared. One such condition occurs in the initial predicate position of descriptive nominal clauses. An indefinite noun, without a determiner, would also have been required as the (predicate) head of nominal attributive structures (i.e., relative clauses).

In Pre-Oceanic, the same processes that we see operating in Minahasan languages must have also occurred. Nouns could occur, depending on their distribution, with a preceding nasal marking definiteness, or without the nasal, indicating indefiniteness. By Proto-Oceanic times, however, the marking of definiteness must have been accomplished by means other than the presence or absence of the nasal, probably by the presence or absence of the determiner *na/a alone, allowing the nasal to become interpreted phonologically as part of the immediately following obstruent. Once definiteness became marked by a feature other than prenasalization, what was once a grammatically conditioned alternation must have persisted for some time as free variation between the two classes of forms. Ultimately some of the prenasalized variants became dominant in some of the daughter languages of POC, while their nonprenasalized variants were lost. In other languages, it was the nonprenasalized variants that became dominant, while their prenasalized variants were lost, resulting in the situation that is described today as "cross-over."

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