# The morphosyntax of demonstratives in synchrony and diachrony

HOLGER DIESSEL

*Abstract*

*This study investigates the morphosyntactic properties of demonstratives and their development into grammatical markers. It is based on a representative sample of eighty-five languages. The first part argues that demonstratives occur in four different syntactic contexts and that languages differ as to whether they employ demonstratives of the same or of different grammatical categories in these contexts. The second part shows that demonstratives are a common historical source for a wide variety of grammatical items and that the grammaticalization path of a demonstrative is crucially determined by the syntactic context in which it occurs.*

*Keywords:    article, copula, deixis, demonstrative, grammaticalization, pronoun, word class*

## 1 Introduction

This article examines thee morphosyntactic properties of demonstratives from a crosslinguistic and diachronic perspective. It is organized into two parts. The first part (Section 3) presents a typology of demonstratives based on their syntactic features. I argue that demonstratives occur in four different syntactic contexts: (i) they are used as independent pronouns in argument position of verbs and adpositions, (ii) they may co-occur with a noun in a noun phrase, (iii) they may function as verb modifiers, and (iv) they may occur in copular and nonverbal clauses. I refer to demonstratives used in these four contexts as (i) pronominal, (ii) adnominal, (iii) adverbial, and (iv) identificational demonstratives, respectively. Some languages use the same demonstrative forms in all four contexts, but most languages have several series of demonstratives that they employ in these positions. When pronominal,

adnominal, adverbial, and identificational demonstratives are formally distinguished, I assume that they belong to different grammatical categories, to which I refer as (i) demonstrative pronouns, (ii) demonstrative determiners, (iii) demonstrative adverbs, and (iv) demonstrative identifiers, respectively. In other words, I distinguish the use of a demonstrative in a specific syntactic context (i.e., its distribution) from its categorial status (i.e., its distribution AND form).

The second part (Section 4) examines the morphosyntactic properties of demonstratives from a diachronic perspective. More specifically, it deals with the development of demonstratives into grammatical markers. Across languages demonstratives are frequently reanalyzed as definite articles, relative and third person pronouns, complementizers, sentence connectives, copulas, directional preverbs, focus markers, and many other grammatical items. I argue that the pathway along which demonstratives grammaticalize is crucially determined by the syntactic context in which they occur. More precisely, I show that the grammaticalization of pronominal, adnominal, adverbial, and identificational demonstratives gives rise to four different sets of grammatical markers, which usually retain some of the syntactic properties that the demonstrative had in the source construction. Though grammaticalization is often described as the change of isolated items, my investigation shows that grammaticalization processes involve the whole construction in which an item occurs.

## 2. Data

My study is based on a sample of *85* languages listed in the Appendix. With two minor exceptions my sample includes at least one language of every major language family suggested by Ruhlen *(1991),'* and it also includes at least seven languages from each of the six major geographical areas that Dryer (e.g., *1992)* assumes in his work. The bulk of my data comes from reference grammars and other published sources, supplemented by information obtained from native speakers and language specialists.

## 3. **The morphosyntactic properties of demonstratives in synchronic perspective**

Demonstratives are deictics such as English *this* and *that.* They are commonly divided into pronominal demonstratives, which substitute for a noun phrase, and adnominal demonstratives, which co-occur with a coreferential noun. Many studies confine the term demonstrative to

deictic expressions serving one of these two functions, but the notion that I will use is broader. It subsumes not only pronominal and adnominal demonstratives, but also locational deictics such as English *here* and *there.* Following Fillmore *(1982), 1* call such locational deictics adverbial demonstratives. In addition, I distinguish demonstratives that are used in identificational sentences from demonstratives that occur in other sentence types. I refer to the former as identificational demonstratives. They are usually not distinguished from pronominal demonstratives, but since demonstratives in identificational sentences are often formally distinguished from (pronominal) demonstratives in other sentence types I will keep them separate.

As pointed out in Section 1, I distinguish between the use of a demonstrative in a specific syntactic context and its categorial status. The categorial status of a demonstrative is defined by the combination of two features: (i) a certain distribution and (ii) a specific form. Two demonstratives belong to different categories if they are distributionally AND formally distinguished. I use the attributes pronominal, adnominal, adverbial, and identificational-in order to indicate the syntactic context in which demonstratives occur (i.e., their distribution); and I use the nominals (demonstrative) pronoun, determiner, adverb, and identifier-in order to indicate their categorial status. Table 1 presents an overview of these terms.

The distinction between the distribution and the categorial status of demonstratives is crucial because some languages use demonstratives of the same grammatical category in more than one syntactic context, while other languages employ formally distinct demonstratives in each position.

In the following three subsections I discuss the evidence for the distinction between demonstrative pronouns, determiners, adverbs, and identifiers, and I take a closer look at languages in which these categories are not distinguished. I begin by examining the distinction between demonstrative pronouns and demonstrative determiners, then I discuss demonstrative adverbs, and finally I consider the evidence

Table 1. *Demonstratives: Distribution and category*

| DISTRIBUTION | CATEGORY |
| --- | --- |
| pronominal demonstrative | demonstrative pronoun |
| adnominal demonstrative | demonstrative determiner |
| adverbial demonstrative | demonstrative adverb |
| identificational demonstrative | demonstrative identifier |

for my hypothesis that many languages have a separate class of demonstrative identifiers.

## 3.1. Demonstrative pronouns and demonstrative determiners

The majority of languages uses the same demonstrative forms as independent pronouns and together with a co-occurring noun. In my sample there are only *24* languages out of *85* in which pronominal and adnominal demonstratives are formally distinguished. In some of these languages they have different stems as in the examples from Mulao in Table *2* which uses *ni*$^s$ `this' and *hui*$^5$ `that' as independent pronouns and *na:i*$^6$ `this' and *ka*$^b$ `that' as modifiers of a co-occurring noun.

In other languages, pronominal and adnominal demonstratives have the same stems, but differ in their inflection. For instance, in Turkish, as shown in Table *3,* demonstrative determiners are uninflected, but demonstrative pronouns take number and case suffixes, which are joined to the demonstrative root by an alveolar nasal.

There are 11 other languages in my sample in which pronominal demonstratives are inflected while adnominal demonstratives are morphologically invariable. Languages in which pronominal demonstratives are uninflected while adnominal demonstratives are marked for gender, number, and/or case do not occur in my sample (details in Diesel *1998).*

If pronominal and adnominal demonstratives have different stems, as in Mulao, or if they differ in their inflection, as in Turkish, I assume

Table 2. *Mulao (Wang & Guoqiao 1993: 52)*

|  | DEM PRONOUNS | DEM DETERMINERS |
|---|---|---|
| PROXIMAL | *ni*$^5$ | *na:i*$^6$ |
| DISTAL | *hui*$^5$ | *ka*$^6$ |

Table 3. *Turkish (Kornfilt 1997: 106, 311)*

|  |  | DEM PRONOUNS | | | | DEM DETERMINERS | | |
|---|---|---|---|---|---|---|---|---|
|  |  | PROX | MED | DIST |  | PROX | MED | DIST |
| SG | NOM | *bu* | *şu* | *o* | SG/PL | *bu* | *şu* | *o* |
|  | ACC | *bun-u* | *şun-u* | *on-o* |  |  |  |  |
|  | GEN | *bun-un* | *şun-un* | *on-un* |  |  |  |  |
|  | etc. |  |  |  |  |  |  |  |
| PL | NOM | *bun-lar* | *şun-lar* | *on-lar* |  |  |  |  |
|  | etc. |  |  |  |  |  |  |  |

that they belong to different grammatical categories, to which I refer as demonstrative pronouns and demonstrative determiners, respectively.

Unlike Mulao and Turkish, most languages use the same demonstrative forms as independent pronouns and with a co-occurring noun. In my sample, there are 61 languages in which adnominal and pronominal demonstratives have the same stems and the same inflectional features. In most of these languages there is no evidence that pronominal and adnominal demonstratives belong to different categories. Both are often independent pronouns, which are either used as arguments of verbs and adpositions or in apposition to a coreferential noun (cf. Hale *1983;* Heath *1986;* Diesel forthcoming b). Tuscarora has, for instance, two demonstratives, *kye:ni:ka:* 'this/these' and *he:ni:k5:* 'that/those', which are either used as independent pronouns or with a co-occurring noun (Mithun *1987).* When *kye:ni:ka:* and *he:nf:ka:* are used adnominally they are only loosely combined with the juxtaposed noun: (i) both noun and demonstrative can represent the entire noun phrase without the other element, (ii) their position with respect to each other is flexible (la-lb), and (iii) they are often seperated by an intonational break (lc).

(1)  a.  *hè:ní:kɔ̀: áha:θ*
    that     horse
    'that horse' (Mithun 1987: 184)
  b.  *uʔné:wa:k hè:ní:kɔ̀:*
    ghost     that
    'that ghost' (Mithun 1987: 184)
  c.  *waʔtkahá:hi:θ hè:ní:kɔ̀:, ... ruyaʔkwáhehr*
    it.met.it     that       he.body.carries
    'It met that dinosaur.' (Mithun 1987: 186)

Based on these data, Mithun *(1987)* argues that adnominal demonstratives in Tuscarora are free nominals that co-occur with a coreferential noun in apposition. There are several other languages in my sample in which adnominal demonstratives behave in the same way as in Tuscarora and have been analyzed as independent pronouns that are joined to a neighboring noun in apposition (e.g., Nunggubuyu, Martuthunira, Wardaman, Oneida, West Greenlandic, Karanga). In some of these languages, adnominal demonstratives may even be separated from the noun by an intervening constituent. Such discontinuous noun phrases are quite common in Australian languages (cf. Dixon *1972: 107-108).* An example from Wardaman is shown in (2).

(2)  *dang-nyi    wunggun-bu-ndi    yibiyan-yi*
     yonder-ERG 3SG.3NONSG-hit-PST man-ERG
     'Yonder man hit them.' (Merlan 1994: 143)

In Tuscarora and Wardaman, adnominal demonstratives are categorially not distinguished from demonstrative pronouns. These languages do not have a separate class of demonstrative determiners. Adnominal demonstratives are demonstrative pronouns that are adjoined to a neighboring noun in some kind of appositional structure.

Note that adnominal and pronominal demonstratives do not generally belong to the same category if they have the same form. Adnominal demonstratives in English are, for instance, phonologically and morphologically indistinguishable from demonstrative pronouns; but I would argue that adnominal *this* and *that* do not function as independent pronouns that are joined to an appositive noun. Pronominal and adnominal demonstratives have the same form in English, but their syntax is different.[2] Unlike adnominal demonstratives in Wardaman and Tuscarora, adnominal demonstratives in English are (i) in most instances obligatory to form a noun phrase, (ii) they occur in a fixed syntactic position, and (iii) they are never separated from a co-occurring noun by a pause or an intervening constituent. Moreover, pronominal and adnominal demonstratives are in paradigmatic relationship with elements of two separate word classes: pronominal *this* and *that* occur in the same syntactic slot as other pronouns, while adnominal demonstratives are in complementary distribution with articles, possessives, and other adnominal elements that are commonly considered determiners. Since pronominal and adnominal demonstratives are associated with elements of two distinct word classes, I assume that they belong to different grammatical categories despite the fact that they are phonologically and morphologically not distinguished.[3]

To summarize the discussion thus far, I have shown that some languages have both demonstrative pronouns and demonstrative determiners, while other languages have only demonstrative pronouns that occur in two different syntactic contexts. Note that there are also languages that do not have demonstrative pronouns. These languages use demonstrative determiners together with a classifier, a third person pronoun, or some other nominal element in contexts where other languages use demonstrative pronouns. For instance, Korean has three demonstrative determiners *i* NEAR S, *ku* NEAR H and *ce* AWAY FROM S4 H (S and H are Speaker and Hearer) which require a co-occurring noun. However, Korean does not have a class of independent demonstrative pronouns. The semantic equivalent of a demonstrative pronoun is a

construction including one of the three demonstrative determiners and a classifier, which Sohn (1994: 294) calls a "defective noun". Example (3) shows a sentence including the demonstrative determiner *ce* and the defective noun *it* `thing', which are commonly translated by a demonstrative pronoun. Other defective nouns that are frequently used in this construction are *kes* 'thing/fact' and i `person' (Sohn 1994: 294).

(3)  [*ce  il-ul*]       *nwu-ka    mak-keyss-ni?!*
     that thing-ACC who-NOM block-will-Q
     'Who would be able to block that [mess that I have just mentioned]?!' (Sohn 1994: 295)

Like Korean, Lealao Chinantec lacks a class of demonstrative pronouns. It uses instead a noun phrase consisting of a demonstrative determiner and the particle ʔi$^H$, which Rupp (1989: 74) characterizes as the "semantically empty head" of the construction. Compare examples (4a) and (4b) from Rupp (1989: 74):

(4)  a.  *hi$^M$    la$^M$*     b.  *ʔi$^M$      la$^M$*
         book this             PARTICLE this
         'this book'           'this one (inanimate)'

Table 4 summarizes the results of this section. It distinguishes three types of languages based on the categorial status of pronominal and adnominal demonstratives: (i) languages in which pronominal and adnominal demonstratives belong to different categories, (ii) languages that have only demonstrative pronouns, and (iii) languages that have only demonstrative determiners.

### 3.2. Demonstrative adverbs

The term demonstrative adverb is adopted from Fillmore (1982: 47), who uses this notion for locational deictics such as English *here* and *there*.[4] The category adverb subsumes expressions that are semantically quite

Table 4. *Demonstrative pronouns and demonstrative determiners*

|  | DEM PRONOUNS | DEM DETERMINERS |
| --- | --- | --- |
| Mulao | x | x |
| Turkish | x | x |
| English | x | x |
| Tuscarora | x |  |
| Wardaman | x |  |
| Korean |  | x |
| Lealao Chinantec |  | x |

diverse and morphologically often not consistently marked as a word class. Syntactically, adverbs are used as modifiers of verbs, adjectives, and other adverbs (Schachter 1985: 20). Since locational deictics are primarily used to indicate the location of the event or situation expressed by a co-occurring verb, they may be classified as adverbs.

In many languages, locational deictics can also be used adnominally, as in English *this guy here* or German *das Haus da* `this house there'. In this use, they usually co-occur with a demonstrative determiner that they intensify. That is, if a demonstrative adverb is used adnominally it does not function as an operator of the noun; rather it is used to reinforce a co-occurring demonstrative determiner. In some languages, this use has been grammaticalized and has led to new demonstrative forms consisting of a former demonstrative determiner and a locational deictic. Afrikaans has, for instance, two demonstratives, *hierdie* `this' and *daardie* `that', which are historically derived from the Dutch demonstrative/article *die* and the demonstrative adverbs *hier* `here' and *daar* `there' (Raidt 1993). When these forms first appeared they were only used adnominally; but now they are also increasingly used as independent pronouns. Similar demonstrative forms occur in Swedish (e.g., *den hdr hus-et* 'the/this here house-the') and French (e.g., *cette maison-la* 'this/that house-there').

Most languages distinguish locational deictics from pronominal and adnominal demonstratives; but there are a few languages in my sample in which they have the same form. One of them is Ngiyambaa, which has only one series of demonstratives, shown in Table 5. The demonstratives in Ngiyambaa occur in a variety of syntactic contexts: they are used as independent pronouns, as in (5a); they may co-occur with a coreferential noun, as in (Sb); and the demonstratives in locative case are also commonly used to indicate the location of an event expressedby a co-nccnrrinu verb ac in (Sc).

(5)  a.  *ŋadhu  giyanhdha-nha ŋidji-laː*
         1SG.NOM fear-PRES        this.CIRC-EST
         'I am frightened of her (this one).' (Donaldson 1980: 138)

Table 5. *Demonstratives in Ngiyambaa (Donaldson 1980: 136)*

|       | PROXIMAL | DISTAL |
|-------|----------|--------|
| ERG/INS | *ŋilu* | *ŋalu* |
| ABS | *ŋina* | *ŋana* |
| DAT | *ŋigu* | *ŋagu* |
| LOC | *ŋini* | *ŋani* |
| CIRC | *ŋidji* | *ŋadhi* |

b.  *dhuni-ga yaba-l-aga  ŋina      dhigarbila-Ø*
    sun-LOC  track-CM-IRR this.ABS porcupine-ABS
    '(You) will track this porcupine during the day.' (Donaldson 1980: 323)

c.  *yaba=lugu    ŋani-laː     guri-nja*
    track=3SG.GEN that.LOC-EST lie-PRES
    'His tracks are there.' (Donaldson 1980: 317)

The demonstrative in (Sc) is semantically equivalent to English *there,* but from a morphological and syntactic perspective it is a demonstrative pronoun in locative case. Ngiyambaa does not have a class of demonstrative adverbs; it uses instead a demonstrative pronoun with a locative case marker.

Apart from Ngiyambaa, there are only a few other languages in my sample in which adverbial demonstratives belong to the same category as demonstrative pronouns (e.g., Acehnese, see below). In most languages adverbial demonstratives are formally distinguished from demonstratives in other contexts.

## 3.3. *Demonstrative identifiers*

While demonstrative pronouns, determiners, and adverbs are wellestablished categories in linguistic analysis, demonstrative identifiers are virtually unknown in the typological and theoretical literature (but see Himmelmann 1997: 127). Demonstrative identifiers occur in identificational sentences together with a noun and, depending on the language, a copula. An initial example from Karanga (Marconnes 1931: 111) is given in (6).

(6)  *hero          sadza*
     there/that.is porridge
     'There/that is porridge.'

As pointed out in the introduction, demonstrative identifiers are usually considered pronominal demonstratives, but since many languages distinguish ordinary demonstrative pronouns from demonstratives in identificational sentences, they should be kept separate. Table 6 shows that the pronominal demonstratives in Karanga begin with a vowel, while the identificational demonstratives are marked by an initial *h-*.

If the demonstratives in identificational sentences are formally distinguished from pronominal demonstratives in other sentence types, as in Karanga, I assume that they form a class of demonstrative

Table 6. *Demonstrative pronouns and identifiers in Karanga (Marconnès 1931: 101, 110)*

|          | DEM PRONOUNS | | DEM IDENTIFIERS | |
|----------|------|------|------|------|
|          | SG   | PL   | SG   | PL   |
| PROXIMAL |      |      |      |      |
| NC 1     | *iyi*  | *idzi* | *heyi* | *hedzi* |
| NC 2     | *uyu*  | *ava*  | *hoyu* | *hava*  |
| NC 3     | *ichi* | *izvi* | *hechi*| *hezvi* |
| etc.     |      |      |      |      |
| DISTAL   |      |      |      |      |
| NC 1     | *iyo*  | *idzo* | *heyo* | *hedzo* |
| NC 2     | *uyo*  | *avo*  | *hoyo* | *havo*  |
| NC 3     | *icho* | *izvo* | *hecho*| *hezvo* |
| etc.     |      |      |      |      |

identifiers independent of demonstrative pronouns. If, on the other hand, demonstratives in identificational sentences are formally indistinguishable from demonstrative pronouns, I assume that they belong to the same grammatical category. English, for instance, does not distinguish between demonstrative pronouns and demonstrative identifiers. The demonstratives in identificational sentences are formally indistinguishable from pronominal demonstratives in other sentence types and will therefore be considered demonstrative pronouns.[5]

Demonstrative identifiers have been described under various names in reference grammars. In two previous studies (Diesel 1997, forthcoming a) I called them "predicative demonstratives". I adopted this term from studies by Denny (1982) and Heath (1984: 269-336), who use this notion for a particular class of demonstratives in Inuktitut and Nunggubuyu, respectively. Other terms that I have found in the literature that seem to correspond to the term of demonstrative identifier are "deictic predicator" (Schuh 1977: 7), "predicative pronoun" (Marconnes 1931: 110), "existential demonstrative" (Benton 1971: 90), "pointing demonstrative" (Rehg 1981: 143), and "deictic identifier pronoun" (Carlson 1994: 160). Since identificational sentences are often realized as nonverbal clauses, demonstrative identifiers are sometimes considered to be functionally equivalent to a demonstrative plus copula, which many languages require in this construction (Hengeveld 1992). In fact, demonstrative identifiers are often glossed as 'this/that.is' or 'here/there.is' (e.g., Carlson 1994: 241; Dayley 1989: 145). This explains why some studies use the attribute "predicative" in order to characterize demonstrative identifiers. However, the occurrence of demonstrative identifiers is not restricted to nonverbal clauses. Demonstratives in copular clauses are also often formally distinguished from (pronominal)

demonstratives in other sentence types (see below). Since demonstratives in copular clauses are certainly not predicative, I decided to replace the term "predicative demonstrative" by "demonstrative identifier".

Demonstrative identifiers are similar to deictic presentatives such as French *voila,* Latin *ecce,* and Russian *vot.* Fillmore (1982: 47) calls such presentatives "sentential demonstratives". Both demonstrative identifiers and sentential demonstratives are commonly used to introduce new discourse topics, but they have different syntactic properties. Demonstrative identifiers are embedded in a specific grammatical construction an identificational sentence while sentential demonstratives arc syntactically more independent. Although they might occur in sentences that are functionally equivalent to an identificational construction (e.g., *Voila un taxi* `Here is a taxi'), they are more commonly used as oneword utterances, which are often loosely adjoined to an adjacent construction. I assume therefore that demonstrative identifiers arc distinguished from sentential demonstratives, but the distinction is not clear-cut (see the discussion of demonstrative identifiers in Nunggubuyu below).

In the remainder of this section I will discuss further examples of demonstrative identifiers. First I consider demonstrative identifiers whose stems are phonologically distinguished from the stems of demonstrative pronouns, and then I examine demonstrative identifiers that differ from demonstrative pronouns in their inflection.

Table 7 shows the demonstrative pronouns and demonstrative identifiers in Supyire. The demonstrative pronouns have an initial nasal consonant, which does not occur on demonstrative identifiers. Both demonstrative pronouns and demonstrative identifiers are inflected for gender (noun class) and number. Carlson (1994: 240) points out that the demonstrative identifiers might have developed from a pronominal demonstrative and a copula. Their use is restricted to affirmative nonverbal clauses. In negative contexts, Supyire uses a specific negative identifier, and in copular clauses demonstrative identifiers are replaced by demonstrative pronouns. Example (7a) shows a demonstrative pronoun, and example (7b) shows one of the demonstrative identifiers.

(7)  a. *mu  à   pyi a   ŋgé    cè    la?*
        you PERF PST PERF DEM.G1.SG know Q
        'Did you know this/that one?' (Carlson 1994: 190)
     b. *ku    kè*
        it.G2.SG here.is.G2.SG
        'Here/there it is.' (Carlson 1994: 241)

Table 7. *Demonstrative pronouns and identifiers in Supyire (Carlson 1994: 159–161)*

|  | DEM PRONOUNS | | DEM IDENTIFIERS | |
|  | SG | PL | SG | PL |
|---|---|---|---|---|
| NC1 | ŋ́gé | m̀píí | we | pii |
| NC2 | ŋ̀ké | ɲ̀jé | ke | ye |
| NC3 | ǹdé | ɲ̀cíí | le | cii |
| NC4 | ǹté | | te | |
| NC5 | m̀pé | | pe | |

Table 8 shows the demonstrative pronouns and demonstrative identifiers in Ponapean. The demonstrative pronouns begin with a bilabial nasal and the demonstrative identifiers have an initial high front vowel. Examples (8a-8b) illustrate the use of these forms: (8a) shows a demonstrative pronoun functioning as the subject of the verb *mengila* `wither', and (8b) shows a demonstrative identifier in a nonverbal clause.

(8)  a.  *mei pann mengila*
         this will  wither
         'This (one) will wither.' (Rehg 1981: 143)
     b.  *ien           noumw pinselen*
         That/there your    pencil
         'There is your pencil.' (Rehg 1981: 150)

Finally, in Kilba demonstrative identifiers are monosyllabic enclitics while demonstrative pronouns are free forms consisting of two or more syllables. The use of demonstrative identifiers is restricted to nonverbal clauses:

(9)  *kɔ̀tɔ̀ŋ=ná*
     sheep=DEM
     'It's a sheep.' (Schuh 1983: 318)

Schuh (1983: 317) classifies the enclitics *=nk, =nda,* and *=ŋgk* as demonstratives, but he commonly translates them by a third person

Table 8. *Demonstrative pronouns and identifiers in Ponapean (Rehg 1981: 150–153)*

|  | DEM PRONOUNS | | DEM IDENTIFIERS | |
|  | SG | PL | SG | PL |
|---|---|---|---|---|
| NEAR S | me(t) | metakan | ie(t) | ietakan |
| NEAR H | men | menakan | ien | ienakan |
| AWAY S/H | mwo | mwohkan | io | iohkan |

Table 9. *Demonstrative pronouns and identifiers in Kilba (Schuh 1983: 315–317)*

|  | DEM PRONOUNS | DEM IDENTIFIERS |
|---|---|---|
| PROXIMAL | (nɔ́)nɔ́nnà | =ná |
| DISTAL | (nà)ndándà | =ndá |
| REMOVED | (ŋgɔ̀)ŋgɔ́ŋgà | =ŋgá |

pronoun or an expletive. The demonstrative enclitics are usually unstressed like third person pronouns, but since they contrast deictically I consider them demonstratives. Demonstrative identifiers are genuine deictic expression; they are not expletives such as English *it* in *it is Friday*. In fact, in some languages demonstrative identifiers are primarily used with reference to entities in the speech situation. This is reflected in the terms that some of my sources use for demonstrative identifiers: Rehg (1981: 150) calls them "pointing demonstratives" and Carlson (1994: 160) uses the term "deictic identifier pronoun".

In Supyire, Ponapean, and Kilba demonstrative identifiers and demonstrative pronouns have different stem forms. In Nunggubuyu, Tumpisa Shoshone, and German demonstrative identifiers have the same stems as demonstrative pronouns, but they differ in their inflection.

In Nunggubuyu demonstrative pronouns occur with two noun class markers, a prefix and a suffix, while demonstrative identifiers take only the suffix. The noun class affixes are also used to indicate number distinctions. Both demonstratives occur optionally with a case marker. Table 10 shows the masculine singular forms; demonstratives of other noun classes are formed in the same way. Demonstrative identifiers are often used without a co-occurring nominal so that one might argue that they are better analyzed as sentential demonstratives. However, since Nunggubuyu is a nonconfigurational language, in which all constituents are syntactically more independent than in languages with rigid phrase structure configurations (Heath 1984, 1986), I assume that the ability to use demonstrative identifiers without a co-occurring noun

Table 10. *Demonstrative pronouns and identifiers in Nunggubuyu (Heath 1984: 272–274)*

|  | DEM PRONOUNS | DEM IDENTIFIERS |
|---|---|---|
| PROXIMAL | na:-'-gi | ya:-gi |
| MEDIAL | na:-da-gi | da-gi |
| DISTAL | nu:-'wa:-gi | yuwa:-gi |
| ANAPHORIC | nu:-'ba:-gi | ba-gi |

is not a property of the demonstratives but rather a consequence of general typological characteristics. Example (10) shows a demonstrative identifier that is accompanied by a coreferential noun.

(10)  *ya:-gi*      *na-waḷyi-nʸunᵍ*
      this-M.SG  M.SG-male-HUMAN.SG
      'Here is the man.' (Heath 1984: 278)

In Tumpisa Shoshone, demonstrative pronouns are inflected for number and case and they may take the prefix s-, which Dayley (1989: *136)* calls an "obviative marker". The demonstrative identifiers are unmarked for number; they take the suffix *-sii(n)* instead of a regular case ending; and they never occur in the obviative form. Table 11 shows the proximal and medial forms; there are parallel forms built on three other demonstrative roots. The use of demonstrative pronouns and identifiers is exemplified in (11a) and (11b), respectively.

(11)  a.  *u punikka setü*
          it see    this
          'This one saw it.' (Dayley 1989: 141)
      b.  *esü    nahim pungku*
          this.is our.DU pet
          'This is our pet.' (Dayley 1989: 145)

Finally, in German pronominal demonstratives are inflected fog gender, number, and case, while identificational demonstratives are morphologically invariable. The only demonstrative form that can be used in identificational sentences is the nominative/accusative, singular neuter form *das. No* other form may occur in this context. Example (12) shows that identificational demonstratives do not agree with the predicate nominal. The singular, neuter form *das* is used regardless of the gender and number features of the co-occurring NP.[6]

Table 11. *Demonstrative pronouns and identifiers in Tümpisa Shoshone (Dayley 1989: 137–145)*

|          |     | DEM PRONOUNS |               | DEM IDENTIFIERS |
|----------|-----|--------------|---------------|-----------------|
|          |     | SUBJ         | OBJ           |                 |
| PROXIMAL | SG  | *(s)-i-tü*     | *(s)-i-kka*     | *i-sü(n)*         |
|          | DU  | *(s)-i-tungku* | *(s)-i-tuhi*    |                 |
|          | PL  | *(s)-i-tümmü*  | *(s)-i-tümmi*   |                 |
| MEDIAL   | SG  | *(s)-e-tü*     | *(s)-e-kka*     | *e-sü(n)*         |
|          | DU  | *(s)-e-tungku* | *(s)-e-tuhi*    |                 |
|          | PL  | *(s)-e-tümmü*  | *(s)-e-tümmi*   |                 |

(12)  a.  *das*                    *ist meine Schwester*
          DEM.NOM/ACC.SG.N is my    sister.F.SG
          'This is my sister.'
      b.  *das*                    *sind meine Freunde*
          DEM.NOM/ACC.SG.N are my    friend.PL
          'These are my friends.'

*3.4. Conclusion*

In this section, I have presented a typology of demonstratives based on their syntactic features. I have argued that one has to distinguish between the use of a demonstrative in a specific syntactic context and its categorial status. Demonstratives occur in four different syntactic contexts: (i) they are used as independent pronouns in argument position of verbs and adpositions, (ii) they occur together with a noun in a noun phrase, (iii) they may function as locational adverbs modifying a co-occurring verb, and (iv) they are used in identificational sentences. I have shown that demonstratives being used in these four contexts are often formally distinguished from one another. They might have different stem forms, they might differ in their inflection, or they might have different syntactic properties. If they are distinguished by any of these criteria, they belong to different grammatical categories, which I call (i) demonstrative pronouns, (ii) demonstrative determiners, (iii) demonstrative adverbs, and (iv) demonstrative identifiers. I have shown that languages differ as to whether they exploit all four of these categories. Some languages use the same demonstratives in more than one syntactic context, while other languages employ distinct forms in each position.

To conclude this section, I will discuss the demonstratives of two languages that exemplify the extent of variation in this domain: one in which pronominal, adnominal, adverbial, and identificational demonstratives are formally distinguished, and one in which they belong to the same category. Acehnese represents the latter. The Acehnese demonstratives are shown in Table 12. Acehnese has three demonstrative particles that indicate three degrees of distance. Each one of these demonstratives has a bound allomorph. All six demonstrative forms may occur in every possible syntactic context. Consider the following examples.

(13)  a.  *ureueng=nyan*
          person=that
          'that person' (Durie 1985: 191)

Table 12. *Demonstratives in Acehnese (Durie 1985: 130)*

|  | Free forms | Bound allomorphs |
|---|---|---|
| PROXIMAL | *nyoe* | =*noe* |
| MEDIAL | *nyan* | =*nan* |
| DISTAL | *jêh* | =*dêh* |

b. *neu—peusom nyan bek ji—teu-pue lê—gop*
   2=hide      that DONT 3=know-what by=other.person
   'Hide that so that no one else will know.' (Durie 1985: 268)

c. *nyan ji=pura-pura teungeut jih*
   there 3=pretend-pretend sleep    he
   'There he goes pretending to be asleep.' (Durie 1985: 256)

d. *nyan aneuk=lông*
   that child=1SG
   'That is my child.' (Durie 1985: 132)

All four examples include the medial demonstrative *nyan*. In (13a) *nyan* is used adnominally. Adnominal demonstratives usually cliticize to a preceding noun, but they are not generally bound. In (13b) *nyan is* used as an independent pronoun, functioning as an argument of the verb *peusom* 'to hide'. The demonstrative in (13c) is ambiguous: it is either used to indicate a location or it serves as a presentational marker. Durie (1985: 132) points out that the Acehnese demonstratives may function as locational adverbs (which he calls "locative pronouns"), but apart from (13c) I have found no other example in which *nyan* might be interpreted as an adverbial demonstrative. There are, however, examples in which some of the other demonstratives are used as locational adverbs.' In the final example *nyan* serves as an identificational marker in a nonverbal clause. The sentences in (13a-13d) show that adnominal, pronominal, adverbial, and identificational demonstratives are formally indistinguishable in Acehnese. They belong to the same grammatical category, which may occur in four different syntactic contexts.

The demonstratives in Pangasinan represent the other end of the spectrum. Pangasinan uses specific demonstrative forms in each of the four contexts in which demonstrative occur, as shown in Table 13. The Pangasinan demonstratives are divided into four grammatical categories: demonstrative determiners, demonstrative pronouns, demonstrative adverbs, and demonstrative identifiers.[9] The demonstrative determiners are formed from the article *sa*, the deictic roots *to* PROXIMAL and *ma* DISTAL, and the suffix -*y*, which Benton calls a topic

Table 13. *Demonstrative in Pangasinan (Benton 1971: 51-52, 88–91)*

| DEM DET | | DEM PRO | | DEM ADV | | DEM IDENT | |
|---|---|---|---|---|---|---|---|
| PROX.SG/PL | *sá-ta-y* | PROX.SG | *(i)yá* | PROX | *diá* | PROX | *nía* |
| PROX.PL | *sa-rá-ta-y* | PROX.PL | *(i)rá-ya* | NEAR H | *ditán* | NEAR H | *nítan* |
| DIST.SG/PL | *sá-ma-y* | NEAR.H.SG | *(i)tán* | DISTAL | *dimán* | DISTAL | *níman* |
| DIST.PL | *sa-rá-ma-y* | NEAR H.PL | *(i)rá-tan* | | | | |
| | | DISTAL.SG | *(i)mán* | | | | |
| | | DISTAL.PL | *(i)rá-man* | | | | |

marker, but which is probably a linker (Nikolaus Himmelmann, personal communication). In the plural, demonstrative determiners are marked by -ra-, which precedes the deictic root and the linker. Benton (1971: 51-52) classifies these forms as articles, but since they contrast deictically I consider them demonstratives. The demonstrative pronouns consist of the demonstrative roots *ya* PROXIMAL, *tan* NEAR H, and *man* DISTAL, which optionally occur with an initial high front vowel; the plural forms are also marked by -ra-. The demonstrative adverbs occur with an initial stop and do not have plural forms. And the demonstrative identifiers take an initial nasal and are also unmarked for number. The sentences in (14a-14d) exemplify the use of these forms.

(14) a. *sá-ma-y apók*
   ART-DEM-LK grandchild.my
   'my grandchild' (i.e., 'that grandchild of mine') (Benton 1971: 53)

b. *sikató so analíw imán*
   he    TOPIC bought that
   'He (is the one who) bought that.' (Benton 1971: 89)

c. *sikató-y inmogíp ditán*
   he-LK slept    here/there
   'He (was the one who) slept here/there' (Benton 1971: 90)

d. *nía so kánen mo*
   here.is TOPIC food your
   'Here's your food.' (Benton 1971: 91)

The demonstrative in (14a) is a demonstrative determiner; the demonstrative in (14b) is a pronoun; the one in (14c) is a demonstrative adverb; and the final example shows a demonstrative identifier.

Acehnese and Pangasinan represent the two ends of a spectrum ranging from languages in which all demonstratives belong to the same category to languages in which demonstratives are divided into four distinct classes. Most languages fall somewhere in between these two

extremes. English distinguishes, for instance, three demonstrative categories: demonstrative adverbs, demonstrative determiners, and demonstrative pronouns. It does not have a separate class of demonstrative identifiers; the demonstratives in identificational constructions are ordinary demonstrative pronouns. Korean has two demonstrative categories: demonstrative determiners and demonstrative adverbs. It does not have demonstrative pronouns and demonstrative identifiers. The functional equivalent of the latter two is a noun phrase consisting of a demonstrative determiner and a defective noun. To give one further example, Nunggubuyu has demonstrative pronouns, demonstrative adverbs and demonstrative identifiers. Adnominal demonstratives are demonstrative pronouns that co-occur with an appositive noun (Heath 1986). The three demonstrative categories are distinguished through the use of noun class markers. Demonstrative pronouns take two noun class markers, a prefix and a suffix; demonstrative adverbs occur only with noun class prefixes; and demonstrative identifiers take only noun class suffixes.

## 4. The morphosyntactic properties of demonstratives in diachronic perspective

### 4. L Introduction

Having described the morphosyntactic properties of demonstratives from a synchronic point of view, I will now examine the process whereby demonstratives evolve into grammatical markers.

Crosslinguistically demonstratives provide a frequent historical source for definite articles, relative and third person pronouns, copulas, sentence connectives, complementizers, number markers, and many other grammatical items. The development of multiple grammatical markers from a single historical source has been called polygrammaticalization (Craig 1991). It occurs when a single item undergoes grammaticalization in several constructions (Lehmann 1995b: 1258). In this section I show that the path-of-evolution that a demonstrative might take is crucially determined by the syntactic context in which it occurs. More specifically, I show that pronominal, adnominal, adverbial, and identificational demonstratives develop into grammatical items that usually retain some of the syntactic properties that the demonstrative had in the source construction. Pronominal demonstratives develop into grammatical items that are either used as pronouns or that have at least some of the properties of a pronominal item. Adnominal demonstratives give rise to grammatical markers functioning as operators of nominal constituents. Adverbial demonstratives

evolve into operators of verbs or verb phrases. And identificational demonstratives develop into grammatical markers that interact with constituents derived from predicate nominals.

In Section 4.2 1 discuss the criteria that I have used in order to determine if and to what extent a demonstrative has undergone grammaticalization. Sections 4.3 to 4.6 describe the grammaticalization of pronominal, adnominal, adverbial, and identificational demonstratives, respectively.

### 4.2. Criteria for the grammaticalization of demonstratives

Demonstratives are deictic expressions. They are primarily used to focus the hearer's attention on objects, persons, or locations in the speech situation, but they may also refer to linguistic entities in discourse (Lyons 1977: 636-677). The latter usage is often divided into the anaphoric and the discourse deictic use (e.g., Levinson 1983: 85-86; Himmelmann 1996: 224-229). Anaphoric demonstratives are coreferential with a noun phrase in the preceding discourse; they keep track of prior participants. Discourse deictic demonstratives refer to propositions; they are used to link two discourse units: the one in which they are embedded and the one to which they refer.[10]

The diachronic reanalysis of demonstratives originates from the anaphoric and discourse deictic usage. One can think of the grammaticalization of demonstratives as a cline ranging from demonstratives that are used to orient the hearer in the outside world to grammatical items serving a specific syntactic function. Anaphoric and discourse deictic demonstratives occur somewhere between the two ends of this cline. They usually have the same forms as demonstratives that refer to entities in the speech situation, but they serve a language internal function similar to grammatical markers.

Grammaticalization may affect all aspects of a linguistic sign: its phonological form, its morphosyntactic features, and its meaning or function. The following changes frequently occur when demonstratives grammaticalize:

FUNCTIONAL CHANGES:
(a) grammatical items that develop from demonstratives are no longer used to focus the hearer's attention on entities in the outside world;
(b) they are usually deictically non-contrastive.

SYNTACTIC CHANGES:
(c) their occurrence is often restricted to a specific syntactic context;

(d) they are often obligatory to form a certain grammatical construction.

MORPHOLOGICAL CHANGES:

(e) they are usually restricted to the distal or, less frequently, the proximal form;
(f) they may have lost their ability to inflect.

PHONOLOGICAL CHANGES:

(g) they may have undergone a process of phonological reduction;
(h) they may have coalesced with other free forms.

These eight criteria might be used in order to determine if and to what extent a demonstrative is grammaticalized. " The two functional criteria apply to (almost) all grammatical markers that evolved from a demonstrative. The other criteria may or may not apply, depending on the grammaticalization channel, the properties of the source item, and the stage that an emergent grammatical marker has reached. More grammaticalized demonstratives are more likely to have undergone some of the formal changes than less grammaticalized demonstratives. At the initial stage of a grammaticalization process, grammatical markers often have the same morphosyntactic and phonological properties as the source item (Hopper 1991: 21).

Note that some of these criteria also apply to anaphoric and discourse deictic demonstratives: (i) both anaphoric and discourse deictic demonstratives are often deictically non-contrastive; (ii) anaphoric demonstratives are in many languages restricted to the distal (or medial) forms (Anderson & Keenan 1985); and (iii) discourse deictic demonstratives are sometimes restricted in their inflection. [12] This suggests that anaphoric and discourse deictic demonstratives are already to some extent grammaticalized. The division between grammatical markers and anaphoric/discourse deictic demonstratives is, strictly speaking, an idealization. There is no clear-cut borderline between demonstratives and grammatical markers; there are only demonstratives that are more or less grammaticalized.

In the following four sections (4.3 to 4.6) 1 describe 17 grammaticalization channels that commonly originate from a demonstrative. For each of these channels, I provide at least one example of a grammatical item that has undergone some phonological and/or morphosyntactic changes so that source and target are formally distinguished. Some of the grammaticalization channels that I examine have been discussed extensively in the literature on grammaticalization, but others have only been described in reference grammars or other special sources. I begin my investigation with the reanalysis of pronominal demonstratives, followed by the grammaticalization of adnominal and adverbial demonstratives, and 1 conclude by discussing grammatical items that have developed from identificational demonstratives in copular and nonverbal clauses.

### 4.3. The grammaticalization of pronominal demonstratives

4.3.1. *Third person pronouns.* In many languages, third person pronouns are historically derived from pronominal demonstratives.[13] Givon (1984: 353-360) has shown that the emergence of third person pronouns from demonstratives is part of a diachronic cline that one might describe as follows.

(15) demonstrative pronoun > third person pronoun > clitic pronoun > verb agreement

At the beginning of this cline we find anaphoric pronominal demonstratives tracking emphatic, contrastive, and unexpected discourse topics. Anaphoric demonstratives that develop into third person pronouns become destressed and their use is gradually extended to all persisting topics. When third person pronouns continue to grammaticalize they may become clitics, which may eventually turn into agreement markers (cf. Givon 1984: 353; Lehmann 1995a: 39-42).

The entire cline is attested in the history of French. Modern standard French uses pronominal clitics to track continuing topics; but in certain nonstandard varieties the clitics are essentially used as agreement markers, which are commonly accompanied by a coreferential (pro)noun (see Lambrecht 1981). Historically, the clitics go back to free third person pronouns, which in turn developed from the demonstrative *ille* in Vulgar Latin (e.g., Harris 1978: 100-101).

4.3.2. *Relative pronouns.* The formation of relative clauses may involve a relative pronoun that evolved from a pronominal demonstrative (Lehmann 1984: 373-375). Like anaphoric pronominal demonstratives, relative pronouns are coreferential with a prior noun (phrase); but unlike the former, relative pronouns occur only in subordinate clauses. Consider, for instance, the following examples from German.

(16) a. *er hat einen neuen Vorschlag gemacht, der mir besser*
he has a new suggestion made REL me better
*gefallen hat*
pleased has
'He made a new suggestion, which I liked better.'

b. *er hat einen neuen Vorschlag gemacht; der hat*
he has a new suggestion made DEM has
*mir besser gefallen*
me better pleased
'He made a new suggestion; this one I liked better.'

The relative pronoun *der* in (16a) occurs in a subordinate clause, marked by the position of the finite verb at the end of the sentence. It has the same form as the pronominal demonstrative in (16b), which is embedded in an independent main clause (marked by the finite verb in second position). Relative pronouns and pronominal demonstratives are morphologically indistinguishable in German;[14] but since their syntax is different they are commonly distinguished (e.g., Eisenberg 1994: 200). Relative pronouns are generally the first element in a clause, while pronominal demonstratives are not restricted to a specific position. That is, the relative pronoun in (16a) can only occur clause-initially, while the pronominal demonstrative in (16b) may also occur after the finite verb (cf. *mir hat der besser gefallen vs.\* mir der besser gefallen hat).* Moreover, while relative pronouns are generally unstressed, anaphoric demonstratives may bear a contrastive accent.

According to Behaghel (1923-1932, III: 766), relative pronouns in German are derived from pronominal demonstratives that continued a noun of the preceding sentence. The anaphoric demonstrative assumed the function of a relative pronoun when the sentence in which it occurred was reinterpreted as an attributive clause of the antecedent.'ˢ A similar process gave rise to the development of relative pronouns in Old English (Traugott 1992: 224-226) and Ancient Greek (Lehmann 1984: 373-375).

4.3.3. *Complementizers.* Like relative pronouns, complementizers are frequently based on pronominal demonstratives (cf. Frajzyngier 1991: 236). The complementizers of North and West Germanic languages arose, for instance, from a demonstrative that originally occurred in the main clause referring forward to the subsequent proposition. Harris & Campbell (1995: 287) provide the following example from Middle High German, which exemplifies the source construction.

(17) *joh gizalta in     sâr          thaȝ, thiu sâlida untar   in     uuas*
    and told    them immediately that  the  luck  among them was
    'And he told them immediately that good fortune was among them.'

The initial clause in (17) includes the pronominal demonstrative *tha3*, which anticipates the information expressed in the following clause. When the cataphoric demonstrative was reanalyzed as a complementizer it became associated with the following subordinate clause where it occurs in Modern German.

The same process gave rise to the complementizer *that* in English (Traugott 1992: 230-238). Hopper & Traugott (1993: 185-189) argue that the complementizer *that* started out as a copy of a cataphoric pronominal demonstrative that occurred in the preceding main clause. Consider the following example from Old English (Hopper & Traugott 1993: 1R6)

(18) *þæt  gefremede Diulius hiora consul, þæt   þæt  angin*
    DEM arranged  Diulius their consul COMP DEM beginning
    *wearð tidlice  þurhtogen*
    was   in.time achieved
    'Their consul Diulius arranged (it) that it was started on time.'

The initial *Pcet* in (18) is a fronted object pronoun used to anticipate the complement clause, which is introduced by a copy of the cataphoric demonstrative. Hopper & Traugott (1993: 186) point out that one could analyze the complement clause as an appositive of the object pronoun, rather than an argument of the verb in the initial clause. The appositive clause turned into a complement clause when the cataphoric demonstrative was no longer used to anticipate its occurrence.

4.3.4. *Sentence connectives.* Sentence connectives are frequently formed from a pronominal demonstrative and some other element that indicates the semantic relationship between the two propositions joined by a connective. Consider, for instance, the following example from Hixkaryana (Derbyshire 1985: 157).

(19) *nomokyaknano tuna heno. iro  ke          romararin*
    it.was.coming rain QNT   DEM because.of my.field
    *hokohra          wehxaknano*
    not.occurring.with I.was
    'It was raining heavily. Therefore I did not work on my field.'

Example (19) shows two clauses linked by the pronominal demonstrative *iro* and the causal postposition *ke.* Derbyshire (1979: 57, 1985: 157) treats *iro ke* as a sentence connective, consisting of two words (cf. English *so that),* which are routinely used in combination to express a causal link between two propositions. Similar sentence connectives occur in many other languages in my sample. Khasi has, for instance, a set of sentence connectives formed from a distal demonstrative and a preposition. Example (20) exhibits a complex sentence consisting of two clauses linked by *nayta* `then', which is formed from the adpositional marker *nark-* and the demonstrative root *to* (Nagaraja 1985: 100).

(20) *u   khla  u    la  baːm naŋ-ta u    la   thyaʔ*
    ART tiger ART PST eat    P-DEM   ART PST sleep
    'The tiger ate then he slept.'

4.3.5. *Possessives.* Many languages do not have possessive pronouns and use personal or demonstrative pronouns (often in genitive case) in order to indicate a possessor. For instance, in Supyire a possessor may be realized by a pronominal demonstrative preceding the noun denoting the possessee. Possessive demonstratives have the same form as adnominal demonstratives, but unlike the latter possessive demonstratives agree with their antecedent rather than with the head noun. The different agreement behavior of adnominal and possessive demonstratives is shown in (21 a-21b): the adnominal demonstrative in (21a) has the same noun class features as the following noun (Carlson 1994: 200), while the noun class of the possessive demonstrative in (21b) corresponds to the noun class of its referent or antecedent (Carlson 1994: 200-201).

(21)  a. *ŋké      ba-gé*      b. *ŋgé     ba-gé*
         DEM.G2.SG house-DEF.G2.SG    DEM.G1.SG house-DEF.G2.SG
         'that/this house'            'this/that one's house'

The possessive demonstratives in Supyire are ordinary pronominal demonstratives serving a particular semantic function in this construction. They may, however, turn into possessive markers if they become disassociated from pronominal demonstratives being used in other contexts. The development of possessive markers from pronominal demonstratives is well attested. The French possessive *leur* `their' developed, for instance, from the genitive masculine plural form of the pronominal demonstrative *ille* in Vulgar Latin. Harris (1978: 87-95) describes the development as follows. Classical Latin used the possessive pronoun *suus* in order to indicate a possessor within the same sentence, and it used the genitive forms of the anaphoric demonstrative *is* in order to indicate a possessor that is not mentioned in the same clause. In other words, Classical Latin distinguished reflexive from non-reflexive possessives: suns *was* used as a reflexive possessive, *and eius* na/F./N.sG, *eorum* M.PL, and *earum* FTL functioned as non-reflexive possessives. The latter were later replaced by *illius* M/F.SG, *illorum* M.PL, and *illarum* F.NL when the demonstrative *ille* took over the function of *is*. Old French lost the distinction between reflexive and non-reflexive possessives and restricted the use of *suus* to singular while the former masculine plural form of the non-reflexive possessives, *illorum,* was

adopted as the corresponding plural form. The singular and the plural feminine forms, *illius* and *illarum,* disappeared. As the grammaticalization process continued, *illorum was* shortened to *leur (il-for-um)* and by analogy it developed a new plural form, *leurs,* used to indicate multiple possessees.

## 4.4. *The grammaticalization of adnominal demonstratives*

*4.4.1. Definite articles.* Adnominal demonstratives provide a common historical source for definite articles. The development has been described in numerous studies including Christophersen (1939), Heinrichs (1954), Kramsky (1972), Ultan (1978), Harris (1978, 1980), Greenberg(1978,1991), Vogel (1993), Cyr (1993), Epstein (1994, 1995), Lehmann (1995a), Laury (1995, 1997), and Himmelmann (1997). This section summarizes the central findings discussed in these works.

Most of the studies that I have cited assume that definite articles arise from anaphoric adnominal demonstratives (e.g., Greenberg 1978). The use of anaphoric demonstratives is usually confined to non-topical antecedents that tend to be somewhat unexpected, contrastive, or emphatic (e.g., Givon 1984: 354; Comrie forthcoming). When anaphoric demonstratives develop into definite articles their use is gradually extended from non-topical antecedents to all kinds of referents in the preceding discourse. In the course of this development, demonstratives lose their referential function and turn into a formal marker of definiteness. An example of such a definite marker is the article *the* in English.

Greenberg (1978) has shown that the grammaticalization of adnominal demonstratives often continues after they have turned into a definite marker. He shows that the use of definite articles may spread from definite nouns to nouns expressing specific indefinite information. When this happens, articles occur with (almost) every noun, definite and indefinite, unless the noun is (i) non-specific (i.e., generic), (ii) inherently definite (e.g., proper names), or (iii) otherwise marked for definiteness (e.g., by a demonstrative). Greenberg mentions several Bantu languages having articles of this type (e.g., Bemba, Zulu, Xhosa). When such articles continue to grammaticalize they may turn into gender or noun class markers before they eventually disappear.

*4.4.2. Boundary markers of pootnominal relative clauses/attributes.* Relative pronouns are only one of several relative markers that may arise from a demonstrative. Some African languages have relative

clauses in which the head of the relative construction is marked by an adnominal demonstrative that is repeated at the end of the relative clause. Consider, for instance, the following example from Sango (Samarin *1967: 73*).

(22) *áfamille só ahé   mbi só, mbi yí ála pεpε*
    relatives this laugh 1SG this 1SG like them NEG
    'Relatives who  make fun of me, I don't like them.'

The relative construction in *(22)* includes two adnominal demonstratives: one that occurs after the head noun, and one that occurs at the end of the relative clause. The initial demonstrative can be analyzed as a modifier of the head noun, but the final demonstrative does not have an obvious function. Samarin *(1967: 73)* argues that the final instance of so functions to tie the whole construction together. It is a grammatical marker used to indicate the final boundary of the relative clause.
    Sankoff & Brown *(1976)* describe the emergence of a similar relative construction in Tok Pisin. Like relative clauses in Sango (and other Niger-Congo languages, e.g., Izi), relative clauses in Tok Pisin occur with an adnominal demonstrative at the final boundary of the relative clause.

(23) *meri ia, em i    yangpela meri, draipela meri ia,  em*
    girl  REL SG  PRED young    girl  big      girl  REL 3SG
    *harim istap*
    listen ASP
    'This girl, who was a young girl, big girl, was listening.'
    (Sankoff & Brown  1976: 632)

The relative clause in *(23)* is marked by the particle *ia*, which is etymologically related to the adverbial demonstrative *here* in English. *Ia* was first reanalyzed as an adnominal demonstrative before it assumed the function of a boundary marker in relative clauses (e.g., *man is* `this guy'; Sankoff & Brown *1976: 639-641*). Sankoff & Brown *(1976: 657)* point out that *is* is often omitted when the relative clause occurs at the end of a sentence, where the final boundary of the relative clause is sufficiently marked by intonation. They characterize the two instances of *is* in *(23)* as a "bracketing device" used to mark relative clauses and other postnominal attributes (Sankoff & Brown *1976: 631*). In their perspective, both instances of *is* serve a grammatical function in this construction. Example *(24)* shows that the *is ... is* construction is not only used to mark relative clauses; it also occurs with nominal attributes that follow a preceding noun.

(24) *...na  em, man ia, lapun man ia,  stap   autsait ia.*
    and 3SG man this old    man this stayed outside here
    '...and this man, this old  man, stayed outside.' (Sankoff & Brown 1976: 642)

In this example, *is* "brackets" an appositional noun phrase. Sankoff & Brown maintain that *is ... is* has basically the same function in this construction as in relative clauses. In both instances it is used to mark lexical material that provides necessary information for the identification of the preceding noun (Sankoff & Brown *1976: 640*).[16]
    Finally, Ewe has relative clauses that are marked by two relative particles, *si* and *lk*, which seem to have a very similar function as the two *id sin* Tok Pisin.

(25) *nyɔ́nu si vá  étsɔ    lá mé-ga-le  o*
    woman REL come yesterday REL NEG-yet-be NEG
    'The woman who came yesterday is no longer here.' (Heine & Reh 1984:  251)

Sentence *(25)* includes a relative construction that is marked by two relative particles: si and *la. Si* follows the head noun and *la* occurs at the end of the relative clause. Historically, *si* is related to the proximal demonstrative *sia*, which is composed of a demonstrative root and a definite marker; and *la* can be traced back to a definite article, which in turn may have developed from an adnominal demonstrative. Heine & Reh *(1984: 251)* consider si and *la a* "discontinuous morpheme" used to mark relative clauses. According to their description, si ... *lk* has basically the same function as *is ... is* in Tok Pisin.

*4.4.3. Determinatives.* A determinative is a grammatical item used to mark the head of a restrictive relative clause (see Quirk et al. *1972: 217;* Himmelmann *1997: 77-80*). Swedish has such relative markers at an early stage of the grammaticalization process. The determinatives are morphologically indistinguishable from adnominal demonstratives, but their semantic and syntactic properties are different. Adnominal demonstratives refer to entities in the speech situation or in the universe of discourse, while determinatives are neither deictic nor anaphoric, rather, they are used as formal markers of the head of a subsequent relative clause. And further, while demonstratives co-occur with nouns that are marked by a definite article, determinatives occur with nouns that do not take a definite marker. Consider the following examples (Holmes & Hinchliffe *1994: 167, 168*).

(26)  a.  *de  turist-er-na  fick mycket sol*
           DEM tourist-PL-DEF got lot.of  sun
           'Those tourists got a lot of sun.'
     b.  *de  turist-er  som åkte  till Island fick mycket sol, ...*
           DTM tourist-PL REL went to Island got lot.of  sun ...
           'Those tourists who went to Iceland got a lot of sun, ...'

Example (26a) shows an adnominal demonstrative modifying a noun that is marked for definiteness by the suffix *-na*, while sentence (26b) includes an adnominal determinative preceding a noun that does not have a definite marker. Note that the nominal head of a relative clause is not generally used without a definite marker; the definite article is only omitted if the head noun is accompanied by a determinative (Holmes & Hinchliffe 1994: 167).

  Determinatives are not only used adnominally. Example (27) shows a pronominal determinative functioning as the head of a relative clause (Holmes & Hinchliffe 1994: 169).

(27)  *Island  har mycket att bjuda dem som gillar äventyr*
        Iceland has a.lot  to offer DTM REL like  adventure
        'Iceland has a lot to offer those who like adventure.'

  German has a determinative that is composed of the definite article *der* and the demonstrative *jener* (Lockwood 1968: *73*). *Derjenige* and its inflected forms are primarily used as the head of a relative clause (Drosdowski 1995: 336):

(28)  *derjenige, der  das gemacht hat, wird bestraft*
        the.one   who this did       has will be.punished
        'The one who has done this will be punished.'

In colloquial German, *derjenige* may also occur with a subsequent prepositional phrase (e.g., *wir nehmen denjenigen mit dem besten Angebot* 'we will take the one with the best offer'), and occasionally it is used as a plain pronoun (e.g., *derjenige loll kommen* 'that one is supposed to come'); but according to Lockwood (1968: 73), these are later extensions of the use of *derjenige* with a following relative clause. That is, *derjenige* was originally used only as a determinative pronoun. 17

*4.4.4. Number markers.* In a recent study, Frajzyngier (1997) has shown that demonstratives may be the historical source for plural markers. He discusses data from several Chadic languages in which

plural markers and demonstratives are morphologically related.[1s] Consider the following examples from Mopan (29a) and Podoko (29b) (Frajzyngier 1997: 201, 207-208).

(29)  a.  *saar*  'hand'      b.  *ɗəya*       'bird'
          *saar mo* 'hands'       *ɗəya-kaki* 'birds'
          *mo*    'these/they'    *ʸma-ká*    'that'

In both examples the plural marker has the same form as a demonstrative or one of its components. Based on these and parallel data from several other Chadic languages, Frajzyngier maintains that the plural markers in Chadic developed from former demonstratives. His analysis is straightforward in the case of plural markers that developed from plural demonstratives: the latter are readily reinterpreted as plural markers if they lose their deictic function. But Frajzyngier maintains that plural markers also arose from singular demonstratives. He discusses several factors that may have contributed to the grammaticalization of singular demonstratives as plural markers. Most importantly, he points out that plural marking in Chadic is often confined to definite nouns marked by an adnominal demonstrative or a related noun modifier. Due to the co-occurrence of definite and plural marking, adnominal demonstratives may become associated with the semantic feature of plurality, and then they are immediately reanalyzed as plural markers if they lose their deictic function.

  Plural marking is not confined to nouns in Chadic. Verbs are also commonly marked by a plural affix. As in many other languages, the plural affixes of verbs are often similar to the plural markers of nouns in Chadic. Frajzyngier attributes the morphological resemblance of verbal and nominal plural markers to a common historical origin. He claims that both developed from demonstratives. I suspect, however, that nominal and verbal plural markers originate from demonstratives in two different source constructions: nominal plural markers are probably derived from adnominal demonstratives that accompany a juxtaposed noun, while verbal plural markers develop from pronominal demonstratives that cliticize to a verb stem.

  Frajzyngier's study is primarily concerned with Chadic languages, but he points out that there are many languages in which plural markers and demonstratives are morphologically related (see also Dryer 1989). It is thus conceivable that the development of plural markers from demonstratives is a widespread phenomenon rather than being restricted to Chadic.

*4.4.5. Specific indefinite articles.* Wright & Givon (1987) have shown that many languages distinguish between two different indefinite nouns: indefinite nouns having a specific referent and indefinite nouns denoting a non-specific entity. Specific indefinites are often used to introduce a major discourse participant that will persist in the subsequent discourse, whereas non-specific indefinites mostly do not recur in the sentences that follow. Many languages mark specific indefinites by an article based on the numeral "one" and non-specific indefinites by zero (see Wright & Givon 1987; Givon 1995). Standard English does not distinguish between the two indefinites; both occur with the indefinite article *a*. But in colloquial English unstressed *this* and *these* are commonly used to mark specific indefinite information that will persist in the subsequent discourse (Wright & Givon 1987: 15-28; see also Prince 1981; Wald 1983). A typical example is shown in (30).

(30) ... *So next he passes this bum and boy, the guy was real ragged, run down and all, was not even begging, just sitting there; so he stops and gives him a dollar and the next thing you know the guy is screaming* ... (Givon 1990: 921)

The noun phrase *this bum* introduces a new discourse participant, which is one of the main topics in the sentences that follow. Following Wright & Givon (1987), 1 assume that unstressed *this* is an indefinite article, strictly distinct from the adnominal demonstrative from which it descended. Unlike the demonstrative, indefinite *this* is generally nondeictic; that is, indefinite *this* does not function to orient the hearer in the speech situation or in the universe of discourse, rather it provides particular processing instructions. As Givon (1990: 921) puts it, indefinite *this* is a "grammatical signal" that "instructs the hearer to open and activate a file for the referent".

There is at least one other language in my sample that seems to have a specific indefinite article derived from an adnominal demonstrative. Like English, Urim uses a former demonstrative to introduce new discourse topics. **In** this function, the demonstrative is often accompanied by the indefinite article *ur,* as in *kin ur pa ekg* woman a that two `(those) two women' (Hemmila 1989: 46).

## 4.5. The grammaticalization of adverbial demonstratives

4.5.1. *Temporal adverbs.* Time is an abstract concept that is often metaphorically structured in spatial terms (e.g., Lakoff & Johnson 1980). Mapping spatial expressions onto the temporal dimension

provides a common historical source for the development of temporal markers. Since temporal expressions are semantically more abstract and subjective than locational terms, it is commonly assumed that the development of temporal markers from spatial expressions is an instance of grammaticalization (e.g., Heine et al. 1991: 156-157; Haspelmath 1997). Temporal adverbs such as English *now* and *then* are often derived from adverbial demonstratives (Anderson & Keenan 1985: 297-299). Very often, adverbial demonstratives are directly imported into the temporal domain. Anderson & Keenan cite, for instance, the examples in Table 14 from Wik-Munkan, which are used both as locational and temporal deictics. They consist of three deictic stems, *in-* PROXIMAL, *an-* MEDIAL and *nan-* DISTAL, and two suffixes: *-pal,* which indicates directions, and *-man,* which denotes a stationary referent.

Anderson & Keenan (1985: 298) point out that some of the terms in Table 14 have acquired special meanings so that the temporal senses are not always predictable from the corresponding spatial terms. This is a clear indication that the temporal expressions have become independent of the demonstratives from which they derive. According to Anderson & Keenan (1985: 298), it is fairly uncommon for a language to employ temporal deictics that are completely independent of the demonstrative system. However, temporal and locational deictics do not always have the same morphological form as in Wik-Munkan. There are many languages in my sample in which temporal deictics are formally distinguished from adverbial demonstratives (e.g., Kannada *illa/alla* 'here/there' vs. *i:ga/a:ga* 'now/then').

*4.5.2. Directional/locational preverbs.* Preverbs are elements such as *con-, re-,* and *dis-* in Latin that are affixed to the verb stem. According to Lehmann (1995a: 97-104), preverbs are commonly derived from relational adverbs that indicate the semantic relationship between a verb and a noun. Lehmann shows that a language may have several layers of

Table 14. *Spatial and temporal deictics in Wik-Munkan (Anderson & Keenan 1985: 298)*

| Form | Spatial sense | Temporal sense |
|------|---------------|----------------|
| *inman* | right here | right now, today |
| *inpal* | from here | from now |
| *anpal* | from there (distant) | from then (on) |
| *anman* | around there | around now |
| *nanpal* | from there (near) | from then (recent) |
| *nanman* | there (close), that place | now (general), any near time |

proverbs whose syntactic and semantic properties can be quite different. The oldest layer of proverbs in German includes, for instance, inseparable prefixes of the verb (e.g., *be-*, *er-*, and *ver-*). Their semantic contribution to the verb is vague and the meaning of the resulting form is usually quite idiosyncratic. Proverbs that developed more recently (e.g., *aus-*, *auf=*, and *ab-*) tend to be semantically more transparent and they are separable from the verb stem in certain contexts.

Directional proverbs are often derived from adverbial demonstratives.' German has, for instance, two directional proverbs, *hin* `hither' and *her* `thither', which developed from an old demonstrative root, *hi,* which only survived in a few forms such as *hin, her, hier* `here', *heute* `today' (cf. Lockwood *1968: 36, 72).* *Hin* and *her* are still sometimes used as independent adverbs, but in most instances they function as proverbs. Lehmann maintains that preverbation in German and other Indo-European languages is not an instance of grammaticalization but rather of lexicalization.[20] He argues that the use of proverbs in these languages is usually not fully productive and that most verbs that include a proverb are semantically irregular. These are typical properties of a word formation process rather than grammaticalization (see also Lehmann *1989).*

Although I would not dispute Lehmann's general conclusion, it seems to me that the formation of complex verbs including a directional proverb is usually more regular and productive than other instances of preverbation. The two directional proverbs in German combine, for instance, fully productively with all verbs expressing a directional process and the resulting forms are semantically regular and transparent. Examples are given in Table *15.* The verbs shown in this table express a process or activity that is directed toward a specific location. The meaning of these verbs is completely regular and their formation is fully productive. Verbs that do not fit this pattern such as *hindeuten* `to indicate', *hinrichten* `to execute', or *hinweisen* `to point out' developed from forms that were at one point semantically regular. It is, thus, important to distinguish between the development by which the demonstrative adverbs *hin* and *her* turned into directional proverbs and subsequent changes that affected the entire verb form. The former is an instance of grammaticalization, giving rise to verbs that are semantically regular and transparent. Only the latter is a lexicalization process whereby verbs including *hin* and *her* may assume a new meaning that diverges from the general pattern.

There are several other languages in my sample in which directional proverbs developed from demonstratives. Papago has, for instance, two directional proverbs, *?i-* TOWARD *and ?a(m)-* AWAY, which are based on

Table 15. *Directional preverbs in German*

| | |
|---|---|
| *hin-/her-kommen* | 'to come hither/thither' |
| *hin-/her-fahren* | 'to go by vehicle hither/thither' |
| *hin-/her-laufen* | 'to run hither/thither' |
| *hin-/her-rennen* | 'to run hither/thither' |
| *hin-/her-schwimmen* | 'to swim hither/thither' |
| *hin/her-kriechen* | 'to crawl hither/thither' |
| *hin/her-fliegen* | 'to fly hither/thither' |
| *hin/her-jagen* | 'to chase hither/thither' |
| *hin/her-springen* | 'to jump hither/thither' |
| *hin-/her-bringen* | 'to take/bring hither/thither' |
| *hin-/her-holen* | 'to get hither/thither' |
| *hin-/her-ziehen* | 'to drag hither/thither' |
| *hin-/her-tragen* | 'to carry hither/thither' |

the adverbial demonstratives *?ia* `here' and *dam* `there' (Mason *1950: 42, 65):*

(31)  a. *?am-hihi?*     b. *?i-?gebei*
AWAY-they.went     TOWARD-take.it
'They went there.'     'Take it there.'

### 4.6. The grammaticalization of identificational demonstratives

*4.6.1. Nonverbal copulas.* In a frequently cited paper, Li & Thompson *(1977)* have shown that copulas often arise from demonstratives and third person pronouns. More specifically, they argue that nonverbal copulas derive from anaphoric pronouns, either from anaphoric personal pronouns or from anaphoric demonstrative pronouns. Subsequent studies by Schuh *(1983),* Gildea *(1993),* and Devitt *(1994)* supported their finding.

In this section I argue that Li & Thompson's analysis is only partially correct. I agree with their hypothesis that nonverbal copulas often develop from anaphoric third person pronouns; but I disagree with their claim that copulas may develop along the same path from anaphoric pronominal demonstratives. Challenging their view, I maintain that the development of nonverbal copulas from third person pronouns and demonstratives follows two different pathways. Before I discuss the demonstrative-to-copula path of evolution I will consider the development of copulas from third person pronouns. Li & Thompson argue that nonverbal copulas derive from anaphoric pronouns that resume a topicalized noun phrase as schematized in (33).

(32) **NP, [PRO, NP]**　　　　　　**~ NP, COPULA, NP**
Topic-comment construction　　　　Equational sentence

Since the topic and the pronominal subject are coreferential they will agree if there is any agreement marking in the language. When such a topic-comment construction is routinely used to express an identity relation between the topic and the predicate nominal, the topicalized noun phrase is eventually reanalyzed as the subject of an identificational sentence in which the anaphoric pronoun assumes the function of a copula. Li & Thompson support their analysis by data from several languages including Modern Hebrew where the reanalyses of third person pronouns as copulas is due to a very recent development; so recent, indeed, that their status as copulas is not immediately obvious. Consider the following examples.

(33)　a.　*ha-sha'on*ᵢ　　*hu*ᵢ　　*matana*
　　　　the-clock.M.SG is/he.M.SG present.F.SG
　　　　'The clock is a present.' (Glinert 1989: 189)
　　b.　*Hevrat*ᵢ　　*bóing hi*ᵢ　　*taagid*　　*anaki*
　　　　company.F.SG Boeing is/she.F.SG corporation.M.SG giant.M.SG
　　　　'The Boeing company is a giant corporation.' (Glinert 1989: 188)

In both sentences, *hu* 3SG.M and *hi* 3SG.F agree with the sentence-initial noun phrase, which one might either interpret as the topicalized noun phrase of a nonverbal clause or as the subject of a copula sentence. If the initial noun phrase is the subject of a copula clause, *hu* and *hi* would be nonverbal copulas; but if it is the topic of a topic-comment construction, *hu* and *hi* would function as anaphoric pronouns. Following Berman & Grosu (1976), Li & Thompson argue that *hu* and *hi* are nonverbal copulas in this context. Among other things they point out that the initial noun phrases are intonationally not separated from the rest of the sentence, which would suggest that they are dislocated. And furthermore they note that the noun phrase preceding *hu* and *hi can* be a first or second person pronoun (e.g., *ani hu ha-soter* `I am/he the-policeman'; Berman & Grosu 1976: 271), which would be ungrammatical if *hu* and *hi* were pronouns, because pronominal *hu* and *hi* have to agree with their antecedent.
Thus far, I agree with Li & Thompson's analysis. I challenge, however, their claim that the development of nonverbal copulas from demonstratives involves the same mechanism as the development of copulas from third person pronouns. Questioning this part of their analysis, I maintain that nonverbal copulas that are based on

demonstratives develop from identificational demonstratives in nonverbal clauses. Crucial evidence for my hypothesis also comes from Modern Hebrew.

Modern Hebrew not only has copulas that are derived from personal pronouns; it also has a set of nonverbal copulas that developed from the demonstratives *ze* M.SG, *zot* F.SG, and *ele* PL. Like *hu* and *hi*, the demonstratives are still used with their original function; that is, apart from their use as copulas, they are still used as demonstratives. When *ze, zot,* and *ele are* used as demonstratives they may function as pronominal demonstratives or as identificational demonstratives in nonverbal clauses. Pronominal and identificational demonstratives have the same form, but they differ in their agreement behavior: anaphoric pronominal demonstratives agree in gender and number with their antecedent, while identificational demonstratives agree with the predicate nominal that follows. Consider the following examples.

(34)　a.　*ten li kasda*ᵢ　*aHéret, ani sone et zot*ᵢ.
　　　　give me helmet.F.SG other.F.SG I hate ACC DEM.F.SG
　　　　'Give me another helmet, I hate this (one).' (Glinert 1989: 100)
　　b.　*ze*ᵢ　　*aba*　　*sheli*ᵢ.
　　　　DEM.M.SG father.M.SG mine
　　　　'This is my father.' (Informant)

The demonstrative in (34a) is an anaphoric pronominal demonstrative. It agrees in gender and number with the noun *kasda* `helmet' in the preceding clause (both are feminine singular). Example (34b), on the other hand, shows an identificational demonstrative in a nonverbal clause. In this instance, the demonstrative agrees in gender and number with the following predicate nominal, *aba (shelf)* `(my)* father' (both are masculine singular). In order to determine whether the copula developed from a pronominal or from an identificational demonstrative one has to examine the agreement properties of the copula:

(35) *ha-báyit*　　*shelHa zot*ᵢ　　*dugma*ᵢ　　*tova*
　　　the-house.M.SG your　COP/DEM.F.SG example.F.SG good.F.SG
　　　'Your house is a good example.' (Glinert 1989: 189)

Example (35) includes two noun phrases of different genders and the feminine singular demonstrative *zot,* which Glinert (1989: 189) characterizes as a copula in this instance. Since the copula agrees in gender and number with the predicate nominal at the end of the sentence rather than with the subject noun phrase, I assume that it developed from an identificational demonstrative in a nonverbal clause, which exhibits the same kind of agreement.

Additional support for my analysis comes from Kilba. Kilba has three nonverbal copulas, which have the same form as identificational demonstratives in nonverbal clauses while they differ from demonstrative pronouns. The demonstrative pronouns are complex free forms while the identificational demonstratives and nonverbal copulas are monosyllabic enclitics (see Table 9). Schuh (1983) shows that the identificational demonstratives have turned into copulas that mark three different tenses: =ná has been reanalyzed as a present tense copula, =ndá indicates past tense, and =ŋgá is used in copula clauses whose subject is out of sight (Schuh 1983: 321):

(36)  a.  *ùsmân hə́bà ná*
          Usman Kilba is
          'Usman is a Kilba (Usman is present).'
      b.  *ùsmân hə́bà ndá*
          Usman Kilba was
          'Usman was a Kilba.'
      c.  *ùsmân hə́bà ŋgá*
          Usman Kilba is
          'Usman is a Kilba (Usman is not present).'

*4.6.2. Focus markers.* Like nonverbal copulas, focus markers may arise from identificational demonstratives in nonverbal clauses.' Heine & Reh (1984: 147-182) have shown that focus markers frequently develop in the context of a cleft construction (see also Givon 1979: 246-248, 1990: 722-724). A cleft construction consists of two clauses: a copular or nonverbal clause providing focal information and a main or relative clause providing presupposed information. Heine & Reh argue that the copula of the focal clause is frequently reanalyzed as a focus marker of the co-occurring predicate nominal:

*(37)*  [COP NP]ₛ [REL/MAIN CLAUSE] ⇒
        [FOCUS NP]ₙₚ [REL/MAIN CLAUSE]

I agree with Heine & Reh's hypothesis that focus markers often arise in the context of a cleft construction; but I would argue that the source item is usually not a copula but rather an identificational demonstrative.[22] My hypothesis is based on data from several languages in which focus markers and identificational demonstratives are morphologically related. Ambulas has, for instance, two identificational demonstratives, *ken* PROXIMAL and *wan* DISTAL, that are only used in nonverbal clauses. The demonstratives *ken* and *wan* are formally

distinguished from pronominal demonstratives in other contexts, but the same forms are also used as focus markers.

(38)  *véte   dé wak a* [*wan méné*] *kaapuk yéménén*
      see.and he said ah FOCUS you   not     you.went
      'He saw him and said,"Ah, so YOU did not go." ' (Wilson 1980: 347)

Example (38) includes the focus marker *wan,* which has the same form as one of the demonstrative identifiers. Since *ken* and *wan* are not used as copulas, the identificational demonstratives are the most likely source for the focus markers. I suspect that the use of *ken and wan* as focus markers originated in a cleft construction formed from a nonverbal clause (i.e., BEM NP) and a presupposed (main or relative) clause. As Heine & Reh have shown, a focus marker may become independent of the cleft construction in which it emerged once its use as a focus marker is established. A highly grammaticalized focus marker may spread from cleft constructions to other contexts (Heine & Reh *1984: 162-165).*

Another example of a focus marker that developed from an identificational demonstrative in a nonverbal clause is furnished by Swahili. Like many other Bantu languages, Swahili uses the particle *ni* as a focus marker:

(39)  [*Momela Farm ni*]  *i-me-fany-wa*        National Park,
      Momela Farm FOCUS  AGR-PST-make-PASS  National Park
      'It is Momela Farm that was made into a National Park.'
      (McWhorter 1994: 60)

Givon (1990: 722) argues that the focus marker *ni* goes back to an old Bantu copula, which is still used in certain contexts (e.g., *vita ni taabu* `war is trouble'; McWhorter *1994: 59);* but McWhorter *(1994)* shows, based on Swahili texts of the seventeenth and eighteenth century, that the copula use of *ni* is a rather recent innovation. He argues that the focus marker did not develop from a copula but rather from an identificational demonstrative, which he calls a "third person deictic" (McWhorter *1994: 59).* The original use of *ni* as a demonstrative is exemplified in (40).

(40)  *ni  mamoja  kwangu*
      it.is the.same  to.me
      'It's all the same to me.' (McWhorter 1994: 59)

*4.5.3. Expletives.* Expletives are semantically empty pro-forms that some languages use in certain syntactic constructions. Two examples

from French and Modern Hebrew are given in (41) and (42) respectively.

(41)  *c'-est  toi  que  je connais le   mieux.*
       it-is   you that  I   know   the best
       'You are the one I know best.'

(42)  (*ze*)  *tov    she-bat.*
        it    good   SUB-you.came
       'It's good that you came.' (Glinert 1989: 63)

In these examples, *ce* and ze function as dummy pro-forms (the use of *ze* is optional); they do not have a referent and serve a purely grammatical function. Historically, *ce* and *ze* are derived from identificational demonstratives in nonverbal clauses. In other syntactic contexts, expletives developed from demonstratives that were originally used as referring pronouns or adverbs (cf. Traugott 1992: 216-219). An example of the former is English *it* in *it rained;* and an example of the latter is the presentational *there* in sentences like *there was an old man who lived in Western New York.*

## 4.6. Conclusion

In this section I have shown that the development of grammatical items from demonstratives originates from four distinct sources: (i) pronominal, (ii) adnominal, (iii) adverbial, and (iv) identificational demonstratives. Table 16 summarizes these findings.

The list of grammatical items shown in this table is not exhaustive. Other grammaticalization processes starting from demonstratives have been described in the literature. Vries (1995) argues, for instance, that a number of Papuan languages have topic markers that are based on pronominal demonstratives, and Himmelmann (1997: 161-188) shows that the linking articles, or linkers (see Foley 1980), that many Austronesian languages use to indicate an overt link between a noun and its modifiers developed from adnominal demonstratives.

The vast majority of languages included in my sample has at least some grammatical markers that evolved from a demonstrative. The frequent reanalysis of demonstratives as grammatical markers is motivated by two factors. First, the anaphoric and discourse deictic use of demonstratives provides a natural starting point for the evolution of grammatical markers that are either coreferential with a prior noun phrase or link two discourse units. The grammatical functions of such markers are very similar to the discourse pragmatic functions of demonstratives that refer to linguistic entities in discourse. In fact, I maintain

Table 16. *The grammaticalization of demonstratives*

|  | SOURCE | PRONOM | ADNOM | ADV | IDENT |
|---|---|---|---|---|---|
| *TARGET* |  |  |  |  |  |
| third person pronouns |  | X |  |  |  |
| relative pronouns |  | X |  |  |  |
| complementizers |  | X |  |  |  |
| sentence connectives |  | X |  |  |  |
| possessives |  | X |  |  |  |
| verbal number markers |  | X |  |  |  |
| pronominal determinatives |  | X |  |  |  |
| definite articles |  |  | X |  |  |
| boundary markers of attributes |  |  | X |  |  |
| adnominal determinatives |  |  | X |  |  |
| nominal number markers |  |  | X |  |  |
| specific indefinite articles |  |  | X |  |  |
| directional preverbs |  |  |  | X |  |
| temporal adverbs |  |  |  | X |  |
| nonverbal copulas |  |  |  |  | X |
| focus markers |  |  |  |  | X |
| expletives |  | X |  | X | X |

that there is no clear-cut borderline between demonstratives used as anaphors and discourse deictics and grammatical markers such as definite articles, third person pronouns, sentence connectives, and other items discussed in this section.

Second, demonstratives are the source for a variety of grammatical markers because they have undergone grammaticalization in various constructions. As Lehmann (1995b: 1258) points out, a single item may be the source for multiple grammatical markers if it grammaticalizes in more than one construction. In this section I have argued that third person pronouns, definite articles, copulas, and other grammatical markers originate from demonstratives in different contexts. Each grammatical item discussed in this paper can be traced back to a demonstrative in a particular construction. Grammaticalization is often described as the change of isolated items, but it is an entire grammatical construction rather than an isolated item that grammaticalizes (cf. Bybee et al. 1994: 11; Himmelmann 1997: 31).

## 5. **Summary**

This article examined the morphosyntactic properties of demonstratives in crosslinguistic and diachronic perspective. I argued that one has to distinguish between demonstratives in four different constructions: (i) pronominal demonstratives, which substitute for a noun phrase in

argument position of verbs and adpositions, (ii) adnominal demonstratives, which co-occur with a coreferential noun, (iii) adverbial demonstratives, which modify a co-occurring verb, and (iv) identificational demonstratives, which are used in certain copular and nonverbal clauses. I showed that some languages use the same demonstratives in all four contexts, but most languages distinguish at least some of them formally. If the demonstratives that are used in these four contexts are phonologically distinguished or if they have different morphosyntactic properties, they belong to different grammatical categories, to which I refer as (i) demonstrative pronouns, (ii) demonstrative determiners, (iii) demonstrative adverbs, and (iv) demonstrative identifiers, respectively. I showed that some languages do not have demonstrative determiners and use instead demonstrative pronouns with a noun in apposition. Other languages lack a class of demonstrative pronouns and use demonstrative determiners together with a classifier, a third person pronoun, or a nominal particle in lieu of a demonstrative pronoun. Adverbial demonstratives are in most languages categorially distinguished from demonstrative pronouns and demonstrative deter-miners. There are only a few languages in my sample that do not have a class of demonstrative adverbs: Ngiyambaa uses, for instance, demonstrative pronouns in locative case in order to indicate a location. Finally, identificational demonstratives are usually considered demonstrative pronouns, but my investigation showed that the demonstratives in copular and nonverbal clauses are often formally (i.e., categorially) distinguished from pronominal demonstratives in other sentence types.

The second part dealt with diachronic aspects of demonstratives. More specifically, it examined the development of demonstratives into grammatical markers. Across languages demonstratives provide a common historical source for a wide variety of grammatical items. I showed that the pathway that a demonstrative takes when it grammaticalizes is largely determined by the syntactic context in which it occurs. More precisely, I argued that pronominal, adnominal, adverbial, and identificational demonstratives are the source for four different sets of grammatical markers, which usually retain some of the syntactic properties that the demonstrative had in the source construction. Pronominal demonstratives develop into grammatical markers that are either still pronouns or have at least some of the properties of a pronominal item. Adnominal demonstratives develop into noun operators. Adverbial demonstratives provide a common source for certain verb modifiers. And identificational demonstratives may give rise to grammatical markers that interact with nominal

constituents derived from predicate nominals. The development of grammatical markers from demonstratives is probably the most extreme case of polygrammaticalization that has been recognized in the literature thus far. It is due to the fact that demonstratives have undergone grammaticalization in multiple constructions. Each grammatical marker discussed in this paper developed from a demonstrative in a specific syntactic context, which determined its path of evolution.[23]

## Appendix

### Sample languages

The genetic affiliations in parentheses are adopted from the *Ethnologue* (http://www.sil.org/ethnologue/). The class labels show the highest or second highest level of classification.

NORTH AMERICA:

Halkomelem (Salishan), Kiowa (Kiowa-Tanoan), Lealao Chinantec (Oto-Manguean), Mam (Mayan), Mohave (Hokan), Oneida (Iroquoian), Picuris (Kiowa-Tanoan), Quileute (Chimakuan), Slave (AthapaskanEyak), Tumpisa Shoshone (Uto-Aztecan), Tuscarora (Iroquoian), Tzutujil (Mayan), Ute (Uto-Aztecan), West Greenlandic (EskimoAleut)

SOUTH AMERICA:

Apalai (Carib), Barasano (Tucanoan), Canela-Kraho (Ge-Kaingang), Epena Pedee (Choco), Hixkaryana (Carib), Urubu-Kaapor (TupiGuarani), Yagua (Peba-Yaguan)

SOUTH EAST ASIA AND OCEANIA:

Acehnese (Western Malayo-Polynesian), Byansi (Tibeto-Burman), Karo Batak (Western Malayo-Polynesian), Khasi (Mon-Khmer), Kokborok (Tibeto-Burman), Kusaiean (Central-Eastern Malayo-Polynesian), Ladakhi (Tibeto-Burman), Lahu (Tibeto-Burman), Manam (CentralEastern Malayo-Polynesian), Mandarin Chinese (Sinitic), Mulao (Daic), Nung (Daic), Pangasinan (Western Malayo-Polynesian), Ponapean (Central-Eastern Malayo-Polynesian), Santali (Munda), West Futuna-Aniwa (Central-Eastern Malayo-Polynesian), Vietnamese (Mon-Khmer)

AFRICA:

Duwai (Chadic), Ewondo (Atlantic-Congo), Gulf Arabic (Semitic), Izi (Atlantic-Congo), Karanga (Atlantic-Congo), Kunuz Nubian (Eastern

Sudanic), Lango (Nilotic), Logbara (Central Sudanic), Margi (Chadic), Modern Hebrew (Semitic), Nama (Khoisan), Nandi (Nilotic), Ngiti (Central Sudanic), Sango (Atlantic-Congo), Supyire (Atlantic-Congo),
Swazi (Atlantic-Congo), Turkana (Nilotic), Western Bade (Chadic)
EURASIA:
Ainu (Isolate), Basque (Isolate), Burushaski (Isolate), Czech (Slavic), Finnish (Finno-Ugric), French (Romance), Georgian (Kartvelian), German (Germanic), Japanese (Japanese), Kannada (Dravidian), Korean (Isolate), Lezgian (North Caucasian), Punjabi (Indo-Aryan), Swedish (Germanic), Turkish (Turkic)
AUSTRALIA AND NEW GUINEA:

Alamblak (Sepik), Ambulas (Sepik), Dyirbal (Pama-Nyungan), Hua (East New Guinea Highlands), Martuthunira (Pama-Nyungan), Ngiyambaa (Pama-Nyungan), Nunggubuyu (Gunwingguan), Tauya (Madang-Adelbert Range), Tok Pisin (Creole), Urim (Torricelli), Usan (Madang-Adelbert Range), Wardaman (Gunwingguan), Yankunytjatjara (Pama-Nyungan), Yimas (Nor-Pondo)

Notes

  Abbreviations: ABS absolutive, nee accusative, ADV adverb, AFF affirmative marker, AGR agreement marker, ART article, ASP aspect, CIRC circumstantive, CM conjugation marker, COMP complementizer, COP copula, DAT dative,, DEF definite, DEM demonstrative, DIST distal, DONT prohibitive, DTM determinative, DU dual, ERG ergative, EST established reference, F feminine, FUT future, cl/2 gender]/2, GEN genitive, HAS habitual, [DENT identifier, INS instrumental, IRR irrealis, LK linker, LOC locative, M masculine, MED media], N neuter, NC noun class, NEG negation, Nom nominative, NONSG non-singular, NP noun phrase, P preposition, PASS passive, PERF perfective, PL plural, PRED predicate marker, PRSS present, PRO pronoun, PROX proximal, PST past, Q question marker, QNT quantifier, REL relative marker, SG singular, SUB subordinate marker, = boundary between independent word and ethic or cliticized element.

I . The exceptions are Miao-Yao and Chukchi-Karnchatkan. Both families include fewer than half a dozen languages in Ruhlen's classification.
2. For a different view see Abney (1987); see also Postal (1969) and Hudson (1984: 90 -92). For a critique of Abney's view see Diessel (1998).
3.  Compare Moravcsik's (1997) analysis of adnominal demonstratives in Hungarian.
4. And also for manner demonstratives such as Japanese *koo* `in this way', *son* `in that way' and *as* `in that (far away) way' (Fillmore 1982: 48). There are 10 languages in my sample that have manner demonstratives, which are commonly translated as `in

this/that way', `like this/that', or `thus'. Manner demonstratives are largely ignored in the theoretical literature on demonstratives.
5. There is one minor difference between pronominal and identificational demonstratives in English. In identificational sentences demonstratives may refer to a person as in *this is my friend.* In all other syntactic contexts, pronominal *this* and *that* are nonpersonal (Halliday & Hasan 1976: 62-63).
6. Feminine and masculine demonstratives may occur in copular clauses with bare nominals, e.g., *der ist Lehrer* `that one/he is a teacher'. Copular clauses of this type assign an attribute to a referent that is already identified. That is, copular clauses including a bare nominal predicate are not identificational sentences. See Hengeveld (1992) for a discussion of different types of copular and nonverbal clauses.
7. Durie (1985) only provides examples in which adnominal demonstratives are attached to a preceding noun, but his description suggests that adnominal demonstratives do not generally cliticize to a preceding noun.
8. Demonstratives referring to a location often cliticize to a preposition; e.g., *keu=noe* `to here' (Durie 1985: 134).
9.  In addition to the forms shown in Table 13, Pangasinan has two further series of demonstratives, which Benton (1971: 91-93) calls "demonstratives of similarity" and "independent demonstratives". The demonstratives of similarity are manner demonstratives; they belong to the category of demonstrative adverbs. The independent demonstratives occur in a variety of contexts: (i) in equational sentences, (ii) after the marker *ed,* which seems to function as an adposition, and (iii) linked to a noun phrase by the particle *ya.* They appear to be similar to sentential demonstratives such as French *voild,* but this needs further investigation.
10. In addition to the deictic, anaphoric, and discourse deictic use, there is one other common usage, which Himmelmann (1996: 230-239, 1997: 62--82) calls the recognitional use. Recognitional demonstratives activate specific information that is already in the hearer's knowledge store (see also Diessel 1998).
11. These criteria are based on more general principles of grammaticalization discussed in studies by Heine & Reh (1984), Lehmann (1985, 1993, 1995a), Hopper & Traugott (1993), and Bybee et al. (1994).
12. There are several languages in my sample in which discourse deictic demonstratives have fewer inflectional features than demonstratives serving other pragmatic functions. For instance, in German demonstratives are inflected for gender, number, and case, but discourse deictic demonstratives are always neuter singular. The feminine, masculine, and plural forms do not refer to propositions, e.g., in *wer hat dasl*diet *den/*die gesagt?* who has Penn.NSG/*DEM. FSG/*orM.MSG/*orM.er said `Who said that'P
13. First and second person pronouns are usually not derived from demonstratives. But see Humboldt (1832) for some examples.
14. There is one minor difference in the genitive plural. The genitive plural of the relative pronoun is *deren.* The pronominal demonstrative, on the other hand, has two forms: *deren* and *derer* (Drosdowski 1995: 335--336). *Deren* is used to indicate the possessor in a possessive noun phrase (e.g., *die Schu'ler and deren Eltern* `the pupils and their parents'), while *derer is* either used to refer to a subsequent relative clause (e.g., *das Schicksal derer, die...* `the fate of those who...'), or as a free standing pronoun functioning as the object of verbs that take an argument in genitive case (e.g., *wir gedenken derer niche mehr* `we don't commemorate those (people) any more') (Drosdowski 1995: 334).
15. Paul (1916-20, IV: 189--191) and Lehmann (1984: 378-383) suggest two alternative
pathways for the development of relative pronouns in German (see Diessel 1998).

16. There are several other strategies to form relative clauses in Tok Pisin. The is ... is construction serves, according to Verhaar (1995: 215-216), a specific pragmatic function: it is used "by speakers when they do not know immediately how to continue what they are saying...".

17. To be precise, Lockwood only considers derjenige plus prepositional phrase. That is, he does not mention the use of derjenige as a plain pronoun and he also ignores the occasional use of derjenige with a subsequent noun (e.g., diejenigen Leute, die das gesagt haben,... `those people who said that...').

18. Frajzyngier uses the notion of demonstrative as a cover term for demonstratives, definite articles, and anaphoric pronouns. I only cite examples that Frajzyngier glosses as demonstratives.

19. One of the reviewers pointed out to me that Turkish has two locational preverbs bu Naoxrmni, and o DISTAL-that are morphologically not distinguished from adnominal demonstratives while they differ from demonstrative adverbs and pronouns (the latter two are morphologically more complex). This shows, so this reviewer, that locational preverbs may also derive from adnominal demonstratives. It is, however, hard to conceive how a preverb might have developed from an adnominal demonstrative, given that preverbs and adnominal demonstratives occur in very different contexts. Following Himmelmann (1997: 21), 1 assume that demonstratives are historically based on deictic particles with no specific syntactic function. Given that all demonstratives in Modern Turkish include the deictic roots bu and o, it is quite likely that bu and o are the direct descendants of such particles. I suspect that the preverbs of Modern Turkish evolved from the adverbial use of 6u and o before the demonstrative adverbs of the current system emerged.

20. Lehmann examines another type of preverbation in Totonac and Abkhaz which, in his view, might be an instance of grammaticalization.

21. Luo (1997) shows that there are a number of languages in which nonverbal copulas, focus markers, and identificational demonstratives have either the same or a very similar morphological form.

22. I suspect that at least some of the items that Heine & Reh consider copulas are in fact identificational demonstratives.

23. An interesting question that could not be addressed in this article is: Where do demonstratives come from? What is their historical source? Demonstratives are commonly considered grammatical items. Grammaticalization theory claims that all grammatical items are derived from lexical items; but there is no evidence from any language that demonstratives derive from a lexical source or any other source, for that matter, that is non-deictic (cf. Himmelmann 1997: 21). It is therefore conceivable that demonstratives do not evolve from lexical items. In Diesel (1998) 1 consider the hypothesis that demonstratives are based on deictic particles that may belong to the basic vocabulary of every language. This is not only suggested by the absence of any positive evidence for a lexical source, but also by the fact that demonstratives serve a specific pragmatic function, which sets them apart from typical grammatical markers (e.g., Buhler 1934). Furthermore it might explain why demonstratives are among the very few items that display a non-arbitrary relationship between sound shape and meaning (Woodworth 1991; see also Plank 1979x, 1979b).

### References

Abney, Steven P. (1987). The English noun phrase in its sentential aspect. Ph.D. dissertation, Massachusetts Institute of Technology.

Andersen, Henning (ed.) (1995). Historical Linguistics 1993. Amsterdam: Benjamins. Anderson, Stephen R. & Edward L. Keenan (1985). Deixis. In Shopen (ed.) 1985, Volume 3, 259-308.

Behaghel, Otto (1923-32). Deutsche Syntax: Eine geschichtliche Darstellung. 4 volumes. Heidelberg: Winter.

Benton, Richard A. (1971). Pangasinan Reference Grammar. Honolulu: University of Hawaii Press.

Berman, Ruth & Alexander Grosu (1976). Aspects of the copula in Modern Hebrew. In Peter Cole (ed.), Studies in Modern Herbrew Syntax and Semantics: The Transformational-Generative Approach, 265-285. Amsterdam: North-Holland

Bühler, Karl (1934). Sprachtheorie: Die Darste!lungsfunktion der Sprache. Jena: Fischer.

Bybee, Joan L., William Pagliuca, & Revere D. Perkins (1991). Back to the future. In Traugott & Heine (eds.) 1991, Volume 2, 17-58.

Bybee, Joan L., Revere D. Perkins, & William Pagliuca (1994). The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World. Chicago: University of Chicago Press.

Carlson, Robert (1994). A Grammar of Supyire. Berlin: Mouton de Gruyter.

Christophersen, Paul (1939). The Articles: A Study of their Theory and Use in English. Copenhagen: Munksgaard.

Comrie, Bernard (forthcoming). Pragmatic binding: Demonstratives as anaphors in Dutch. Berkeley Linguistics Society 23.

Craig, Colette G. (1991). Ways to go in Rama: A case study in polygrammaticalization. In Traugott & Heine (eds.) 1991, Volume 2, 455-492.

Cyr, Danielle E. (1993). Cross-linguistic quantification: Definite articles vs. demonstratives. Language Sciences 15: 195-229.

Dayley, Jon D. (1989). Tu'mpisa (Panamint) Shoshone Grammar. Berkeley: University of California Press.

Denny, J. Peter (1982). Semantics of the Inuktitut (Eskimo) spatial deictics. International Journal of American Linguistics 48: 359-384.

Derbyshire, Desmond C. (1979). Hixkaryana. (Lingua Descriptive Studies, 1.) Amsterdam: North-Holland.

--(1985). Hixkaryana and Linguistic Typology. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.

Devitt, Daniel C. (1994). Copula constructions in cross-linguistic and diachronic perspective. Ph.D. dissertation, State University of New York at Buffalo.

Diesel, Holger (1997). The diachronic reanalysis of demonstratives in crosslinguistic perspective. Chicago Linguistic Society 33: 83-98.

-(1998). Demonstratives in crosslinguistic and diachronic perspective. Ph.D. dissertation, State University of New York at Buffalo.

-(forthcoming a). Predicative demonstratives. Berkeley Linguistics Society 23.

-(forthcoming b). The use of demonstratives in Oneida narratives. In Karin Michelson (ed.), Buffalo Papers in Linguistics. Buffalo: Department of Linguistics, State University of New York at Buffalo.

Dixon, R. M. W. (1972). The Dyirbal Language of North Queensland. Cambridge: Cambridge University Press.

Donaldson, Tamsin (1980). Ngiyambaa: The Language of the Wangaaybulvan. Cambridge: Cambridge University Press.

Drosdowski, Gunther (ed.) (1995). Duden: Grammatik der deutschen Gegcnwartssprachc. 5th edition. Mannheim: Dudenverlag.

Dryer, Matthew (1989). Plural words. Linguistics 27: 865-895.

-(1992). The Greenbergian word order correlations. *Language* 68: 81-138.

Durie, Mark (1985). *A Grammar of Acehnese on the Basis of a Dialect of North Aceh.* Dordrecht: Foris.

Eisenberg, Peter (1994). *GrundriJ3 der deutschen Grammatik.* 3rd edition. Stuttgart: Metzler.

Epstein, Richard (1994). The development of the definite article in French. In William Pagliuca (ed.), *Perspectives on Grammaticalization,* 63-80. Amsterdam: Benjamins. - (1995). The later stages in the development of the definite article: Evidence from French. In Andersen (ed.) 1995, 159-175.

Fillmore, Charles J. (1982). Towards a descriptive framework for spatial deixis. In Robert J. Jarvella & Wolfgang Klein (eds.), *Speech, Place, and Action,* 31-59. Chichester: Wiley.

Foley, William A. (1980). Toward a universal typology of the noun phrase. *Studies in Language 4:* 171--199.

Fox, Barbara A. (ed.) (1996). *Studies in Anaphora.* Amsterdam: Benjamins.

Frajzyngier, Zygmunt (1991). The *de dicto* domain in language. In Traugott & Heine (ed.) 1991, Volume 1, 219-251.

-(1997). Grammaticalization of number: From demonstratives to nominal and verbal plural. *Linguistic Typology l:* 193-242.

Gildea, Spike (1993). The development of tense markers from demonstrative pronouns in Panare (Cariban). *Studies in Language* 17: 53-73.

Givon, Talmy (1979). *On Understanding Grammar.* New York: Academic Press.

-(1984). *Syntax: A Functional- TypologicalIntroduction,* Volume 1. Amsterdam: Benjamins. - (1990). *Syntax: A Functional-Typological Introduction,* Volume 2. Amsterdam: Benjamins.

-(1995). *Functionalism and Grammar.* Amsterdam: Benjamins.

Glinert, Lewis (1989). *The Grammar of Modern Hebrew.* Cambridge: Cambridge University Press.

Greenberg, Joseph H. (1978). How does a language acquire gender markers? In Greenberg et al. (eds.) 1978, Volume 3, 47-82.

(1991). The last stages of grammatical elements: Contractive and expansive desemantic- ization. In Traugott & Heine (eds.) 1991, Volume 1, 301-314.

Greenberg, Joseph H., Charles A. Ferguson, & Edith A. Moravcsik (eds.) (1978). *Universals of Human Language.* 4 volumes. Stanford: Stanford University Press.

Hale, Kenneth (1983). Warlpiri and the grammar of non-configurational languages. *Natural Language and Linguistic Theory 1:* 5-47.

Halliday, M. A. K. & Ruqaiya Hasan (1976). *Cohesion in English.* London: Longman. Harris, Alice C. & Lyle Campbell (1995). *Historical Syntax in Cross-Linguistic Perspective.* Cambridge: Cambridge University Press.

Harris, Martin (1978). *The Evolution of French Syntax: A Comparative Approach.* London: Longman.

-(1980). The marking of definiteness in Romance. In Jacek Fisiak (ed.), *Historical Morphology,* 141-156. The Hague: Mouton.

Haspelmath, Martin (1997). *From Space to Time: Temporal Adverbials in the World's Languages.* (Lincom Studies in Theoretical Linguistics, 03.) Unterschleidheim: Lincom Europa.

Heath, Jeffrey (1984). *Functional Grammar of Nunggubuyu.* Canberra: Australian Institute of Aboriginal Studies.

-(1986). Syntactic and lexical aspects of nonconfigurationality in Nunggubuyu (Australia). *Natural Language and Linguistic Theory 4:* 375-408.

Heine, Bernd & Mechthild Reh (1984). *Grammaticalization and Reanalysis in African Languages.* Hamburg: Buske

Heine, Bernd, Ulrike Claudi, & Friederike Hiinnemeyer (1991). *Grammaticalization: A Conceptual Framework.* Chicago: University of Chicago Press.

Heinrichs, Heinrich Matthias (1954). *Studien zum hes7immten Artikel in den germanischen Sprachen.* Gief3en: Schmitz.

Hemmila, Ritva (1989). The demonstrative pronouns *pa* and *ti* in Urim discourse. *Language and Linguistics in Melanesia 20:* 41 -63.

Hengeveld, Kees (1992). *Non-Verbal Predication: Theory, Typology, Diachrony.* Berlin: Mouton de Gruyter.

Himmelmann, Nikolaus (1996). Demonstratives in narrative discourse: A taxonomy of universal uses. In Fox (ed.) 1996, 205-254.

-- (1997). *Deiktikon, Artikel, Nominalphrase: Zur Emergent svntaktischer Struktur.* Tubingen: Niemeyer.

Holmes, Philip & Ian Hinchliffe (1994). *Swedish: A Comprehensive Grammar.* London: Routledge.

Hopper, Paul J. (1991). On some principles of grammaticization. In Traugott & Heine (eds.) 1991, Volume 1, 17-35.

Hopper, Paul J. & Elizabeth Closs Traugott (1993). *Granmaticalization.* Cambridge: Cambridge University Press.

Hudson, Richard (1984). *Word Grammar.* Oxford: Blackwell.

Humboldt, Wilhelm von (1832 [1907]). Ueber die Verwandtschaft der Ortsadverbien mit dem Pronomen in einigen Sprachen. *Abhandlungen der historisch-philologischen K/arse der Ko'niglichen Akademie der Wissenschaften zu Berlin aus dem Jahre 1829,* 1-26. Reprinted in *Wilhelm von Humboldts Gesammelte Schriften, 1.* Abteilung, Band 6, 304-330. Berlin: Behr.

Kornfilt, Jaklin (1997). *Turkish.* London: Routledge.

Kramsky, Jib (1972). *The Article and the Concept Of Definiteness in Language.* The Hague: Mouton.

Lakoff, George & Mark Johnson (1980). *Metaphors we Live by.* Chicago: Chicago University Press.

Lambrecht, Knud (1981). *Topic, Antitopic and Verb Agreement in Non-Standard French.* Amsterdam: Benjamins.

Laury, Ritva (1995). On the grammaticization of the definite article *se* in spoken Finnish. In Andersen (ed.) 1995, 239-250.

-(1997). *Demonstratives in Interaction: The Emergence of a Definite Article in Finnish.* Amsterdam: Benjamins.

Lehmann, Christian (1984). *Der Relativsatz: T ypologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik.* Tubingen: Narr.

- (1985). Gramtaticalization: Synchronic variation and diachronic change. *Lingua e Stile* 20: 303 318.

-(1989). Grammatikalisierung and Lexikalisierung. *7.eitschrift fur Phonetik, SprncMrissenschaft und Kommunikationsforschung 42:* 11 19.

-(1993). Theoretical implications of grammaticalization phenomena. In William A. Foley (ed.), *The Role of Theory in Language Description,* 315 340. Berlin: Mouton de Gruyter.

-(1995x). *Thoughts on Grammaticalization.* (Lincom Studies in Theoretical Linguistics, 01.) Unterschlei(3heim: Lincom Europa.

-(1995b). Synsemantika. In Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld, & Then Vennemann (eds.), *Syntax: Fin internationales Handhuch zeitgeno'srischer Forschung* (Handbucher der Sprach- and Kommunikationswissenschaft, 9), Volume 2, 1251 1266. Berlin: de Gruyter.

Levinson, Stephen C. (1983). *Pragmatics.* Cambridge: Cambridge University Press.

Li, Charles N. & Sandra A. Thompson (1977). A mechanism for the development of copula morphemes. In Charles N. Li (ed.), *Mechanisms of Syntactic Change, 419-444.* Austin: University of Texas Press.

Lockwood, W. B. (1968). *Historical Germanic Syntax.* Oxford: Clarendon.

Luo, Cheng (1997). Iconicity or economy? Polysemy between demonstratives, copulas and contrastive focus markers. *Chicago Linguistic Society* 33: 273-286.

Lyons, John (1977). *Semantics.* 2 volumes. Cambridge: Cambridge University Press.

Marconnes, Francisque (1931). *A Grammar of Central Karanga: The Language of Old Monomotapa as at Present Spoken in Central Mashonaland, Southern Rhodesia.* (Supplement to *Bantu Studies,* 5.) Johannesburg: Witwatersrand University Press.

Mason, J. Alden (1950). *The Language of the Papago of Arizona.* Philadelphia: University Museum, University of Pennsylvania.

McWhorter, John (1994). From focus marker to copula in Swahili. *Berkeley Linguistics Society* 20S (Special Session on Historical Issues in African Linguistics): 57-66. Merlon, Francesca C. (1994). *A Grammar of Wardaman, a Language of the Northern Territory of Australia.* Berlin: Mouton de Gruyter.

Mithun, Marianne (1987). The grammatical nature and discourse power of demonstrate ives. *Berkeley Linguistics Society* 13: 184-194.

Moravcsik, Edith (1997). Parts and wholes in the Hungarian noun phrase--a typological study. In Bohumil Palek (ed.), *Proceedings of LP '96: Typology -Prototypes, Item Orderings and Universals,* 307-324. Prague: Charles University Press.

Nagaraja, K. S. (1985). *Khasi: A Descriptive Analysis.* Pune: Deccan College.

Paul, Hermann (1916- 1920). *Deutsche Grammatik.* 5 volumes. Halle an der Saale: Niemeyer.

Plank, Frans (1979a). Ikonisierung and De-Ikonisierung als Prinzipien des Sprachwandels. *Sprachwissenschaft 4:* 121-158.

- (1979b). Exklusivierung, Reflexivierung, Identifizierung, relationale Auszeichnung: Variationen zu einem semantisch-pragmatischen Thema. In Inger Rosengren (ed.), *Sprache and Pragmatik: Lunder Symposium 1978,* 330-354. Lund: Gleerup.

Postal, Paul M. (1969). On so-called "pronouns" in English. In David A. Reibel & Sanford A. Schane (eds.), *Modern Studies in English: Readings in Transformational Grammar,* 201 -224. Englewood Cliffs, N.J.: Prentice-Hall.

Prince, Ellen F. (1981). On the inferencing of indefinite-this NPs. In Aravind K. Joshi, Bonnie L. Webber, & Ivan A. Sag (eds.), *Elements of Discourse Understanding,* 231-250. Cambridge: Cambridge University Press.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, & Jan Svartvik (1972). A *Grammar of Contemporary English.* London: Longman.

Raidt, Edith H. (1993). Linguistic variants and language change: Deictic variants in some German and Dutch dialects vis-a-vis Afrikaans. In Jaap van Marle (ed.), *Historical Linguistics* 1991, 281-293. Amsterdam: Benjamins.

Rehg, Kenneth L. (1981). *Ponapean Reference Grammar.* Honolulu: University Press of Hawaii.

Ruhlen, Merritt (1991). *A Guide to the World's Languages,* Volume *L Classification.* 2nd edition. Stanford: Stanford University Press.

Rupp, James E. (1989). */,ealao Chinantec Syntax.* Dallas: Summer Institute of Linguistics and University of Texas at Arlington.

Samarin, William J. (1967). *A Grammar of Sango.* The Hague: Mouton.

SankoIT', Gillian & Penelope Brown (1976). The origins of syntax in discourse: A case study of Tok Pisin relatives. *Language* 52: 631-666.

Schachter, Paul (1985). Parts-of-speech systems. In Shopen (ed.) 1985, Volume 1, 3-61.

Schuh, Russell G. (1977). Bade/Ngizim determiner system. *Aftoasiatic Linguistics 4-3:* 1-74.

- (1983). Kilba equational sentences. *Studies in African Linguistics* 14: 311-326.

Shopen, Timothy (ed.) (1985). *Language Typology and Syntactic Description.* 3 volumes. Cambridge: Cambridge University Press.

Sohn, Ho -Min (1994). *Korean.* London: Routledge.

Traugott, Elizabeth Gloss (1992). Syntax. In Richard M. Hogg (ed.), *The Cambridge History of the English Language,* Volume l: *The Beginnings to 1066,* 168 -289. Cambridge: Cambridge University Press.

Traugott, Elizabeth Gloss & Bernd Heine (eds.) (1991). *Approaches to Grammaticalization.* 2 volumes. Amsterdam: Benjamins.

Ultan, Russell (1978). On the development of a definite article. In Hansjakob Seiler (ed.), *Language Universals: Papers from the Conference Held at Gummersbach/Cologne, Germany, October 3-8, 1976,* 249-265. Tubingen: Narr.

Verhaar, John W. M. (1995). *Toward a Reference Grammar of Tok Pisin: An Experiment in Corpus Linguistics. (Oceanic Linguistics* Special Publication, 26.) Honolulu: University of Hawaii Press.

Vogel, Petra M. (1993). Uber den Zusammenhang von definitem Artikel and Ferndeixis. *Sprachtypologie und Universalienforschung 46:* 222-233.

Vries, Lourens de (1995). Demonstratives, referent identification and topicality in Wambon and some other Papuan languages. *Journal of Pragmatics 24:* 513-533.

Wald, Benji (1983). Referents and topic within and across discourse units: Observations from current vernacular English. In Flora Klein-Andreu (ed.), *Discourse Perspectives on Syntax,* 91-116. New York: Academic Press.

Wang, Jun & Zheng Guoqiao (1993). *An Outline Grammar of Mulao.* (Monographs on Thai Regional Languages, 1.) Canberra: Australian National University.

Wilson, Patricia R. (1980). *Ambulas Grammar.* Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

Woodworth, Nancy L. (1991). Sound symbolism in proximal and distal forms. *Linguistics* 29:273 -299.

Wright, S. & Talmy Givon (1987). The pragmatics of indefinite reference: Quantified textbased studies. *Studies in Language* 11: 1-33.