The Rise of the Suffixal Article in the Early North Germanic DP*

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1. Introduction

This paper makes three main claims. First, we argue that demonstratives are phrases. With this in mind, we propose that the early North Germanic sequence "noun + demonstrative" provides evidence for a low article phrase (artP). Finally, we argue that the suffixal article arose from the demonstrative via reanalysis of a phrase (in Spec,XP) to a head (in X^0).

2. Word Order Possibilities of Demonstratives and Articles

In this section, we illustrate attested word orders of the demonstratives and articles with regard to the head noun in three stages of early Scandinavian.

2.1 Proto-Scandinavian

Proto-Scandinavian is attested in runic inscriptions in the Elder Futhark (2nd-8th centuries). In these inscriptions, there are two demonstratives: *sá* and *hinn*. The demonstrative may precede N, regardless of whether it is *sá* (1a) or *hinn* (1b):[1]

(1)   a.   **þat azina**   (By, RäF 71)
                  this stone-slab
         b.   **a hitt lant**   (Eggja; RäF 101)
                  to this land

However, the demonstrative may also follow N, both with *sá* (2a) and *hinn* (2b):

(2)   a.   **runaz þaiaz**   (Istaby, RäF 98)
                  runes these
         b.   **hali hino**   (Strøm, RäF 50)
                  stone this

Neither of these orders is dominant: the entire corpus consists of four examples of dem-N and three of N-dem.

2.2 Common Scandinavian

After the 9th century, the North Germanic runic inscriptions are in a different alphabet (the Younger Futhark), and there are many more inscriptions. By this stage, there are three types of demonstratives: the old *sá*, which is now the distal demonstrative ('that'), *sási/þessi,* a strengthened form of *sá* with the local meaning ('this'), and *hinn*.

  By this period, the order N-dem has reached 98% for *sási/þessi*, whereas *sá* is too scantly attested to draw any conclusions (Perridon 1996:252). On the other hand, *(h)inn* seems to be well on the way to becoming a determiner. At the beginning of this period, it never occurs in a simple DP, but is found only when an adjective is present. Compare (3a) and (3b), where the determiner in (3b) is suffixed to the head noun:

(3)   a.   **kunar** … **lit kiara mirki   fr sial** … (Uppland 312)
                Gunnar   … let make monument for soul …
                'Gunnar … had (the) monument made for (the) soul …'
        b.   **tati iok** … **mirki-t mikla eftiR faþur sin** (Södermanland 41)
                Tate cut … monument-the big after father his
                'Tate carved the big monument in memory of his father'

  Many instances of *(h)inn* occur with an inherently uniquely referring element, here a proper name:

(4)   a.   **in heilhi kristr**   (Södermanland 125)
                the holy Christ
        b.   **kristr hin helgi**   (Uppland 391)
                Christ the holy

This shows that in some cases, *(h)inn* has lost its deictic force as a demonstrative and may now have properties of an expletive, in that it seems to have a purely syntactic function in (4). Free-standing, postnominal *(h)inn* as in (4b) presumably formed the basis for the suffixed determiner as in (3b).

  In the 11th century (cf. Noreen 1970:316), we find the first attestation of the article *hinn* with no adjective:

(5)   **kuþ hialbi ant-ini**   (Uppland 669)
        god help   soul-the (Wessén 1970:30)

Crucially, the article is in suffixal form, suggesting it originated in phrases like (3b).

2.3 Old Icelandic

Old Icelandic (13th-15th centuries) is directly descended from Common Scandinavian. It has reversed the relative order of the noun and the demonstrative: *sá* and *þessi* usually appear as dem-N. As for *(h)inn,* it has split into two distinct functions. The first is the determiner, no longer having deictic force. When an adjective is present, the determiner occurs pre-adjectivally (6a-c); when there is no adjective, the determiner appears as a post-nominal clitic (6d). The second function of *(h)inn* is as a demonstrative, where it can appear in a position not available to the definite article, i.e. directly before the noun, as in (6e). Furthermore, it can occur before the adjective, as in (6c). In other words, *(h)inn* in (6c) is ambiguous between an article and a demonstrative:

(6) a. maðr-inn gamli
      man-the old
  b. maðr (h)inn gamli
  c. (h)inn gamli maðr
  d. maðr-inn
  e. (h)inn maðr

2.4 Schematic summary

To summarize the developmental path, the demonstrative *hinn* gradually evolved into a definite article, as shown in Table 1. Only a demonstrative in Proto-Scandinavian, the first clear instances of *(h)inn* as an article occur in modified DPs in Common Scandinavian. Besides this use, we also find the article suffixed to unmodified DPs in Old Icelandic.

Table 1: Kinds of demonstratives and articles in early North Germanic

Language	Demonstrative	Article
Proto-Scandinavian	*sá, hinn*	-
Common Scandinavian	*sá, þessi*	*(h)inn* (before adjectives)
Old Icelandic	*sá, þessi, (h)inn*	*(h)inn* (before adjectives) and -*inn* (clitic)

Note that (*h)inn* is not attested in Common Scandinavian as a demonstrative in unmodified DPs. However, considering that demonstrative *hinn* occurs in Old Icelandic and the probability that the grammaticalization channel "demonstrative > article" is irreversible, we believe that it must have existed in Common Scandinavian as well (see also footnote 4).

 Table 2 summarizes the possible positions of the demonstratives and definite articles in the various stages for the unmodified DP. After an equal distribution in Proto-Scandinavian, Common Scandinavian shows a clear preference for N-dem. In the latter language, we begin to find the first clear instances of articles. With the completed development of the definite article in Old Icelandic, a

division of labor seems to have developed in the simple DP between the pre-nominal position used by the demonstrative (reversing the Common Scandinavian preference) and the post-nominal position used by the article.

Table 2: Position of demonstratives and articles in early North Germanic

Language		Dem - N	N - Dem
Proto-Scandinavian		+	+
Common Scandinavian		few	+
Old Icelandic	*sá, þessi*	+	few
	(h)inn	+ (demonstrative)	+ (clitic article)

3. Formalizing the Development of the Suffixed Article

In this section, we provide evidence that demonstratives are phrases, and as such they are assumed to be in Spec positions. Next, considering the order N-dem, we discuss three potential analyses, concluding that the demonstrative is base-generated in a lower Spec position. Then, we suggest that N-dem forms the basis of the reanalysis of the demonstrative in the Spec position to a suffixed article in a head position. Finally, we briefly discuss some advantages and consequences of our proposal and the question why only *hinn* became the suffixed article.

3.1 Demonstratives are phrases

Among many others, Brugè (1996), Campbell (1996), van Gelderen (2004), Giusti (1997), and Panagiotidis (2000) argue that demonstratives are phrases and thus in Spec positions. We provide one further argument for this claim with evidence from some Scandinavian dialects.

  To begin with, pre-nominal possessives are sometimes argued to be in Spec,DP. One argument in favor of this claim is the possibility that they may co-occur with a determiner:

(7)   a.   minn inn hvassi hjǫrr   (Old Icelandic)
              my   the sharp sword (Wessén 1970:49)
           b.   mett te stór húse   (Lappträsk Sw.)
              my the big house-the (Vangsnes 1999:157)

Assuming that the definite article is in D and that D can host at most one overt element, we conclude that the possessives must be in Spec,DP.

  Interestingly, demonstratives may also co-occur with a determiner:

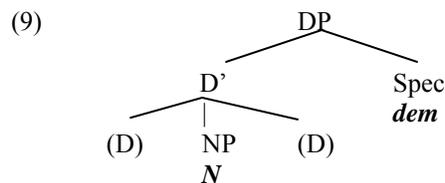(8)   a.   {sá / siá / þesse} enn gamle maþr   (Old Icelandic)
               that / this / this   the old   man (Heusler 1932:126)
           b.   tetta (te) stór húse   mett   (Lappträsk Sw.)
               this (the) big house-the my (Vangsnes 1999:158)

On par with (7), we propose that demonstratives are also in Spec,DP. As Spec,DP is a phrasal position, we conclude that demonstratives are phrases.

3.2 Three options to derive the order N-Dem
In the previous section, we argued that demonstratives are in phrasal positions. In section 2, we illustrated that demonstratives can appear both before and after the head noun in Proto-Scandinavian. This then raises the question how the order N-dem is to be analyzed: one could assume that either the demonstrative is in a different base-position, the head noun N (as part of an XP) moves across the demonstrative, or both. In what follows, we discuss three options, concluding that the base position of the demonstrative is not in Spec,DP but lower in the structure.

  As a first option, one could assume that the demonstrative is in Spec,DP and that this Spec position is on the right:

(9)

```
                        DP
                   ┌──────┴──────┐
                  D'             Spec
              ┌────┼────┐        dem
            (D)   NP   (D)
                   N
```

However, following Kayne (1994), we assume that specifiers on the right are universally disallowed, thus concluding that this option is not available. Likewise, we assume that right adjunction of the demonstrative to the noun phrase is universally disallowed.

  As a second option, one could propose that the demonstrative is in Spec,DP and that this Spec position is on the left, as in most standard accounts (e.g. Abney 1987). In order to derive the order N-dem, one could suggest that the head noun contained in another phrase (XP) moves across Spec,DP to a higher position, illustrated here as Spec of ?P:

(10)

```
                  ?P
            ┌──────┴──────┐
          XP_i            DP
           N        ┌──────┴──────┐
                  Spec           D'
                  dem        ┌────┴────┐
                            D        … t_i …
```
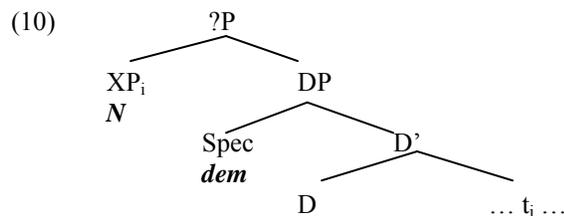
This option also presents a number of problems. Consider two scenarios, the first involving movement due to Scrambling, the second movement due to feature checking.

First, if ?P in (10) equals DP, then XP has moved to adjoin to DP, presumably by Scrambling. However, left adjunction to DP is a very "marked" option and is typically possible only with demonstratives (cf. Norwegian *denne min utbrukte sko* 'this my worn-out shoe', Hellan 1986:104). Furthermore, the type of adjunction in question here would involve *movement* to adjoin to an argument, banned by Chomsky (1986).[2] We conclude then that this option is not available either.
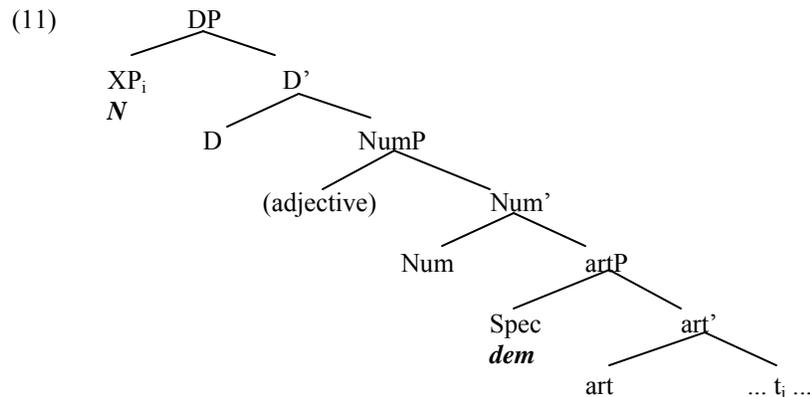
In the second scenario, ?P in (10) equals YP, an assumed phrase level in a split-DP (à la Rizzi's 1997 split-CP). In this case, movement to Spec,YP is assumed to be driven by feature checking in Spec-head configurations, ruling out untriggered movements in general. Note now that the noun in the N-dem order is neither focused nor topicalized. Thus, it is not clear what feature the noun (as part of XP) would check in Spec,YP. If movement is only triggered by feature checking, we conclude that the noun cannot have moved to Spec,YP. Furthermore, there is some indication that (some of) the Scandinavian languages do not have split-DPs: Grohmann & Haegeman (2003) observe that, unlike West Flemish, Norwegian does not allow noun phrase-internal left dislocation or possessor-related Quantifier Float.

As a final option, we propose that the demonstrative is generated in a lower Spec position. Following Julien (2002) and Vangsnes (1999), we assume that determiners are merged in an article phrase (artP). In particular, we suggest that demonstratives are merged in Spec,artP (cf. Brugè 1996, Campbell 1996, Giusti 1997, Panagiotidis 2000, Vangsnes 1999:119-20). In order to derive the order N-dem, we propose that the demonstrative remains in situ and the head noun as part of a larger phrase moves to Spec,DP:

(11)

$$
\begin{array}{l}
\text{DP} \\
\quad \text{XP}_i \quad \text{D'} \\
\quad \textbf{\textit{N}} \\
\qquad \quad \text{D} \quad \text{NumP} \\
\qquad \qquad \text{(adjective)} \quad \text{Num'} \\
\qquad \qquad \qquad \text{Num} \quad \text{artP} \\
\qquad \qquad \qquad \qquad \text{Spec} \quad \text{art'} \\
\qquad \qquad \qquad \qquad \textbf{\textit{dem}} \\
\qquad \qquad \qquad \qquad \qquad \text{art} \quad \dots t_i \dots
\end{array}
$$

Following the traditional literature, we suggest that the resulting order N-dem forms the basis for the change from the post-nominal demonstrative to the suffixed definite article.

3.3 Reanalysis from demonstrative to article

In this section, we propose in more formal detail that the reanalysis of the demonstrative to the definite article progressed via several steps. At the same time, we illustrate the basic derivations for the data discussed above.

To set the stage, the Proto-Scandinavian examples motivate the lower position of the demonstrative. Assuming with Longobardi (1994) that referential noun phrases must have overtly licensed DPs, we suggest that Proto-Scandinavian had the option of moving either the demonstrative or the noun (as part of NP) to Spec,DP. The first option is provided in (12b) and the second one in (13b):

(12)   a.   **a hitt lant**
                to this land
        b. $[_{DP}$ **hitt**$_i$ D $[_{artP}$ t$_i$ art $[_{NP}$ **lant** $]]]$

(13)   a.   **hali hino**
                stone this
        b. $[_{DP}$ $[_{NP}$ **hali** $]_k$ D $[_{artP}$ **hino** art t$_k$ $]]$

In Common Scandinavian, the determiner has become obligatory when an adjective occurs. It has a purely syntactic function with an inherently uniquely referring element, here the proper name *kristr*:

(14)   a.   **in heilhi kristr**
                the holy   Christ
        b. $[_{DP}$ **in**$_i$ $[_{NumP}$ **heilhi** $[_{artP}$ t$_i$ $[_{NP}$ **kristr** $]]]]$

Assuming then that the determiner is an expletive element, we propose that it has moved to D (rather than Spec,DP). If so, the phrasal demonstrative has been reanalyzed as a free-standing head determiner in (14).[3]

Next, in the course of the development from Common Scandinavian to Old Icelandic, the free article is suffixed to the head noun. Interestingly, as neither *hinn N* or *N hinn* sequences are attested in Common Scandinavian, suffixation must have resulted from the obligatory use of *hinn* with adjectives (as traditionally assumed).[4] Note now that with *inn* a head in D, as suggested for (14), there is room in Spec,DP for the noun (phrase). Therefore, frequent appositives involving proper names as in (15a) could *potentially* be reanalyzed as part of the matrix DP as in (15b), where the head noun (inside NP) would have moved to Spec,DP (e$_N$ indicates a null noun, see Panagiotidis 2002):[5]

(15)   a. $[_{DP}$ **kristr** $]$ $[_{DP}$ **hin**$_i$ $[_{NumP}$ **helgi** $[_{artP}$ t$_i$ $[_{NP}$ e$_N$ $]]]]$
                Christi   the   holy
        b. $[_{DP}$ $[_{NP}$ **kristr** $]_k$ **hin**$_i$ $[_{NumP}$ **helgi** $[_{artP}$ t$_i$ t$_k$ $]]]$

(Note that at this stage, *hinn* is still a free-standing element as it still has initial 'h'.) We suggest that this potential reanalysis paved the way for the *actual* reanalysis of less-frequent appositives involving common nouns. Concretely, with the loss of an intonational break between the head noun and the article, the head noun inside NP can be analyzed to be in Spec,DP and *hinn* in D. The article can then be suffixed to the head noun ("+" indicates suffixation):

(16)   a.   **mirkit   mikla**
                monument-the great
        b. $[_{DP}$ $[_{NP}$ **mirki** $]_k$ +**t$_i$** $[_{NumP}$ **mikla** $[_{artP}$ t_i t_k $]]]$

  Finally, although the first suffixed article without an adjective occurs in the 11th century (5), Old Icelandic still has free-standing and suffixed forms (6a-c):

(17)   a. $[_{DP}$ $[_{NP}$ **maðr** $]_k$+**inn$_i$** $[_{NumP}$ **gamli** $[_{artP}$ t_i t_k $]]]$
                    man   the   old
        b. $[_{DP}$ $[_{NP}$ **maðr** $]_k$ **inn$_i$** $[_{NumP}$ **gamli** $[_{artP}$ t_i t_k $]]]$
        c. $[_{DP}$ **inn$_i$** $[_{NumP}$ **gamli** $[_{artP}$ t_i $[_{NP}$ **maðr** $]]]]$

This variation in Old Icelandic can be explained by two assumptions: (i) the article is still ambiguous between a free-standing and suffixal element, and (ii) NP movement to Spec,DP is optional. The first assumption explains the facts in (17a) and (17b) and the second one the contrast between (17a-b) and (17c).

3.4 Advantages and consequences
Importantly, the current proposal allows for a smooth change into Modern Icelandic. With the exception of literary Icelandic (*hinn gamli maður*), the determiner is now a suffixed form. We suggest then that over time, suffixation became obligatory and movement of NP was replaced by partial N-raising to art (cf. Taraldsen 1990) and subsequent movement of NumP to Spec,DP (cf. Julien 2002, Vangsnes 1999). Consider these two steps in the derivation:

(18)   a.   … $[_{NumP}$ **gamli** $[_{artP}$ **maður$_k$**+**inn** $[_{NP}$ t_k $]]]$
        b. $[_{DP}$ $[_{NumP}$ **gamli** $[_{artP}$ **maður$_k$**+**inn** $[_{NP}$ t_k $]]]_j$ D … t_j $]$

  Another advantage is that the proposal of a lower artP fits well with other languages where demonstratives overtly surface in this position. This is illustrated for Spanish (Brugè 1996), Greek (Panagiotidis 2000), and the "marked" option in Modern Icelandic (Vangsnes 1999:148 fn. 34):

(19)   a.   la reacción$_i$ alemana **esta** t_i a las críticas   (Spanish)
                 the reaction German this   to the criticisms
                 'this German reaction to criticism'

b.　　i　nei **afti** katiki　　tis　　　polis　　(Greek)
　　　　　the new these inhabitants the-GEN city-GEN
　　　　　'these new inhabitants of the city'
c.　　maður **þessi**　　　　　　　　　　　(Modern Icel.)
　　　　　man　　this

As such, this analysis unifies the North Germanic DP system with that of Romance, Greek, and other languages.

　More generally, van Gelderen (2004) argues with regard to the clausal domain in Germanic that demonstratives are reanalyzed as complementizers, such that elements in a Spec position become heads of the same phrase. To the extent that our proposal is correct, we extend van Gelderen's analysis to the nominal domain.

　Finally and more speculatively, note that under these assumptions, "transitive" determiners of different structural sizes would be parallel to the different classes of "intransitive" pronouns discussed in Cardinaletti & Starke (1999a), although Cardinaletti (1994) and Cardinaletti & Starke (1999b:278) explicitly deny this extension of their analysis.

3.5 Excursus: Why was only *hinn* suffixed?

There is consensus in the literature that articles typically derive from demonstratives (for discussion, see Hopper & Traugott 1993). However, articles in closely related languages may originate from different demonstratives, as in the Romance languages (Vincent 1997). The question arises why *hinn,* and not the complex demonstrative *sási* or the simple *sá*, became the (suffixed) determiner.

　Sási is a complex or intensified demonstrative pronoun, which is the result of the fusion of the simple demonstrative pronoun *sá* + the intensifier *si*. During the process of fusion, inflection was first on *sá*, then on both elements, and finally only on *si* (Haspelmath 1993:282ff., Prokosch 1938:272). As can be seen in (20), the inflection of the demonstrative is still on *sá* at the time *hinn* became a suffix (11th century):

(20)　　**i　þaimsi**　　　　　　**huki**　　　　　　　(Karlevi c. 1000)
　　　　in this(DAT.MASC)-SI mound (Noreen 1970:315; Kari Gade, p.c.)

In other words, the formation of *sási* was still under way when the suffixation of the article is already attested. Given its morphological complexity, the developing *sási* was a less likely candidate for reanalysis than *hinn* or *sá*.

　Turning to the simple demonstrative, *sá* was not reanalyzed as a suffixal article, although it meets similar positional and semantic criteria as *hinn*. First, it occurs in post-nominal position as in (21a). Secondly, it became the pre-adjectival article in Old Swedish (and Old Danish) as in (21b):

(21)	a.	**kitils þis nuruna**	(Egå)
		of Ketil the Norwegian (Perridon 1996:258)	
	b.	þē gambla	(Old Swedish)
		hin gambla	(Old Icelandic)
		the old (Heusler 1932:125)	

The reason then why only *hinn* became suffixed might be phonetic (cf. Nygaard 1905:34): besides the short stem vowel, *hinn* also had an 'h' as the initial consonant, which was prone to loss even when free standing (4a). (Cf. Kaisse 1981: 108, who notes that the 'h' on English relative pronouns is lost in rapid speech.)

4. Conclusion

Arguing that demonstratives are phrases, we concluded that the early North Germanic sequence "noun + demonstrative" provides evidence that demonstratives are generated in a low artP. Then, we argued that the phrasal demonstrative was reanalyzed as a head, giving rise to the suffixal article.

Notes

[*] We thank Kari Gade, Rex Sprouse, and the audience of WECOL 2004 for comments. All errors are each other's. (For all academic purposes, Christopher D. Sapp is responsible for section 2 and Dorian Roehrs for section 3.)

[1] The examples in section 2.1 and 2.2 are taken from RäF (Krause and Jankuhn 1966) and *Södermanlands/Upplands Runinskrifter*. We follow the convention of transcribing the runic inscriptions with bold, lower-case letters. For clarity, we also use bold print for indicating the pronounced elements in the derivations in sections 3.3 and 3.4. Note that determiners and head nouns agree with regard to gender, case, and number, which we do not mark here.

[2] Further adjunctions to DP (e.g. of the demonstrative across the adjoined head noun inside XP) can presumably be ruled out by the requirement that a chain link must be at least of length 1 (where a chain link from A to B is of length n iff there is n "nodes" (X, X', or XP, but not segments of these) that dominate A and exclude B).

[3] There is independent evidence for the assumption that expletive determiners are in D (and not in Spec,DP). Longobardi (1994:623) argues that proper names in Italian must undergo N-to-D raising if an expletive determiner as in (ia) is not present. Compare (ib) to (ic):

(i)	a.	il mio Gianni	(Italian)
		the my Gianni	
	b. *	mio Gianni	
	c.	Gianni mio	
	d.	il Gianni mio	

Note that the possessive in (id) can only have contrastive reference. As discussed by Cardinaletti (1998), this possessive is in situ; the ones in (ia-b) are in a higher position and (ic) is presumably ambiguous. Crucially, if we assume the expletive determiner to be in D, then the complementary distribution of this determiner and the raised proper noun in (ic) follows straightforwardly.

[4] As already noted above, this state of affairs is surprising in view of the fact that Old Icelandic does have the demonstrative *hinn*. We believe that the reason these patterns are not attested has to do with the semantics of the demonstrative. Taking Old Icelandic as a guide where *hinn* means 'the other' or '(emphatic) that' (Zoëga 1910), the use of *hinn* in inscriptions would probably be pragmatically odd.

Although unattested and not usually assumed to have formed the basis for this reanalysis, the unmodified sequence N-dem could be a second scenario for this change and subsequent suffixation:

(i) a. $[_{DP} [_{NP}$ **maðr** $]_i$ D $[_{artP}$ **hinn** $[_{art'}$ art $t_i]]]$

    b. $[_{DP} [_{NP}$ **maðr** $]_i$ D $[_{artP}$ $[_{art'}$ **inn** $t_i]]]$

To the extent that this possibility is correct, it would allow suffixation of *inn* in the DP-level (after movement of *inn* to D) or in the artP-level (after N(P) raising).

[5] There is evidence that these structures, usually involving a proper name, did involve appositions: some material (indicated by italics) may intervene between the N and the apposition (Perridon 1996:257):

(i) a. **Kara,** *faður sinn*, **inn malspaka**   (Uppland 1146)
            Kara, father his, the eloquent

    b. … **ok staf** *unnu*(?) *ok* **inn mikla at iarteknum** (Uppland 226)
          and staff made   and the splendid as a sign of honor
        '…and made the staff, the splendid one, as a sign of honor'

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