VERBAL NOUN OR VERBAL ADJECTIVE?

THE CASE OF THE LATIN GERUNDIVE AND GERUND

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Contents

1. The aim of this paper

It is the aim of this paper to present and elaborate a new
solution to the old syntactic problems connected with the Latin
gerundive and gerund, two verbal categories which have been in-
terpreted variously either as adjective (or participle) or noun
(or infinitive). These questions have been much discussed for
quite a number of years (cf., among others, Aalto 1949, Tovar
1950, Hahn 1965, 1966, Neschke 1974, Blümel 1979, Stepanov 1985),
but for the most part from a philological or purely diachronic
point of view. All these linguists try to explain the peculiari-
ties of these categories and their syntax by showing that the
gerund is historically prior to the gerundive.

Our point of departure is Risch 1984, who traces in detail
the development of the syntax of these forms from Old Latin
through to the post-classical period, and arrives at the opposite
conclusion. Risch's primary concern is to provide a philological
confirmation of his hypothesis of the historical priority of
the gerundive over the gerund. We rely on his work (which in
terms of philological profundity stands out among the other pub-
lications on this topic) and concentrate on the syntactic ques-
tions, which Risch deals with only in passing and not very clearly.

It is our thesis (following Risch) that in order to arrive
at a unified account of gerundive and gerund we do not have to
go back to prehistoric times. Even for the classical language
gerund and gerundive represent the same category, in the sense
that the gerund can be shown to be a special case of the gerundive.
Additional evidence from a parallel construction in Hindi is
adduced to make the Latin facts more plausible. It is only in
the post-classical language that certain tendencies which had
shown up already in Old Latin poetry become stronger and finally
lead to a reanalysis of the gerundive and a split into two dis-
tinct syntactic constructions.

The propositional meaning of the gerundive in its attributive
use is explained with reference to a conflict between syntactic
and cognitive principles. Special constructions which are the
effects of such conflicts can be found in other parts of grammar.

Languages differ with respect to the degree of syntacticization (or conventionalization) of these special constructions.

2. Gerundive and gerund

2.1. The nd-form

There exists in Latin a peculiar non-finite verbal inflectional category which exhibits a complex syntactic behavior: in some cases it looks more like a verbal noun (and accordingly inflects for case in the singular), in others it rather seems to be a sort of passive participle (and accordingly inflects for the agreement-dimensions case, number and gender). In the former case it is called the gerund, in the latter the gerundive. Formally, however, we are clearly dealing with one and the same category, cf. an example of the gerundive in (1), and one of the gerund in (2).

(1) leg-end-us,   -a,   -um
    read-GER -M   F   N

    "that is to be read"

(2) leg-end-i,   -o,   -um,   -o
    read -GER- GEN   DAT   ACC   ABL

    "of reading, for reading, etc."

Obviously, the only difference is the different inflectional options. So on the basis of its formal characteristics, we can call this category simply the nd-form.

2.2. Traditional grammar

In traditional grammar, gerund and gerundive are treated as two completely distinct categories which really are not related to each other and should under no circumstances be confused. Cf. Hofmann & Szantyr 1965:§201:

"Das Gerundium erfüllt die Funktion eines Verbalsubstantivs, das den Infinitiv in den obliquen Kasus ergänzt...und ähnlich wie dieser verbale Rektion aufweist: legendi librum wie legere librum... Das Gerundivum ist nach herkömmlicher Auffassung, ähn-

lich wie griech. φιλητέος, ein Verbaladjektiv, das nachträglich gleich dem to-Partizip in das Verbalsystem eingegliedert wurde."[1]

2.3. The gerund

When the nd-form is used as a sort of nominalized or rather inflected infinitive, it is called gerund. In most cases it can be translated by an English gerund and is represented in the following table, together with the infinitive:

	INFINITIVE	GERUND	
NOM	legere		"to read"
GEN		legendi	"of reading"
DAT		legendo	"for reading"
ACC	legere		"to read"
		legendum	"reading"
ABL		legendo	"by reading"

The infinitive proper is used only in the direct cases, that is when governed by a verb.[2] Here two cases can be distinguished: (A) as subject of "impersonal predicates", see ex.(3), and (B) as object of the usual "complement-taking verbs" (for this term cf. Noonan 1985), see ex.(4).

(3) hunc librum legere utile est
    this book   read:INF useful is

    "It is useful to read this book."

(4) cupio hunc librum legere
    I-wish this book   read:INF

    "I wish to read this book."

In cases where the infinitive would have to be governed by a non-verb (that is noun, adjective or preposition), the gerund is used instead:

N: (5) potestas respondendi
        possibility answer:GER:GEN   "the possibility of answering"

    (6) ars gubernandi
        art govern:GER:GEN   "the art of governing"

A: (7) homines bellandi cupidi
        men   fight:GER:GEN desirous "men, desirous of waging war"

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P:    (8)  in legendo
           in   read:GER:ABL              "in/while reading"
      (9)  ad vivendum
           to   live:GER:ACC              "for living"
```

The nouns and adjectives which are used in this way are often derived from complement-taking verbs or at least have a similar meaning that requires a propositional actant (=complement), e.g. potestas "possibility, power" (cf. possum "I am able"), cupidus "desirous" (cf. cupio "I desire"). They can be called "complement-taking nouns (and adjectives)".

The gerund can also be used in the ablative caes without a preposition, and very rarely in the dative case. Here the gerund is not governed by the verb, but modifies it adverbially.

```
ADV:   (10) (DAT:) scribundo adfuisse (Cic.Att.4,17,12)
                   write:GER:DAT   be=present

                   "to be present in order to write"
       (11) (ABL:) Romanus sedendo  vincit (Varro RR 1,2,2)
                   Roman        settle:GER:ABL conquers

                   "The Roman conquers by settling."
```

Although this last-mentioned use is not normally taken to be an instance of complementation, we will use the term complementation (or complement function) as a cover term for the functions of the gerund.

Like the infinitive, the gerund behaves more like a verb than a noun in that it takes adverbial modifiers. So we have (12) with a gerund, which is in clear contrast to (13) with a verbal noun.

```
(12) ars bene gubernandi
     art  well  govern:GER:GEN    "the art of governing well"
(13) ars bonae gubernationis
     art  good    government:GEN  "the art of good government"
```

In the same way, the accusative object is not changed to genitive as it is with verbal nouns. Note, however, that in the classical language the gerund is used transitively very rarely, a fact that will become more important later (cf. 3.1.).[3]

2.4. The gerundive

When the nd-form agrees with a noun in case, number and
gender like an adjective or participle, either in attributive
or predicative position, it is called gerundive. The gerundive
has two rather different meanings, according to the syntactic
function it fulfills. At first sight these two meanings do not
seem to have much in common.

2.4.1. Predicative use. When the gerundive is used predicatively
(=as a predicate nominal), it has a passive and modal meaning,
in most cases that of necessity or obligation, more rarely that
of future time reference. Examples:

(14) fugienda   semper injuria est (Cic.off.1,25)
     flee:GER:NOM.F.SG always   injustice(F) is

     "Injustice should always be avoided."

(15) si quis quid reddit, magna habenda   'st gratia (Ter.Ph.56)
     if who what returns great have:GER:NOM.F.SG is gratefulness(F)

     "If anybody returns anything, one should be grateful."

The agent may be added in the dative case:

(16) Caesari erant transcendendae valles maximae (Caes.bc 1,68,2)
     Caesar:DAT were overcome:GER:NOM.F.PL valleys(F) very=large

     "Caesar had to overcome very large valleys."

(17) uxor tibi ducenda   'st, Pamphile, hodie (Ter.And.254)
     wife you:DAT lead:GER:NOM.F.SG is Pamphilus   today

     "You have to take a wife today, Pamphilus."

In most school grammars the corresponding attributive use is
mentioned, also with passive and modal meaning, e.g.

(18) liber legendus
     book(M) read:GER:NOM.M.SG   "A book that is to be read."

However, this use is extremely limited. In the classical period,
it occurs only with verbs of emotion (etc.) in prose (cf. (19)
and (20)) and is more widespread only in poetry (cf.(21)), see
Risch 1984:B.3.

(19) mirandum in modum gaudeo (Cic.fam.15,8)
     marvel:GER:ACC:N:SG in manner(N):ACC.SG I=rejoice

     "I am tremendously pleased."(lit."in a way that is to be marveled at")

(20) non contemnendam manum in ultionem domini compararat(Svet.Tib.25)
      not despise:GER:ACC.F.SG gang(F):ACC in revenge   lord:GEN s/he=had=brought=together

"He had organized a considerable gang for the revenge of his lord."

(21) o sol pulcher, o laudande (Hor.carm. 4,2,45)
      o sun(M):VOC.SG beautiful o praise:GER:VOC.M.SG

"O beautiful sun, the one who has to be praised!"

2.4.2. <u>Attributive use</u>. When the gerundive is used attributively,
in most cases there is no modal meaning involved and we are dealing
with a quite different phenomenon: the <u>gerundive construction</u>
("Gerundivkonstruktion"). An NP consisting of a noun and an attrib-
utive gerundive which together form a gerundive constructin does
not refer to a thing but to a state of affairs: it has propositional
meaning. Thus, the gerundive construction is a peculiar technique
for nominalizing clauses in which the verb does not become a
verbal noun and head of the resulting NP, as in the usual case,
but is made into a verbal adjective which stands in an attributive
relation to the underlying direct object. Examples:

N: (22) spes potiendorum   castrorum (Caes. bG 3,6,2)
           hope take:GER:GEN.PL.N   camp(N):GEN.PL

"the hope of taking the camp"

A: (23) homines belli gerendi peritissimi (Cic.Font.43)
           men   war(N):GEN.SG wage:GER:GEN.SG.N very=experienced

"men, very experienced in waging war"

P: (24) de captivis   commutandis Romam missus est (Cic.off.1,35)
           for captives(M):ABL.PL exchange:GER:ABL.PL.M to=Rome sent is

"He was sent to Rome in order to exchange prisoners."

     (25) impediendae   reliquae munitionis causa (Caes.bc 1,82,1)
           hinder:GER:GEN.SG.F remaining   supplies(F):GEN.SG for=the=sake

"for the sake of hindering the rest of the supplies"

ADV:(26) (ABL:)noster populus sociis defendendis terrarum omnium potitus est
                our   nation allies(M):ABL.PL defend:GER..countries all conquered is

"Our nation has conquered all countries by defending the allies."

     (27) (DAT:) hibernis oppugnandis hunc esse dictum diem(Caes.bG 5,27,5)
            winter-quarters:DAT.PL attack:GER:DAT.PL this be said   day

"that this day was fixed for attacking the winter quarters"

These two meanings look very different and hard to unify. On
the other hand, the attributive use of the gerundive (i.e. the
gerundive construction) immediately strikes one as very similar, and
practically identical with that of the gerund. Both the range of

syntactic contexts (government by lexical categories other than
verbs and adverbial modification) and the meaning (state of affairs)
are exactly the same. Indeed one can say that the gerundive sup-
lements the gerund in its transitive use and has the same complement
function here.

Various accounts of this situation have been proposed, and
it is interesting to note that a transformational description
which derives the gerundive construction from the gerund appears
even in traditional grammars. This transformation, of course,
does not have any theoretical significance, and is used essentially
as a pedagogical device. Cf. the following quotation from a peda-
gogical grammar (Menge 1953:§449):

(Das Gerundium wird in das) "Gerundivum verwandelt, d.h.
das Objekt wird in den Kasus des Gerundiums gesetzt und das Gerun-
divum mit demselben in Übereinstimmung gebracht: In persequendis
hostibus (aus: in persequendo hostes); ad liberandam patriam
(aus: ad liberandum patriam)..."[4]

Such a way of describing the Latin facts may be appropriate
for didactic purposes, but more arguments supporting this analysis
are required if one assumes that this transformation is linguis-
tically real, either as a synchronic rule (Neschke 1974) or as
a diachronic change (Aalto 1949, Hahn 1965, Blümel 1979). See
below (6.) for more discussion of the diachronic development.

A clue to a more adequate analysis of the data comes from
an unexpected direction. In Hindi one finds a rather similar
situation, to which we turn now.

3. The naa-infinitive in Hindi

3.1. The parallel with the gerundive

There is an infinitive in Hindi which is marked by a suffix
-naa and is used as a direct object of complement-taking verbs
such as "begin" (šuruu karnaa), "stop"(khatam karnaa), "want"
(caahnaa).(The examples are taken from Pořizka 1972 and Fairbanks
& Misra 1966; cf. also Meile 1948)

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(28) mãĩ phal khaa-naa šuruu kar-taa hũũ
     I   fruit eat-INF beginning do-PRES COP.1.SG

     "I begin eating fruit."
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(29) voo ghar jaa-naa caah-taa hai
     he  home go-INF want-PRES COP.3.SG

     "He wants to go home."
```

Furthermore, it occurs as subject of the impersonal modal expression
<u>caahiyee</u> "it is necessary" (cf. (30)) and, as predicate together
with the copula, with the meaning of necessity or obligation
(cf. (31)).

```
(30) mujhee yee kaam kar-naa caahiyee
     for=me this work do-INF it=is=necessary

     "I ought to do this job."
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(31) mujhe makkhan khariid-naa hai
     for=me butter  buy-INF COP.3.SG

     "I have to buy butter."
```

This last construction brings to mind the Latin predicative gerun-
dive with the same meaning of necessity, but at this point the
comparison does not yet seem necessary. After all, very similar
constructions appear in other languages as well, with the infinitive
taking on a meaning of necessity in certain syntactic environments,
cf. the Russian example in (32):

```
(32) mne kupit' maslo
     for=me buy:INF butter            "I have to buy butter."
```

In many languages the infinitive seems to possess a sort of inherent
modal meaning, and it is not very unusual to find it in an impersonal
construction with a "morally responsible agent"(Lyons 1977:823)
in the dative case. Cf. Strunk 1977:28ff. for more examples from
other Indo-European languages.

But the following property of the Hindi infinitive is striking:
it agrees with its direct object in gender and number, as can
be seen from (33)-(34).

```
(33) mãĩ rooţii khaa-nii  šuruu kar-taa hũũ
     I   bread(F) eat-INF.F.SG beginning do-PRES COP.1.SG

     "I begin eating bread."
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```
(34) voo kamr-ee deekh-nee  caah-taa hai
     he  room(M)-PL see-INF.M.PL want-PRES COP.3.SG

     "He wants to see the rooms."
```

This type of agreement is very unusual cross-linguistically.
Normally, verbs agree with their direct objects only in person,
see Lehmann 1982. But if we translate these sentences into Latin,
using the gerundive construction, we see a very similar pattern:

(35)(tr.of(33)) panis   edendi   initium facio (=panem edere incipio)
                bread(M):GEN.SG eat:GER:GEN.SG.M beginning I=do

(36)(tr.of(34)) camerarum videndarum cupidus est (=cameras videre cupit)
                rooms:GEN.PL   see:GER:GEN.PL desirous is

In both languages there is agreement of the direct object with the
non-finite verb (infinitive in Hindi, gerundive in Latin) instead
of verbal government. The only difference is that this construction
has a wider distribution in Hindi and is not limited to the oblique
cases like the Latin gerundive.[5] It occurs also (and primarily)
as direct object, a position in which the Latin gerundive cannot
appear. This is why in translating (33) and (34) into Latin we
have to use a nominal paraphrase to get the desired effect. (As
a consequence, the Latin sentences (35)-(36) are rather artificial;
the more natural equivalents with infinitives are indicated in
parentheses.)

Now the similarity is not restricted to the complement function
of the Latin gerundive. The predicative function with modal meaning
is also paralleled by the Hindi infinitive, as we have already
noted, cf. (31). Here too the infinitive agrees with its direct
object in gender and number.

(37) mujhee khabar bheej-nii hai
     for=me   message(F)   send - INF.F.SG COP.3.SG
     "I have to send a message."

The exact Latin equivalent of this sentence would be:

(38) mihi nuntius mittendus est[6]
     I:DAT   message(M) send:GER:NOM.SG.M is

Thus, the Hindi infinitive provides a striking parallel with
the Latin gerundive which extends to both the attributive and
the predicative functions of 2.4. This is a strong arguments
for the unity of these functions in Latin, too.

3.2. The parallel with the gerund

The Hindi infinitive now illuminates also the relationship
of the gerund to both functions of the gerundive. If the infinitive
is used without a direct object with which it could agree, i.e.
if the verb is used intransitively, the Hindi infinitive has
the unmarked form, which is identical to the masculine singular
agreement form.

(39) ham cal-naa caah-tee hãĩ
     we   walk - INF(.M.SG) walk-PRES COP.1.PL
     "We want to walk around."

The same analysis turns out to be applicable to the Latin gerund:
it is nothing other than the unmarked form of the gerundive,
which has, as expected, neuter singular form in Latin. The distri-
bution of agreeing and non-agreeing forms in Latin is exactly
analogous to their distribution in Hindi, a fact that has not
received sufficient attention so far. The agreeing construction
(gerundive) is used when the verb is used transitively while
the non-agreeing construction (gerund) is used when the verb
is intransitive or used intransitively and hence there is nothing
for the nd-form to agree with. Again we can translate (35) directly
into Latin by using the nd-form, and what we get now is the gerund:

(40) ambulandi   cupidinem habemus   (=ambulare cupimus)
     walk:GER:GEN(.SG.N) desire   we=have

The gerund is thus only a special case of the gerundive.
It is a gerundive without a direct object to agree with.

4. The identity of the gerund and the impersonal gerundive

A moment ago we noted that the gerund is nothing other than
the unmarked form form of the gerundive and that it is employed
when the verb is used intransitively. When the verb is used trans-
itively, however, the gerundive agrees with its (underlying)
direct object. But recall that the Latin gerundive has passive
meaning (at least in its predicative use) and the underlying
direct object surfaces as subject. So from the point of view
of Latin we would have to say that the unmarked form is used

when there is no subject, and we can call the gerund the impersonal form (=passive form without a subject) of the gerundive.

We can see this more clearly if we convert the gerundive construction into its finite counterpart, as in (42) from (41).

(41) superstitione tollenda religio non tollitur (Cic.div.2,148)
superstition(F):ABL.SG abolish:GER:ABL.SG.F religion not abolish:PASS.3.SG

"By abolishing superstition religion is not abolished."

(42) superstitio tollitur
superstition   abolish:PASS.3.SG   "superstition is abolished"

The resulting finite clause (42) is passive, of course. Likewise, if we convert a gerund into its finite counterpart, we get a passive clause, as in (44) from(43).

(43) equitandi laus (Cic.Tusc.2,62)
ride:GER:GEN(.SG.N) praise   "the praise of riding"

(44) equitatur
ride:PASS.3.SG   "One rides./There is riding going on."

But this time, of course, the passive clause is impersonal. Impersonal passives are a very common phenomenon in Latin and we should therefore not be surprised to find impersonal gerundives too.

Now the impersonal gerundive does not occur only in attributive position (or complement-function), but also in predicative position with modal meaning, cf.(45)-(46)(Risch 1984:§46,§114).

(45) paci semper consulendum est (Cic.off.1,35)
peace always   plan:GER:NOM(.SG.N) is

"One should always strive for peace."

(46) clam illuc redeundum est mihi (Plt.Amph.527)
secretly thither return:GER:NOM(.SG.N) is I:DAT

"I must return there in secret."

Although this is, like the gerund, an impersonal use of the gerundive, this use of the nd-form has traditionally not been called gerund but simply "impersonal gerundive". The reason for this terminological inconsistency is that either one of two sufficient criteria is taken to be sufficient for classification as gerundive: (A) modal meaning or (B) agreeing form. The result is that no single sufficient criterion for the gerund is left, and it can only be defined ex negativo by a conjunction of two necessary

criteria, namely non-agreeing neuter form and propositional non-modal meaning.

In the following table the four syntactic uses of the nd-form are represented:

	impersonal (neuter form)	personal (agreeing form)
complement function (propositional meaning)	ars gubernandi	spes potiendorum castrorum
predicative function (modal meaning)	paci consulendum est	fugienda injuria est

Along the axes the basic classificatory features are given with the criteria for assignment added in parentheses. Everything falling into the shaded area is traditionally referred to as gerundive. The inappropriateness of this terminology should be obvious. It seems that the most reasonable alternative is to identify the traditional terms gerund and gerundive with the impersonal and personal uses, respectively. The nd-forms in (45) and (46) would be called gerunds according to this convention.[7]

5. From verbal adjective to infinitive: Latin and Hindi

5.1. Classical Latin

The explanation given in section 3. for the syntax of the gerund presupposes that the distinction between agreeing gerundive and non-agreeing gerund coincides with that between transitive and intransitive use of the verb. However, the coincidence is not complete and consequently our analysis requires a certain amount of idealization of the data.

As a rule, in classical Latin (Cicero, Caesar) the gerundive goes together with transitive use, while the gerund goes together with intransitive use of the verb. Cf.Risch 1984:§101:

"(Beim Gerundium) wird im klassischen Latein bekanntlich
ein Akkusativobjekt im ganzen gemieden und stattdessen die Gerundiv-
konstruktion verwendet."[8,9]

This rule, however, has certain stylistically motivated
exceptions. The gerund plus accusative object can be used instead
of the gerundive construction,

(A) if the accusative object is a neuter pronoun, e.g.

(47) cupiditas agendi   aliquid (Cic.fin.5,55)
     desire   do:GER:GEN(.SG.N) something:ACC
     "the desire to do something"

The obvious motivation here is that in the genitive case it would
be impossible to distiguish neuter pronouns from masculine pro-
nouns.

(B) if the accusative object is a personal pronoun, e.g.

(48) cupidus sum te audiendi (Cic.de orat.2,16)
     desirous   I=am you:ACC hear:GER:GEN(.SG.N)
     "I wish to hear you."

The genitive case of personal pronouns would be a bit awkward
as it is rarely used (with pronouns, the possessive adjective
is used in most cases where the genitive case is required).

(C) if the gerundive construction would be in the genitive
plural, e.g.

(49) spatium pila in hostis coiciendi (Caes. bG 1,52,3)
     space   spears in enemy   throw:GER:GEN(.SG.N)
     "space for throwing spears at the enemy"

In this way the cacophony of two successive endings -orum (or
-arum) is avoided.

(D) in a number of minor cases, cf. Risch 1984:98, Hofmann
& Szantyr 1965:§202 Cb, Menge 1953:§449.[10]

5.2. The reanalysis in Latin

In post-classical Latin the use of the gerund with an accusative
object is becoming more and more frequent (Risch 1984:§104),cf.(50):

(50) (Hannibal) mutando nunc vestem, nunc tegumenta capitis...
     Hannibal   change:GER:ABL now dress   now   coverings   head:GEN

     sese ab insidiis munierat (Liv.22,1,3)
     himself from ambushes s/he=had=protected

     "Hannibal had protected himself against ambushes by
     changing now his dress, now his hats."

Such clauses occur, though still rather restricted, as early as
in Old Latin poetry (Risch 1984:§126-27). We may assume that
in the colloquial language (which is reflected to a greater extent
in Old Latin poetry than in classical prose) the reanalysis was
made earlier and that in classical times the system described
here was valid only for the written language. It is very probable
that the classical language preserves an archaism here and that
this system was valid for the colloquial language at some earlier
period, but nothing definite can be said for lack of documentation.

It appears, however, that the gerundive construction was
never used as extensively as the Hindi infinitive, since the
Latin infinitive in -re/-ri/-i/-ier always existed side by side
with the gerundive and fulfilled the more central functions,
while the gerundive construction was used only to supplement
the infinitive in the more peripheral functions as a dependent
of prepositions and nouns, where the infinitive could not appear.

Be that as it may, it is clear that at some point in the
history of Latin a reanalysis of the gerundive took place: The
former impersonal and passive verbal adjective is reanalyzed
as an active infinitive-like verbal noun. Now it becomes a rule
that the direct object object of transitive verbs is in the
accusative case and the gerund is used. The gerundive in complement-
function (=the gerundive construction) loses its place within
the system and is used only as a reminiscence of the classical
norm and not in virtue of its contemporary place in the system.
In the new system the adjectival gerundive and the infinitive-
like gerund are clearly separated now and have nothing in common.
In the popular language survive only the gerund, mainly in its
adverbial use,and some isolated gerundives which had become
lexicalized already in the classical period (Risch 1984:B.4.a).
After this reanalysis we no longer have a unitary category, but

two completely distinct categories: the passive-modal verbal
adjective and the "declinable infinitive", now used transitively
and intransitively like the infinitive proper. What was formerly
the (non-impersonal) gerundive construction is now outside the
system and a really strange phenomenon, sharing properties of
both the declinable infinitive (complement function) and of the
passive-modal verbal adjective (agreement with its head noun).
The reanalysis can be diagrammed as follows:

	gerund (impersonal)	gerundive (personal)
complement function	ars gubernandi	spes potiendorum castrorum
predicative function	paci consulendum est	fugienda injuria est

⇓ reanalyzed as

declinable infinitive (complement f.) | passive-modal verbal adjective (predicative function)

intransitive	ars gubernandi
transitive	spes potiendi castra

impersonal	personal
consulendum est	fugienda injuria est

While in the original system the chief criterion for classifi-
cation was impersonal or personal use of the verbal adjective,
now the chief criterion is the external syntactic function (com-
plement or predicative).

The two categories that exist now correspond rather closely
to the traditional notions of gerund and gerundive. However,
this new stage of the historical development has never become
the written norm. The written language basically sticks to the
classical norm and continues to use the gerundive in complement

function, which should not be possible according to the new
system. Therefore it seems advisable to proceed as above by
taking the old system, which is very clearly reflected in the
classical language, as the basis of the description and to treat
as exceptions the uses that are due to the reanalysis.

5.3. The reanalysis in Hindi

Again in Hindi a quite parallel development is taking place.
In less conservative variants of the language the unmarked masculine
singular form -naa is used not only with [+masculine, +singular]
direct objects and in the absence of any direct object, but also
with other direct objects:[11]

    (51) (cf.33) mãĩ rootii khaa-naa šuruu kar-taa hũũ
                      (F)   INF(.M.SG)
    (52) (cf.34) voo kamr-ee deekh-naa caah-taa hai
                      PL   INF(.M.SG)

So again an infinitive with adjectival properties becomes a
perfectly normal, noun-like infinitive.

Interestingly, the infinitive in Hindi too derives historically
from a future passive participle, as the late Latin declinable
infinitive derives from the gerundive. According to a very plausible
hypothesis, the naa-form continues the Sanskrit participle in
-aniya- which had passive and modal meaning. Some residual instances
of this original use can still be observed in Hindi:[12]

    (53) kah-nii na kah-nii baat
         say-INF.F.SG not say-INF.F.SG word(F)

         "an improper word"

Likewise,there is an infinitive in -ba- in several modern Indoaryan
languages (e.g. Gujarati) which historically derives from the
other future passive participle of Sanskrit which was formed
in -tavya- (cf. Beames 1872-79, vol.III, p.236f. and p.152f.)
This is additional evidence for our interpretation.

6. On the question of historical priority

By the above interpretation of the nd-form syntax and its reanalysis, we commit ourselves to an answer to the much-debated question of the historical priority of gerund or gerundive. After comparative philology in the 19th century had found in Osco-Umbrian something corresponding to the Latin gerundive, but nothing corresponding to the gerund, it became the prevalent opinion that the adjectival gerundive existed in Common Italic and consequently was primary with respect to the gerund, which was a later development of Latin. This view was challenged later, however, with syntactic arguments (see Aalto 1949, Tovar 1950, Hahn 1965, Blümel 1979, Stepanov 1985). The comparative-philo-logical evidence was ignored or somehow explained away.

The semantic-syntactic relationship between the two uses of the gerundive (the predicative and the complement function) is indeed a problem, and we will return to it in more detail in the next section. In this context some remarks on the mor-phology seem in order. This issue has been "probablement la plus débattue de la morphologie latine" (Benveniste 1935), and we will confine ourselves to considering the relative plausibility of the two directions of derivation.

Those linguists who argued for the priority of the gerund for syntactic reasons regarded the gerundive as an "adjekti-viertes Gerundium"(Aalto 147) have usually not been very explicit as to how exactly this adjectivalization may have taken place. In any event, it cannot be attributed to a word-formatin process of the standard type. Tovar 1950 calls the relevant process, very vaguely, an "assimilation of the endings" in con-nection with a still vaguer "close relation between noun and adjective". Blümel's(1979:88) term here is the equally imprecise "attraction".

In fact, future passive participles are frequently derived from verbal nouns, but not by means of obscure "assimilation processes", but by the standard morphological means available in the language. There are numerous instances of such derivations

in other ancient Indo-European languages, as mentioned by
Benveniste 1935:144 and again by Strunk 1977:33-34. For example,
the Sanskrit future passive participles in -aniya- and -tavya-,
mentioned in 5.3., are derived from infinitives in -ana- and
-tu-. So we have to look in the same direction as Benveniste
1935:144-46, who explains Latin -endo- as a derivatin by means
of the suffix -do- from an infinitive in -er/en-, and Risch 1984,
who reconstructs an original *-tno-, made up of the suffix -tr/tn-
and the adjective-deriving suffix -o-.[13]

The gerund priority approach, then, cannot explain the identity
of the morphology of both gerund and gerundive. Moreover, it
cannot explain two important aspects of the syntax of the nd-
form. First, the gerund has verbal government and modification,
that is, objects in the genitive, dative, ablative (and later,
accusative) cases and adverbs. Of course, the same is true for
the infinitive, but the infinitive is not a (verbal) noun at
all, as can be seen from the fact that it does not decline and
can be governed only by verbs. A full-fledged verbal noun which
can be declined and governed like any other noun would be expected
to take its object in the genitive case and to take adjectival
modifiers. On our analysis, the explanation is straightforward:
the gerund is, in reality, a verbal adjective, which nobody would
expect to show syntactic behavior other than it in fact shows.
Second, as we have seen above (2.3.), the gerund does not occur
in a position which is governed by a verb. In other words, it
never occurs in the direct cases. This would be very odd behavior
for an ordinary verbal noun, while on our interpretation it de-
rives directly from the fact that the gerundive construction
never occurs in this position.[14]

We conclude that a diachronic scenario with a verbal noun
"gerund" at the start and a later development of a passive-modal
verbal adjective "gerundive" is unacceptable for morphological
and syntactic reasons.[15] Moreover such a scenario would give
us no possibility to account for the synchronic system of Latin
in a unified way. Our analysis, however, not only provides such
a unitary synchronic account, but is also completely in accord

with the diachronic data.

7. How can an adjective acquire propositional meaning?

7.1. The problem

If we account for the syntax of the Latin nd-form by reducing
it to a passive verbal adjective, we have to explain the fact
that this nd-form in certain constructions has complement function
instead of attributive function and propositional instead of
modifying meaning. As we have seen above (section 6.), many
linguists have found this difficult and have instead tried to
explain the adjectival use in terms of an original verbal noun.
Unfortunately, this leads to serious conflicts with general syn-
tactic and morphological considerations as well as with the com-
parative data.

Let us take a simple example of the gerundive construction:

(54) in persequendis   hostibus
     in   follow:GER:ABL.PL.M enemy(M):ABL.PL

     "in following the enemy"

This looks like an ordinary NP with a modifying adjective and
it should mean something like "in the enemy who is (going) to
be followed". But in fact it means "in following the enemy".
At first sight there seems to be no connection at all between
these two meanings. But upon closer inspection we find that they
are related in an interesting way. To show this, let us first
consider a parallel within the same language.

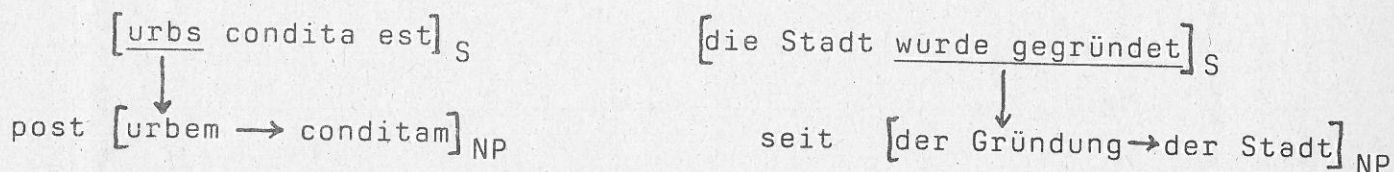There is another construction in Latin with very similar
properties, the so-called "AUC" construction (cf., most recently,
Bolkestein 1980). It looks like the gerundive construction with
a past passive participle instead of the gerundive (hence it
refers to past instead of present time). Examples:

(55) ab urbe condita
     from city(F)/ABL.SG found:PASTPTC:ABL.SG.F

     "since the foundation of the city"

(56) ut expugnati oppidi famam antecederet (Caes.bc 3,80,7)
COMP storm:PASTPTC:GEN.SG.N town(N):GEN.SG rumor arrive=before

"in order to arrive before the rumor of the storming of the town."

(57) cum patrem pulsum,   patriam   adflictam deploraret (Cic.Sest.121)
COMP father:ACC.SG expel:PASTPTC:ACC.SG homeland:ACC.SG trouble:PASTPTC:ACC.SG deplore

"as he was sad that his father had been expelled and his country

    had got into trouble"

(58) Sardinia Siciliaque amissae
Sardinia(F) Sicily(F):and lose:PASTPTC:NOM.PL.F

"the fact that Sardinia and Sicily have been lost"

As in the gerundive construction, these are NPs with propositional
meaning whose head is not a verbal noun, but the underlying object.
(55) literally means "from/since the founded city". Like the
gerundive construction, the AUC construction is used predominantly
in the indirect cases, but there are some exceptions like (58).

The similarity of the AUC construction and the gerundive
construction has been noted by other linguists.[16] Risch 1984:16
contrasts the AUC construction with the corresponding German
construction. The following is a slightly modified version of
his scheme.

$$[\underline{\text{urbs}}\ \text{condita est}]_S \qquad\qquad [\text{die Stadt}\ \underline{\text{wurde gegründet}}]_S$$

$$\text{post}\ [\underline{\text{urbem}} \longrightarrow \text{conditam}]_{NP} \qquad\qquad \text{seit}\ [\text{der Gründung} \rightarrow \text{der Stadt}]_{NP}$$

The vertical arrows here mean that in the course of nominalization
a constituent of the finite clause becomes the head of the resulting
NP, while the horizontal arrows denote the dependency relations
within the NP. It appears that Risch simply notes this difference
between Latin and German without seeing any problem here. But
there is a universal syntactic principle which states that in
nominalizations of clauses the head of the clause (=the verb)
becomes the head of the resulting NP.[17]

7.2. A cognitively-based approach

We would like to propose that one should look for a solution
to the problem in cognitive rather than in syntactic principles.

Tovar 1950 comes close to it when he points out that "wir hier
wieder einen Fall jener Verfahren vor uns haben, über die das
Lateinische verfügt, um das Abstrakte durch das Konkrete auszu-
drücken." The normal case is that in a natural language "the
abstract" (i.e. states of affairs) is expressed by an abstract
noun when nominalized. Languages provide many different techniques
of word formation and syntax which form nominalized constructions
(mostly, NPs) from predicates that express states of affairs
(verbs, adjectives).

On the other hand there is a cognitive principle that concrete
things are more salient and easier to conceptualize than abstract
states of affairs. Moreover, NPs typically denote things and
not states of affairs, so that abstract NPs are rather untypical
NPs. Such discrepancies between syntactic and cognitive principles,
which are commonly "explained" by syntactic transformations,
are discussed by Langacker 1984 within his framework of "Cognitive
Grammar."

Langacker distinguishes in a state of affairs ("relational
predication" in his terms) between the "active zone", that is
those entities which participate in the state of affairs in the
strict sense and the "profile", that is those entities which
are conceptualized by the mind and expressed linguistically.
In many cases active zone and profile coincide, but in many others
they do not. For example, in (59)

(59) The woman heard the piano.

the active zone comprises only the auditory apparatus of the
person and the sound that comes from the piano. But the person
and the piano are much more salient for conceptualization[19] and
thus only they are profiled and expressed linguistically.

Similarly, discrepancies can arise in states of affairs which
have other states of affairs (e.g. processes) as their participants.
In (60) profile and active zone coincide ("to draw Cologne Cathedral").

(60) It is difficult to draw Cologne Cathedral.

In (61), however, the active zone is still the complete process
"to draw Cologne Cathedral", but only its patient participant

is profiled.

(61) Cologne Cathedral is difficult to draw.

The relevant active zone is specified periphrastically with a to-infinitive here, but this periphrastic specification is not nec-essary. As Langacker observes, if the process functioning as the active zone is obvious from the context, the to-infinitive may be omitted. So in the context of a drawing class, (62) would be perfectly natural.

(62) Cologne Cathedral is difficult.

In certain cases such "illogical" conceptualizations can be reg-ularized and become part of the grammar. So for cases such as (60)-(61) a syntactic transformation of "tough-movement" has been proposed.

7.3. Application to the gerundive

This account now easily transfers to the problem of the AUC and gerundive constructions. Here too participants are profiled although the active zone comprises the complete state of affairs. The predicate is then added attributively as a periphrastic spec-ification of the active zone, in much the same way as it is added in the form of a to-infinitive in (61). But again as in (61), the periphrastic specification is not always obligatory. In (63)-(64), the (a) instances are complete gerundive or AUC constructions, while in the (b) instances the periphrastic specification has been omitted.

(63) (a) cupidi   bellorum   gerendorum (Cic.off.1,74)
         desirous   wars(N):GEN.PL   wage:GER:GEN.PL.N

         "desirous of waging war"

     (b) cupidi   bellorum

         "desirous of wars"

(64) (a) suspicio acceptae pecuniae (Cic.Verr.1,38)
         suspicion   accept:PASTPTC:GEN.SG.F   money(F):GEN.SG

         "the suspicion that money had been accepted"

     (b) suspicio pecuniae

         "the suspicion of money"

Similar constructions can be found sporadically in other
languages as well. Padučeva 1985 discusses this type of construction
in Russian and gives the following examples:

(65) (a) Bystro rastuščie ceny na toplivo podstegnuli interes
      quickly growing   prices on fuel incite   interest

     k ėtoj probleme
     to this   problem

     "The fast-rising fuel prices stimulated the interest in this problem."

(b) bystryj rost
     quick   growth

(66) (a) Tol'ko malorasprostranennyj jazyk, na kotorom on pišet, mešaet
      only   little=known   language on which he   writes prevents

     emu dostignut' v Evrope slavy lučšix anglijskix jumoristov.
     him attain   in Europe fame best English   humorists:GEN

     "Only the little-known language in which he writes
      prevents him from attaining in Europe the fame of the
      best English humorists."

(b) malaja rasprostranennost' jazyka
     little   knownness   language:GEN

The literal translations of the (a) sentences seem quite natural
in English too, and yet semantically and syntactically the more
natural constructions are those given in (b).

The important difference between Russian (and English) on
the one hand and Latin on the other is that in Russian such cons-
tructions occur only sporadically and no clear-cut syntactic
rule can be given. Padučeva 1985 tries to formulate a number
of general regularities for Russian but has great difficulty
in pinning down the exact conditions. This is obviously due to
the different status of such constructions in the grammars of
different languages. In Russian they must be accounted for with
reference to the above-mentioned cognitive principles, while
in Latin they have been regularized to a greater degree (as in
the case of the AUC construction) or completely syntacticized
(=become part of the syntax) (as in the case of the gerundive
construction).

7.4. Degrees of syntacticization

The preceding subsection shows that we have to distinguish
between different degrees of syntacticization of cognitively-
motivated constructions. In this respect, too, the constructions
of attributive participles with propositional meaning are similar
to the constructions involving tough-movement. Like the Latin
gerundive construction, tough-movement in English has been syntac-
ticized rather strongly. In other languages, this is not so.

Let us take Russian again. With adjectives like trudnyj "difficult",
again either the process as a whole or its patient-participant alone
may be profiled. Cf.(67), which is the more usual, and (68),
which is acceptable in a suitable context:

(67) Trudno narisovat' kël'nskij sobor.
     difficult draw   Cologne   cathedral

     "It is difficult to draw Cologne Cathedral."

(68) Kël'nskij sobor truden.
     Cologne   cathedral(M):NOM difficult:M

     "Cologne Cathedral is difficult."

The difference vis-à-vis English is that there is no easy or
natural way of adding a periphrastic specification. (69) is poss   ,
though it sounds rather odd stylistically. The specification
here involves the verbal noun which shows various morphological
and semantic idiosyncrasies and is thus itself much less regular
than the English to-infinitive.

(69) Kël'nskij sobor truden dlja risovanija.
     Cologne   cathedral difficult for   drawing

     lit. "Cologne Cathedral is difficult for drawing."

We see that Russian shows the same cognitively-motivated phenomenon,
only in a lesser degree of syntacticization.

Thus, the gerundive construction may be explained as a partic-
ularly strongly syntacticized version of the same cognitively-
motivated phenomenon that exists in other languages as well,
but with less regularity. Still, the strong syntacticization
of this type of construction in Latin is a rather peculiar thing
and seems to be very rare across languages. In fact, I am not
aware of any similar constructions except the Hindi infinitive.

Here, however, we can only infer that such a construction
existed at some earlier time from the strange agreement pattern.
Synchronically the infinitive is not a verbal adjective any
longer (cf. note 6). It would be interesting to find a living
example of a construction similar that in Latin in some other
language.[20]

Notes

1. "The gerund fulfills the function of a verbal noun which supplements the infinitive in the oblique cases...and like the infinitive shows verbal government: <u>legendi librum</u> like <u>legere librum</u>... The gerundive is, according to the traditional view, a verbal adjective (similar to Greek φιλητέος) which was later integrated into the verbal system, like the to-participle."

2. I use the term "government" in the sense of Lehmann 1983, that is not in the sense of the Government and binding framework, where the subject is not included in the elements governed by the verb.

3. For this reason, the example of Hofmann & Szantyr, quoted above(2.2.), is quite misleading.

4. "The gerund is converted to the gerundive, i.e. the object stands in the case of the gerund and the gerundive is put in agreement with it:..."

5. There is a second infinitive in Hindi too, which has a much more restricted use. It is identical to the bare verb-stem and is used, e.g., as a complement of "be able" and forms part of the progressive aspect periphrasis:

   (i) bacc-ee chat-par kheel sak-tee hai
       child-PL   roof - on   play   can - PRES   COP.3.SG

     "The children can play on the roof."

   (ii) larkaa ghooree-koo maar rahaa hai
       boy   horse - OBJ strike PROG COP.3.SG

     "The boy is striking the horse."

6. It should be noted, however, that, due to an earlier reanalysis in Hindi, the syntactic structure is as in the Russian example (32) and not as in the Latin example (38):

   (i) mihi [nuntius]$_{SUBJ}$ [mittendus est]$_{PRED}$ (=38)
   (ii) mne [kupit' maslo]$_{PRED}$ (=32)
   (iii) mujhee [khabar bheejnii hai]$_{PRED}$ (=37)

That is, whereas <u>nuntius</u> is the subject of the sentence in (i), <u>khabar</u> is the object of the infinitive in (iii), as is <u>maslo</u> in (ii). This is apparent from the facts of number agreement.

The finite verb does not agree in number with a plural object:

(iv) mujhee ciṭṭhi-yãã   bheej-nii   hai
     to=me   letter(F)-PL   send - INF.F.PL COP.3.SG

     "I have to send letters."

7. A terminology like the one proposed here is used in Aalto 1949.

8. "As is well-known, in classical Latin an accusative object is avoided with the gerund on the whole and instead the gerundive construction is used."

9. Risch's formulation reflects the expectation that it should be possible to use an accusative object with the gerund. On our analysis, of course, just the reverse is expected.

10. If we want to stick to our interpretation of the gerund as an impersonal passive in such cases, too, we have to allow for impersonal passives with accusative objects. The corresponding finite clause for the nd-phrase in (i) would look like (ii):

(i) te audiendi
    you:ACC hear:GER:GEN(.SG.N)   "of hearing you"

(ii) *te   auditur
     you:ACC is=heard   lit."*it is heard you"

(ii) is ungrammatical within the system of Latin, of course. However, impersonal passives with accusative objects occur in other languages which are related to Latin genetically and typo-logically. A case in point is the Polish impersonal passive:

(iii) zaczę-to   taniec-∅
      begin - PASS.N dance - ACC

      "Dancing was begun." lit."It was begun dancing."

(iv) poda-no herbatę
     serve - PASS.N tea - ACC

     "Tea was served."   lit. "It was served tea."

In Dutch such "transitive passives" occur in certain idioms (cf. Lange 1986):

(v) Er werd krokodillentranen gehuild.
    there was crocodile=tears   cried

    "Crocodile tears were cried."   lit. "It was cried crocodile tears."

These examples are intended to show that although transitive passives are not part of the system of Latin, they do occur in the language type that Latin belongs to. Therefore it is possible to assume a change in this direction for Latin, too, at least

in the restricted contexts indicated above. In any case, these
are clear signs of the reanalysis which was to take place even-
tually.

11. Cf. Pořizka 1972:316.

12. Cf. Pořizka 1972:317.

13. This is not to deny the possibility that Latin -ndo- is a
continuation of the Proto-Indo-European present passive (or "middle")
participle in *-m(e)no-. It is very well conceivable that the
future or modal meaning developed later, and for the explanation
of the gerundive construction (below, 7.3.) we need a simple
present or future meaning anyway.

14. This, in turn, follows from the fact that the function of
the gerundive construction was to supplement the infinitive in
those positions where it could not appear (cf. 5.2., second para-
graph). It was only secondarily a coding device for complementation
and could never seriously compete with the infinitive. If Hahn's
1965 statement were correct that "(the infinitive) always 'competed'
with the gerund so far as its inferior flexibility permitted",
we would have to ask how the infinitive could possibly have sur-
vived in such an unequal struggle. In fact the infinitive was
at no time challenged and survived from Proto-Indo-European to
this day in most Romance languages.

15. There is only one real advantage of such an account. The
fact that the gerundive is used very rarely in the attributive
position with normal attributive meaning (liber legendus "a book
that is to be read") is explained very easily if one assumes
that the gerundive originated from the predicative position of
the gerund. In our terms we have to assume that this normal
attributive meaning fell into disuse as the gerundive construction
became syntacticized more and more strongly. In any event, the
existence of ancient adjectives like secundus "second" (old nd-
form of sequi "follow") proves that the adjectival use of the
nd-form dates back to prehistoric times.

16. That these two constructions were felt to be of similar status
by Latin speakers is shown by examples like:

(i) ante conditam   condendam-ve   urbem (Liv.praef.6)
   before found:PASTPTC:ACC.SG.F found:GER:ACC.SG.F city(F):ACC.SG

"before the city had been founded or was in the process of being founded"
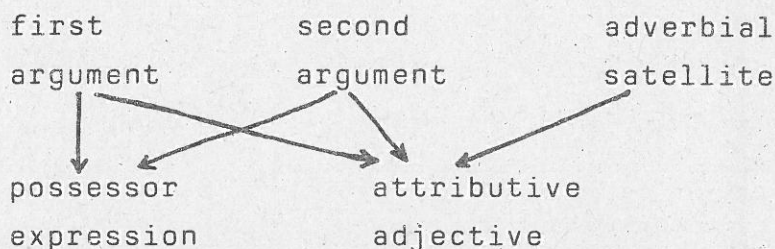
17. For example, Dik 1985:21 presents the following general schema
for "adjustment of embedded predications to the pattern of nominal
terms" (slightly simplified):

verbal predication

verbal predicate   first   second   adverbial
                        argument   argument   satellite

nominal head   possessor   attributive
                        expression   adjective

nominal term (=NP)

18. "Here again we are faced with a case of those techniques
which Latin uses to express abstract ideas by means of concrete
ones."

19. Langacker 1984:180 cites the following cognitive principles:
"(i) a whole is generally more salient than its individual parts;
 (ii) discrete physical objects are generally more salient than
      abstract entities;
 (iii) humans and (to a lesser extent) animals are generally
      more salient than inanimate objects (other things being
      equal)."
In (59), all of these are relevant: the auditory apparatus is
both a part and inanimate, while the woman is a whole and human;
the piano is a discrete physical object, while the sounds are
more abstract entities.

20. Padučeva 1985:25 states that
    "Zamena - fakul'tativnaja ili objazatel'naja - neksusnoj
konstrukcii, kotoraja javljaetsja estestvennym sintaksičeskim
oformleniem dlja podčinennoj predikacii, na junktivnuju izvestna
vo mnogix jazykax."
    ("The -optional or obligatory - substitution of the nexus-
construction, which is the natural syntactic form for a subordinate

predication, by the junction-construction in well-known in many
languages.")

but to support this claim she gives examples only from Latin
(both the AUC and the gerundive construction) and from Greek.
For the AUC construction in Ancient Greek see Jones 1939. But
note that this construction in Greek is not strictly parallel
to the Latin construction because there is a three-way contrast:

    (i) (attributive:)   he hidrumene polis
                          ART founded   city

                          "the city which has been founded"

    (ii)(verbal noun:)   he tes poleos hidrusis

                          ART ART city:GEN foundation

                          "the foundation of the city"

    (iii) (AUC:)   he polis hidrumene
                          ART city   founded

The AUC construction is distinguished clearly from the attrib-
utive construction by the difference in word order. Therefore
we have left the Greek case out of the present discussion.
Nevertheless, this peculiar Greek construction deserves attention
in connection with the general problems discussed here.

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Seit 1968 erschienen die von Prof. Dr. Hansjakob Seiler herausgegebenen Arbeits-
papiere des Instituts für Sprachwissenschaft. Nach der Emeritierung von Prof. Dr.
Seiler im März 1986 wurde eine neue Folge mit neuer Zählung und dem Zusatz "Neue
Folge" (N.F.) begonnen. Herausgeber ist das Institut für Sprachwissenschaft.
Die in beiden Folgen erschienenen Titel werden jeweils am Schluß der Publikationen
aufgeführt. Die mit einem Stern bezeichneten Arbeitspapiere sind noch vorrätig.

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