FROM PURPOSIVE TO INFINITIVE — A UNIVERSAL PATH OF GRAMMATICALIZATION

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1. INTRODUCTION

According to a widespread view, the infinitive is the basic and maximally unmarked form of the verb that carries no meaning of its own in addition to the meaning of the verb stem and that is therefore ideally suited for listing verbs in a dictionary, much like the nominative singular for nouns. This view can be found, for example, in Jakobson’s influential 1937 article, and in two recent definitions from dictionaries of linguistics:

(i) "Among all verbal forms, it is the infinitive which carries the minimal grammatical information. It says nothing either about the participants of the narrated event or about the relation of this event to other narrated events and to the speech event". (Jakobson 1937: 142)

(ii) "Infinitive: A traditional term for the non-finite form of the verb usually cited as its unmarked or base form, e.g. go, walk, kick. N (Crystal 1985: 187)

(iii) "Infinitiv, auch Grundform oder Nennform: ursprünglich nominale Form des Verbs, die die Bedeutung des Verbs an sich, d.h. ohne formalen Ausdruck der verbalen Kategorien Person, Numerus, Modus und Tempus bezeichnet, z.B. gehen, schlafen, leuchten." (Conrad (ed.) 1985: 100)

The fact that the infinitive is often regarded by linguists as the basic form of the verb may be related to the widespread lexicographic practice of listing verbs in dictionaries in this form. However, this practice is rather recent and by no means universal: In many languages a relatively unmarked finite form of the verb is conventionally used in dictionaries (e.g. the first person sin-

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gular of the Present in Latin and Greek, or the third person masculine singular of the Perfect in Hebrew and Arabic).

In this paper I will argue that the traditional view of the infinitive reflected in the above quotations is wrong (or that it is correct only to a very limited extent). The infinitives that occur in most European (and many non-European) languages do have a meaning and also a form of their own. This meaning and form and the relation between them can best be understood if the infinitive is approached from a diachronic perspective.

This paper describes the evolution of the infinitive in terms of its progressive formal and semantic grammaticalization, using the German infinitive as an example. It is shown that the infinitive has its diachronic origin in a nominal purposive form and that the grammaticalization of a purposive form to an infinitive is a widespread phenomenon in the languages of the world. This original function of the infinitive is important for understanding its nature, and the most interesting syntactic property of infinitives, the absence of an explicit subject, can be shown to follow from it.

Finally, I show (using examples from Ancient and Modern Greek) that the diachronic process of the grammaticalization of a purposive form is even more general, occurring also in the case of purposive markers in finite clauses.

2. INFINITIVES COME FROM PURPOSIVE ACTION NOMINALS

A few examples are sufficient to show that the infinitive is by no means semantically empty, of. the following minimal pairs from English (1) and German (2), where the same complement-taking predicate takes either an infinitive or a finite verb.

(1) a. Mary told Tom to write the article.
   b. Tom told Mary that he was writing the article.
(2) a. Es ist wichtig für mich, das zu wissen.
   'It is important for me to know that'.
   b. Es ist wichtig für mich, dass ich das weiß.
   'The fact that I know that is important for me'.

In these cases the infinitive clearly has a modal meaning that can be described as "non-factual" or "irrealis" and that distinguishes it from the corresponding finite indicative verb forms. Jakobson's claim that "it says nothing...about the relation of [the

narrated event] to other narrated events and to the speech event" is therefore incorrect.

Also formally the infinitive is not completely unmarked. For instance, in German it is marked with the suffix -en, in Russian with -t', in Latin with -re, etc. Even more striking is the particle in English (corresponding to zu in German). In generative grammar this to/zu is usually assigned to one of the two abstract categories COMP and INFL (e.g. Wilder 1988, van Gelderen 1988).

But this does not explain why it is to and not any other element (say, the, or through) that is used in this way. The relation between form and function is arbitrary in generative grammar.

I claim that it is no coincidence that the infinitive is marked by an element that is synonymous with the allative preposition to (German zu), and that there is a close connection between the modal meaning of the infinitive and the allative meaning of the preposition to/zu. This connection is not easy to capture in synchronic terms. But from a historical perspective, the two are of course identical. The locative meaning of the allative preposition is the original meaning which has eventually given rise to the meaning of the infinitive.

The first step is the extension from the local allative meaning to the meaning of purpose, which can be seen in (3).

(3) a. Mary went to Sabina's apartment.
   b. Mary went to take photos of Sabina.
   c. Mary bought a camera to take photos of Sabina.

In both (3a) and (3b) the to-phrase expresses a direction, but whereas (3a) is purely locative, (3b) can be taken as expressing a purpose. The purposive meaning is clear beyond doubt in (3c), where the action is not inherently directional.

Old High German is still fairly close to this original situation where the allative preposition (Old High German zi) is used with verbs only to express purpose. According to Erdmann 1874: §351, the zi-infinitive has a purposive meaning in most cases in Otfrid's Liber Evangeliorum (one of the most important Old High German original documents, not translated from Latin), e.g.:

(4) a. er ward zi manne, bi szi ersterbanse (Otfrid V, 12, 27)
   he became a man with them to die
   'Christ became a man in order to die with them'.

19 Folia Linguistica Historica
b. biwooten sie san mit linskemo sabane thos zi bigrabanne
wrapped they him with linen shroud there to bury
(Otfrid IV, 35, 33)
'They wrapped him in a linen shroud to bury him there'.

Later the zi-infinitive is extended to contexts where it is not a modifier, but an argument of a complement-taking verb. This use is still quite rare in Otfrid. An example is:

(5) joh wer thiik hitte haneh ouh hier zi drinkanne (Otfrid II, 14, 24)
and who thee asks now also here to drink
'And he who is asking you now here to drink (i.e. for a drink)

Complement clauses corresponding to Modern German zu-infinitives are otherwise expressed by bare infinitives (6b) or finite clauses (6a).

(6) a. manota er ouh the suntar thos sie thas firbarin (Otfrid IV, 6, 41 - 42)
 admonished he also those especially that they that avoided
'And he admonished them especially to avoid that.'
b. joh th bigimme rodinon, wio er bigonda bredbon (Otfrid I, 2, 7)
 and I begin talk as he began preach
'And I begin to talk, as he began to preach.'

The zu-infinitive in complement clauses is becoming more and more widespread only later, in Middle High German and especially in Early New High German. This is reflected in the following quotations:

"Die Verbindung von zu mit Inf., die ursprünglich der Bedeutung der Präposition zu entsprechend nur den Zweck bezeichnete, hat im Niedersächsischen eine immer ausgedehntere Verbreitung gefunden. Sie hat sich einerseits an die Stelle des einfachen Inf. eingespielt, andererseits an die Stelle von abhängigen Sätzen." (Paul 1920: §390)

"From a historical point of view, zu (when it appears with the infinitive) developed from a very preposition-like morpheme to a very complementizer-like morpheme as it wormed its way into more and more constructions where previously only the bare infinitive or finite clause complements had stood." (Ebert 1978: 81)

The specific features of this grammaticization change will be dealt with in more detail in section 4. First I would like to show that this diachronic change is not an isolated event but is an instantiation of a very general process that happens in language after language.

3. PURPOSE TO INFINITIVE AS A UNIVERSAL GRAMMATIZATION PATH

A well-known example of grammaticization is the evolution of future markers from verbs of obligation, volition, or movement, e.g. the Romance future (from Latin habere 'have (to)'), the English will-future (Old English will 'want'), and the more recent English (and Romance) gonna-future. These developments are not limited to the languages of Europe, but can be found widely in the languages of the world (Bybee & Pagliuca 1987). Such converging paths of grammaticization (as represented in Figure 1) can be called universal in the sense that this development can happen at any time in any language, independently of its genetic affiliation or areal location.

\[
\text{obligation} \rightarrow \text{volition} \rightarrow \text{intention} \rightarrow \text{prediction (= future)} \rightarrow \text{going to}
\]

Figure 1. Semantic grammaticization of future

In much the same way, the evolution of infinitive-like forms (verb forms used in irreals complement clauses) from purposive forms is not limited to West Germanic languages like German and English. Indo-European linguists have been aware for a long time (cf. Jolly 1873) that the infinitives of the ancient Indo-European languages (especially Latin, Ancient Greek, Old Indo-Iranian, Slavic, Hittite) go back to verbal nouns in the dative, accusative or locative case (cf. also Jeffers 1975, Gippert 1978). Dative, accusative and locative are exactly those cases that were available in old Indo-European for the expression of direction, goal and purpose, since there was no special allative case.

Among the modern Indo-European languages we find similar formations in the Romance languages (using Latin ad 'to', de 'concerning'), in the Scandinavian Germotic languages (using at, cf. English at), and Albanian për të (plus participle). Albanian për means 'for': Note that the purposive meaning arises not only from a local allative meaning, but also from a benefactive or causal meaning.
Infinitives whose morphological form shows that they are originally allative or benefactive-marked verb forms are also found in non-Indo-European languages of Europe, Asia, and Africa:

(i) TURKIC (Fedotov 1981):

(a) The Chuvash infinitive -ма́шкан (<-макшан) was formed with the verbal noun suffix *-мак and the postposition *знин “for”.

(b) The Gagauz infinitive -маа (<-мая-а) consists of the same verbal noun suffix *-мак and the dative ending -а.

(c) In Tatar and Bashkir, there is an infinitive in -ар-га, consisting of the verbal noun in -ар and the dative ending -га.

(ii) FINNO-UGRIC:

(a) The Udmurt infinitive -ны is originally a verbal noun in -ны plus a lative (i.e. directional) case ending (Serebrennikov 1963); the same is true for Hungarian -нi.

(b) The Finnish infinitive consists of the verbal noun -маа plus the illative case ending. Very similar is the infinitive in Mari (Kokla 1980).

(iii) SEMITIC. Hebrew -ве is both the dative case prefix and the infinitive marker. In Biblical Hebrew, a number of other case prefixes could be used in the same way with the verbal noun (бе-ин, ве-ас). In Modern Hebrew, this is no longer common, and the -ве-infinitive is reinforced with кде 'in order' to express the purpose sense (on the Hebrew infinitive, cf. Fox 1984). Akkadian anа “to” + verbal noun is completely analogous (cf. Fehling 1980).

(iv) BANTU. In Swahili (cf. Jensen 1923; other Bantu languages are similar), ку- is an infinitive marker and also a class marker of one of the locative noun classes.

(v) NAKHO-DAGHESTANIAN (northeastern Caucasus). Lezgian has a verb form in -из called purposive which in actual fact is rarely used to express purpose. Most of the time it occurs in complement clauses to express-taking verbs like ‘begin’, ‘cause’ (Gadziiev 1964: 51 - 57). This suffix is originally identical to the dative suffix -из. Similar infinitives can be found in other southern Dagestanian languages, e.g. Udi (Schulze 1993).

(vi) DRAVIDIAN (Subrahmanyam 1971). The reconstructed infinitive ending for Proto-Kolami-Parji is *-e/анк, which should be compared to the reconstructed dative ending *-(e)нк. In Kannada and Telugu there exist compound suffixes -(а|-л)кe and -(д)|н|кi, respectively) made up of the verbal noun suffix plus the dative case suffix.

In the forms just cited the purposive form has grammaticized to such a degree that the resulting verb form is called an infinitive. In most cases, the original purposive function can no longer be fulfilled by this infinitive.

On the other hand, there are cases where a purposive form has already entered the path of grammaticization but has not grammaticized strongly enough to be considered a separate isolated form called “infinitive”. Examples come from a wide variety of languages from all over the world: 1

(7) a. Old Irish do (Jeffers 1978: 180)
(purpose:) is do immarchar cĥóre dotlagat (Wb.5a3)
it is to the.carrying of.peace that they .come
'They come to bring peace'.
(complement:) innti adhebrai=som do hec (Wb.28b1)
those whom he.desires do save (VN)
'Those that he wishes to save.'

b. Persian be- (allative): n rafa-i be-fahr
she go-FTCP is ALL-city
'She has gone to the city.'
(complement:) man Zala-rã be-dådan-e asb
I Zala-ACC ALL-give.VN-ATTR horse
be-All farnán-dådan
ALL-All order-give1SG
'I ordered Zala to give the horse to Ali'.

c. Maori ki (allative) e hoki ana au ki te kosinga
PRES return PROG I ALL ART village
'I am going back to the village'.

1 Some of these examples are from a series of short notes in the Stanford Working Papers on Language Universal, beginning with Moravcsik (1972) (Persian; Brian D. Joseph 1975, “Case Marking and Complementizers in Persian”, WPLU 17, 141 - 44; Maori; R. Clark. 1983, “Case markers and complementizers: a Maori example”, WPLU 12, 145 - 47; Diegueno; Larry Corbett. 1973, “Case markers and Complementizers in Diegueno”, WPLU 11: 219 - 222). No attempt is made here to explain the recurring use of allative/purposive case markers as infinitive-like “complementizers”.
According to Fehling, infinitives in European languages that are formed with an allative preposition are due to areal diffusion and can ultimately be traced back to Akkadian. At best, however, the general tendency of grammaticizing purposive action nominals and turning them into infinitives was reinforced by contact among European languages.

4. THE DEVELOPMENT OF THE GERMAN ZU-INFINITIVE AS GRAMMATICALIZATION

In this section I show in more detail that the evolution from the (more or less nominal) purposive zu-form to an infinitive in German is a grammaticization change. I will be using the framework of C. Lehmann (1982, 1985), the most systematic treatment of grammaticization available. Lehmann, following Kuryłowicz, defines grammaticization as “a process which turns lemmes into grammatical formations and makes grammatical formations still more grammatical”. The latter qualification is essential for infinitives, because infinitives do not represent standard examples of grammaticization, which involve a change from a periphrastic construction to an inflectional morpheme, as when a noun turns into an adposition, an auxiliary turns into an aspect marker, or the verb ‘say’ turns into a complementizer. Rather, they start out as (purpose-marking) adpositional phrases or simply case forms of verbal nouns. The adposition (or the case affix) already clearly has a grammatical status. What happens in infinitives is that the grammatical element marking the infinitive becomes even “more grammatical”, i.e. more grammaticized.

Lehmann distinguishes six parameters of grammaticization, three paradigmatic ones and three syntagmatic ones (1985: 306).

Lehmann’s parameters of grammaticization

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<thead>
<tr>
<th>Parameter</th>
<th>Paradigmatic</th>
<th>Syntagmatic</th>
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<tr>
<td>Paradigmaticity</td>
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<td>Bondedness</td>
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<td>Scope</td>
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The higher the value of an item is on each of these parameters, the higher is the degree of its grammaticization. I will now discuss
each of these parameters in turn as they apply to the German infinitive.

(i) An increase in paradigmatcity means that the element becomes more and more integrated into an increasingly small, homogeneous paradigm. In the case of the infinitive, this has reached the ultimate limit: the paradigm consists of one member. In Old High German, the old infinitive could be used with the prepositions in, mit, zu, and probably others (Erdmann 1874 : 211). By the time of Middle High German, this paradigm was reduced to one preposition (zu), and this form more and more becomes a member of the verbal paradigm. The increase of paradigmicity is particularly striking in the history of Old Indic. In the oldest texts (Vedic) about 19 different “infinitives” are attested (Diethe 1980), formed from various verbal-noun stems and in various cases. Only one survived in classical Old Indie (Sanskrit), the *-um- infinitive, which is the accusative of the *-u-verbal noun.

(ii) Bondedness is cohesion within a syntagm. The commonly recognized stages along the continuum of bondedness are free word clitic - affix. In Old English, to was probably a free word because it had a long vowel. In modern English, to is probably a pronoun although in the written language certain adverbial phrases may intervene between to and the verb. In German, zu has probably always been a clitic, and in Early New High German it even appears to have coalesced with the verb. Modern German zu is probably a bound prefix although the spelling treats it as a non-bound element (zu geben “to give”, but cf. the compound weggegeben “to give away”).

(iii) Loss of paradigmatic variability (“obligatorification”) means that the choice among the members of the paradigm becomes constrained by grammatical rules and the whole category becomes increasingly obligatory. While purpose clauses leave the speaker the option of choosing between to, in order to and so that, or of using a causal clause or something completely different, this is not possible in the case of many complement-taking verbs. Once the speaker has decided on a particular complement-taking verb, the choice of the infinitive is obligatory:

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(iv) The parameter of syntagmatic variability refers to the freedom with which an element can be shifted around in the syntax. This cannot be shown in the infinitive because the infinitive starts out as a grammatical construction (a PP) that already has a fixed order of constituents.

(v) Reduction of an item’s scope means that it combines with items of an increasingly lower constituent structure level. For instance, while an adposition combines with an NP, a (more grammaticalized) case affix combines with a noun. In Early New High German the scope of the prefix zu seems to have been wider than in modern German, cf.

9 der geworfen auch die leute zu reissen und freisen (Luther; Ex. 19,6)

“he has learned to tear apart and eat the people.”

The fact that zu can be missing in the second conjunct (freisen) may be interpreted as reflecting the possibility of zu having scope over two conjoined infinitives. In modern German this is impossible because the scope of zu is limited to the immediately following verb.

(vi) The loss of integrity has a semantic and a phonological component. The loss of phonological integrity is generally called erosion and is a well-known property of grammaticalization which is responsible for the fact that grammatical morphemes are not rules (entailed) and (more generally) less salient phonologically than lexical stems. Like the loss of syntagmatic variability, phonological erosion is not easy to show in the case of the infinitive because the element zu is already fairly short and reduced at the beginning of this process. However, erosion of the infinitive preposition can be observed in English, where Old English to changed to [tə].

Most interesting component of the development of the infinitive is the loss of semantic integrity, generally called desemantization or semantic generalization. The original purposive meaning is gradually weakened, just as in the case of the future. This can be represented as in Figure 2.

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1 The German form was [təe] in Middle German (cf. example 11), which was later replaced by the full (non-clitic) form zu in Standard German. This replacement was not accompanied by semantic changes (there was no renewal of the complete form), but neither was it purely phonological. The details are unclear.
The grammaticization path represented in Figure 2 starts with the most concrete meanings: allative, benefactive and causal. These turn into the purposive meaning and later they develop into the various modalities of complement clauses.

I distinguish four modalities of complement clauses here, named irrealis-directive, irrealis-potential, realis-non-factive, and realis-factive. The semantics of complement clause modality is very complicated (cf. Givón 1980, Noonan 1986, Ransom 1986), but these distinctions will be sufficient for the present purposes.

(a) Irrealis-directive is the modality of complements to manipulative verbs like 'order', 'ask', 'cause', and to desiderative verbs like 'desire', 'want', 'prefer'. The complement situation is presented as not realized, and its possible realization is expected for the future, so instead of irrealis-directive one could also say irrealis-potential.

(b) Irrealis-potential is the modality of complements to modal predicates like 'be possible', 'be able', 'be necessary', 'have to', and to evaluative predicates like 'interesting', 'funny', 'regret', etc. Here the situation is not realized either, but it is not expected to be realized sometime in the future; rather, it is presented as potentially occurring anytime.

(c) Realis-non-factive is the modality of complements to verbs of thinking (or 'propositional attitude') like 'think', 'believe', 'seem', and verbs of utterance, e.g. 'say', 'claim', 'report'. Here

The situation is presented as real, although the speaker is not committed to its truth.

(d) Realis-factive is the modality of complements to verbs of cognition like 'know', 'realize', 'find out', and of evaluative predicates (cf. note 4).

These modality meanings are increasingly different from the purposive meaning, showing a progressive weakening of the rather concrete original meaning. The irrealis-directive modality is still fairly close to the meaning of purpose. Both express non-realization and expected future time reference, but the purpose element is no longer directly present in the irrealis-directive modality, being expressed as part of the lexical meaning of the complement-taking verb. The irrealis-potential meaning represents a further degree of desemanticization in that it lacks the directive and prospective components. In the realis-non-factive modality the original irrealis component has been weakened to the non-factive meaning, and in the realis-factive modality even that last trace of the original purposive meaning is absent.

In the Old High German of Otfrid the zi-infinitive was mostly used with irrealis-directive modality (if it was used in complement clauses at all). Example (5) above contains a manipulative complement-taking verb, and (10) is an example with a desiderative verb:

(10) sie geroton al bi manne inan zi rinanne (Otfrid, II, 16, 7)
they desired all by man him to touch
'All of them sought to touch him'.

And if we look at the examples in (7), which show weakly grammaticized purposive forms, we see that they all have irrealis-directive modality when they occur in complement clauses.

As the purposive form develops and grammaticizes further, it can be used also in complement clauses with irrealis-potential modality. This use of the infinitive is found only in Middle High German, e.g.

(11) a. se zimet dem man ze lobene wol (Tristan und Isolde, 13)
'It becomes the man well to praise'.
b. da ist vil guot ze loben (Behagel 1924: 343)
'There it is very good to live.'

(11a) is an example of an infinitive with ze as the complement of a modal verb, and (11b) exemplifies the use of a ze-infinitives with an evaluative adjective.
The use of zu-infinitives with realis-modality, as in verbs of thinking, is even later. In Middle High German, the most important verb of thinking, däken 'think, seem', takes finite clausal complements, as in (12).

(12) in dänke das im al dina lant... woren baken (Penzival 590, 7)

He thought that all the lands were known to him.'

According to Paul 1920: §342, the verb däken has been used with the infinitive only since approximately 1300 (i.e. late Middle High German). Early New High German and in modern German the number of verbs that allow an infinitive to be used here has increased considerably, cf. (13) from Luther's bible (16th cont.):

(13) von dem wird genommen auch des er moist zu haben

'From him even that is taken which he thinks he has.'

Complement clauses to verbs of thinking and other realis complements have indeterminate time reference (Noonan 1985), i.e. they can be located temporally independently of the main predicate. It is therefore not surprising that now an infinitive arises that can express temporal precedence, the perfect infinitive. Example (14) is from Modern German.

(14) Franz bereut nicht, seine Familie verlassen zu haben

'Franz does not regret having left his family.'

Such an infinitive that expresses temporal precedence is not needed as long as the infinitive is used only with irrealis modality which implies determinate time reference. According to Paul 1920: 68, this perfect infinitive did not exist in Middle High German.

In Modern German the zu-infinitive can also be combined with verbs of saying, e.g. (15), and possibly even with verbs of cognition that take realis-factive modality, as in (16).

(15) Mutter versicherte, früh zu Hause sein zu wollen

'Mother said that she wanted to be home early.'

(16) a. Sie stellte fest, in einer schwierigen Lage zu sein.

'She realized that she was in a difficult situation.'

b. *Sie erfuh, ihm nicht mehr helfen zu können.

'She learned that she could no longer help him.'

Realis-factive modality is an extreme point in the gradual process of desemanticization of the original directional-purposive modality. It is maximally different from the original meaning, and the semantic grammaticization has hereby reached its final stage. Once the infinitive has reached this degree of desemanticization, one is easily led to conclude that it does not have any of its meaning left at all, having become the maximally unmarked form of the verb. But this degree of grammaticization is an extreme case, and the modality meaning is still clearly distinguishable in many of its complement uses.

5. SOME PARALLELS AND CONSEQUENCES

There is an interesting parallel between the development of the infinitive and the development of nominal case markers. As is well known, markers of the grammatical cases (such as nominative, ergative, genitive) arise via the grammaticization of markers of less grammatical participant roles (such as instrument, benefactive, and various local relations, cf. Lehmann 1982: 107 - 112). A good example are accusative markers originating in dative markers that ultimately go back to direction markers, as in Spanish (a, from Latin ad "to(ward)") or Hindi-Urdu (-ko, also used as a dative marker). The infinitive marker starts out as a purpose marker which also often goes back to a direction marker, and finally it is used to mark grammatical clausal arguments (i.e., complement clauses) in general. While the precise mechanisms vary (new accusative markers first appear on animate/definite NPs; infinitives gradually lose their specific modality), the parallelism is striking.

Another parallel comes from the grammaticization of main verbs. In the case of the infinitive, it is the marking of the subordinate predicate that undergoes the grammaticization process. More typically, however, it is the main verb that grammaticizes their own subject, rather than to their inherent modality meanings; and realis complements are more independent than irrealis complements not only in that they have indeterminate time reference, but also in that the reference of their subject is more independent.
and turns into an auxiliary verb (cf. Lehmann 1988: 3.2). One well-known case in the history of English (and, to a lesser extent, German) is the grammaticalization of modal auxiliaries (e.g. Shephard 1981), like may, shall, must, will. The original meaning of these was fairly concrete (e.g. shall used to mean ‘owe’). These concrete meanings gave rise to root modality meanings (ability, duty, desire), which later developed to deontic modality (permission, obligation, intention) and epistemic modality (possibility, necessity, future). It appears that the same tendency of semantic development from root modality to epistemic modality is at work in both cases, no matter whether the superordinate or the subordinate verb is grammaticalized.

Since the development of the infinitive from purposive forms is an instance of grammaticalization, it also shows a number of further general properties characteristic of grammaticalization processes. First, the development is unidirectional. Degrammaticalization does not exist, and we do not find an example where an infinitive becomes less grammatical according to any of these parameters. Second (and as a consequence of this unidirectional development), grammaticalized items tend to be reinforced or renewed after some time (cf. Lehmann 1982: 20 - 25). As the meaning of an item is increasingly extended and its form undergoes phonological erosion, it is no longer strong enough to fulfill its original function, and another, less grammaticalized item is added as a reinforcement. This is exactly what happened twice during the history of the German infinitive. The first reinforcement is the marking with zu, because the bare infinitive was an infinitive, too, only much less clearly marked as such. The second reinforcement is the addition of um for the purposive function. In Modern German, the simple zu-infinitive can no longer be used to express purpose; um (originally ‘for’) is required in such cases:

(17) Er ging nach Amerika, um Arbeit zu finden.
    ‘He went to America (in order to) find work.’

For the future one could predict that this new purposive form will again be extended to complement clauses and will then take the same path of development that we just saw for the zu-infinitive. In a sense, this prediction has already come true: We just need to look at Dutch, which is generally more advanced than German in its development.

The gradual spread of the corresponding Dutch form, the om te-infinitive, has been described by Gerritsen 1987. The om te-infinitive is used in Modern Dutch not only in purpose clauses (cf. 18), but optionally also in complement clauses with irrealis modality (cf. 19), but not yet in complement clauses with realis modality (cf. 20).

(18) Hij ging naar Amerika om beroemd te worden.
    ‘He went to America in order to become famous.’

(19) a. Hij probeerde (om) het te sluizen.
    ‘He tried to close the fence.’
    b. Het past (om) dat te doen.
    ‘It does not become you to do that.’

(20) Moeder zei (om) vroeg thuis te zullen zijn.
    ‘Mother said she would be home early.’

The use of the Dutch om te-infinitive therefore corresponds more or less to the zu-infinitive in Middle High German.

Coming back now to the question whether the infinitive can be regarded as the basic and maximally unmarked form of the verb, we can say that this is true only insofar as the infinitive has a very general meaning in many languages as the result of a high degree of grammaticalization. But this relative emptiness of meaning does not adequately describe the nature of the infinitive. Every grammaticalization process has “zero” as its logical end point. The nature of grammatical categories is best understood from the point of view of the source items from which they developed, not the final point where they end up after a long history of grammaticalization. Thus, the nature of the infinitive is best understood if its original purposive function is taken into account. In addition to the se-
mantics of the infinitive, one important syntactic property follows from this original function.

According to Noonan's (1985: 20) definition, an infinitive is "a verb-like entity that does not bear syntactic relations to its notional subject; i.e. its subject does not take nominative case marking or condition verb agreement (where otherwise appropriate for subjects), nor are they marked in the associative (genitive) case. The notional subjects of infinitives are typically equi-deleted...".

This property of infinitives has been most prominent in formal syntactic studies (where the distribution of infinitives over semantic complement types has hardly been an issue), and many different theories have been proposed, often invoking an abstract empty subject PRO. From the present point of view, the absence of an explicit subject in the infinitive can be shown to follow from its original purposive function. The reference of subject of purpose clauses is most of the time predictable (i.e. it is coreferential with the main clause subject) because people are egocentric and act for their own purposes. In the real world situations like (21a) are simply more usual than situations like (21b).

(21) a. Tom bought a new bike to impress his girlfriend.
   b. Tom bought a new bike for the bike dealer to make more money.

It is not surprising then that speakers exploit this predictability and conventionalize expressions in which coreference of the purpose subject clause is only implicit. The same predictability of the reference of the subordinate clause subject holds for most of the irrealis complement functions, but it is no longer true for the realis complement functions. Nevertheless, the restriction on the expression of a subject that was well-motivated for the original function remains in force because grammatical restrictions cannot simply be lifted.

6. THE GRAMMATIZATION OF FINITE PURPOSIVE FORMS

Infinitives arise when non-finite verb forms, i.e. mainly action nominals, are grammaticized in a purposive function. But there are also ways of expressing purpose with finite clauses. For instance, German has a specialized subjunction dam it 'so that, in order for... to',

e.g. in (22):

(22) Robert verdient Geld, damit seine Freundin studieren kann.
    Robert works for money in order for his girlfriend to be able to go to college.

Greek presents an interesting example of the grammaticization of such finite purpose clauses.

From the earliest times, i.e. beginning with Mycenean and Homeric texts, Ancient Greek has an infinitive, inherited from Proto-Indo-European, which exhibits a fairly high degree of formal and semantic grammaticization. The infinitive suffixes have lost any connection to the case paradigm, and morphologically it is well-integrated into the verbal inflectional paradigm, distinguishing different voices and aspects (or even tenses: there is a future and a perfect infinitive). Semantically and syntactically the high degree of grammaticization results in a wide range of complement uses, including complete clauses with realis modality. Cf. (23) from Homer.

(23) a. Παντός ουκ ειναι νοός διακρίνειν othai oti... (Od. 20, 180)
   anyhow no.longer we(ACC) part(FUT)-INF.MIDDLE believe
   1SG
   'At any rate I believe that we will not be parted anymore.'
   b. Καὶ τοιά ἡ τής ἑκάτης μακρινὴς τρίτης ἄρχετον (II, 1, 521)
   and and me say-3SG battle-DAT Trojan-DAT.PL help-INF
   'And she says that I am succeeding the Trojans in battle.'

Given this high degree of grammaticization, it is not surprising that first in classical times and then again in hellenistic times the purposive function of the infinitive is reinforced. The reinforcing item in the classical language is hôte so that, the hellenistic reinforcing item is toô (the genitive form of the definite article, cf. Burguirê 1960:139ff, for details). These forms are then also extended to uses in complement clauses with irrealis modality:

(24) hôte-+ infinitive (classical Greek)
   (purpose) a. metápmós-an xummabhii-an mb
   change.mind-3PL alliance-ACC not
   poiê-siach hôte toôs
   make-INF so that the

tion on the Ancient Greek infinitive and its historical development.

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In Modern Greek this subordinator exists in an more grammaticalized form, phonologically reduced to ná (cf. 27) and extended to complement clauses with realis-non-factive modality, as in (28).

(27) a. 

Mpor-á

ná ór-x-ont-e.

be-possible-3SG SUBJ come-3PL

'They may come.'

b. bél-un

ná tó kán-un.

want-3PL SUBJ it do-3PL

'They want to do it.'

With this high degree of grammaticization, it is not surprising that the next round of grammaticization has already occurred. The element ná is no longer sufficient to express a purpose clause in Modern Greek, it has to be reinforced by yá, a proposition meaning 'for'.

(28) Plít-a

sín adélf-i mu yá nd tó p-oí.

go-1SG.PAST to.the sister my for SUBJ her it say-1SG

'I went to my sister to tell her about it.'

The striking parallelism with German um, which reinforces the zu-infinitive, should be evident.
This example shows that the grammaticization from purposive meaning to realis modality complement functions (as shown in Figure 2 above) is an even more general phenomenon, of which the evolution of the infinitive is just a special case.

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