Nominalization and the Origin of Subordination
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This paper raises a few concerns about current discussions of the origin of subordination, and in particular, about the possibility that the processes which are portrayed as the emergence of subordinate clauses may actually be just fairly superficial rearrangements of already existing subordinate structures, whereas the real cognitive underpinnings of subordination are being overlooked.

There is a Jewish story about a man who is desperately searching for his keys on the pavement under a street light. When a passer-by asks him if that's where he lost the keys, the man says that they actually fell from his pocket somewhere further down the road, but that it's so much easier to search for them under the light.

When seeking the origin of subordination, we also run the risk of looking for it under the light, in the easily visible, but relatively superficial elements of the process, and ignoring a crucial element that is more elusive. In particular, I want to suggest that nominalization is the unsung hero in the story of subordination. The ability of a language to derive a noun from a verb, that is, to reify a verbal predicate and to present it as a nominal argument or modifier, is at the core of subordination. And yet, the origins of nominalization are little researched and little understood, and thus the standard accounts of the rise of subordination are robbed of much of their explanatory value. (By 'nominalization' I refer throughout this paper to the *derivational* process, the ability of a language to take verbs and turn them into various nominal forms, and especially to action-nominals, masdars, participles, infinitives, gerunds, and the like.)

In their recent monograph on the Genesis of Grammar, Heine and Kuteva (2007, following Givón 2006) suggest a useful binary typology for the paths through which subordinate clauses arise. They term the two main channels *expansion* (of a nominalized argument to a clause) and *integration* (of two independent clauses into one). I will consider both these channels, and suggest that they both run the risk of explaining the 'rise' of subordination by presupposing exactly what they aspire to explain. The accounts of expansion take as their starting point nominalized structures that to all intents and purposes are already subordinated. And many examples of 'integration' likewise describe the integration of structures which already contain a subordinate structure.

The paper is really a sort of thinking aloud, rather than a presentation of fully formed ideas. If all of the claims made here turn out to be completely baseless, I hope their refutation will at least help to put the orthodox accounts of the rise of subordination on a firmer basis.

1. Subordination through expansion - or expansion of already subordinate structures?

Discussions of the emergence of subordination through expansion generally take a nominalized verb as given, and only describe the paths by which such a nominalized form can develop into a more clause-like subordinate structure. Harris and Campbell (1995:310-13), for instance, suggest that the ultimate origin of subordination can be explained through the extension of structures such as 'I saw the dancing girl' to subordinate clauses such as 'I saw the girl who had danced'. The origin of 'I saw the dancing girl' is not deemed to require explanation, and Harris and Campbell's conclusion is that the 'first introduction of subordination' in language can be *explained* by the path which leads from 'dancing girl' to 'a girl who was dancing'.

Heine and Kuteva (2007) and most recently Heine (paper for this symposium) provide a reconstruction of the stages in the development from nominalized verbs in embedded positions to fully fledged subordinate clauses. Like Harris and Campbell, Heine also argues that this scenario entails a 'strong claim, namely that clause subordination is historically derived from non-subordinate sentences'. Again, the implication is that the initial stage in the process, a nominalized verb in embedded position, is not one that the explanation needs to account for. Heine's scenario does mention in passing a 'Stage 0', which consists of a simple noun in an embedded position of argument or adjunct. But his actual reconstruction starts from what he calls 'Stage 1: an extended noun stage', in which a non-finite verb 'typically in a nominalized, an infinitival, or an participial form' appears in an embedded position as argument or adjunct, but still has the internal structure of a noun phrase. The paradigm example of Stage 1 that Heine provides is (1a) below. From Stage 1, he demonstrates how languages progress in various steps towards 'Stage 4', subordinate clauses that are indistinguishable in their morpho-syntax from finite main clauses. (The corresponding example of Stage 4 would thus be (1b)).

(1)   a. (Heine's Stage 1:)   [Algernon's shooting of the aardvark] drew international attention
        b. (Heine's Stage 4:)   [that Algernon shot the aardvark] drew international attention

That languages proceed from Stage 1 to Stage 4 is not disputed. But can the passage from Stage 1 to Stage 4 *explain* the origin of subordination? Of course, definitions are a matter of arbitrary choice. One can decide to define subordination in such a way that (1a) would not be considered a subordinate structure. But if the issue is explanation, if we want to understand how subordination as an instance of 'syntactic complexity' arises from structures that are genuinely cognitively simpler, then surely we cannot take (1a) as our point of departure. For structures such as (1a) are to all intents and purposes already subordinate. If a language has the ability to create a phrase such as 'Algernon's shooting of the aardvark', and to embed this phrase in a higher clause, then it has the means of squeezing a whole proposition, with predicate, arguments and all, as an argument of another (higher) predicate. Is it not exactly the emergence of this ability that we are meant to explain?

Of course, no one doubts that structures such as (1a) are more restricted in their syntactic possibilities than (1b). But within the syntactic constraints of the nominalized structure, the pattern in (1a) even allows recursion: 'Algernon's financing of the filming of the shooting of the aardvark drew international attention', and so on. If there is any real cognitive leap in the genesis of subordination, it is between '[the aardvark] drew international attention' and '[the shooting of the aardvark] drew international attention'. Once that leap has been made, the rest, as Einstein said, are

details. Once a verb has been pressure-packaged into a tight nominal wrapping, and in this way embedded in a higher clause, then it is only natural that speakers would try to let the verb expand from its restrictive wrapping, regain some of the flexibility of an independent verb, and thus achieve the ability to convey the additional information that an independent verb typically supplies (arguments, TMA, and so on). By the end of this process, when the verb has fully expanded while still maintaining its embedded status, we get finite subordinate clauses. But there is nothing very difficult in the morphosyntactic rearrangements that accommodate this expansion. They are just natural sequels to the only step in the process that is cognitively challenging, the pressure-packaging of a verb as a noun in the first place.

And yet, it is exactly the origin of the nominalized verb which the standard accounts presuppose. The most significant step in the process is thus left unaccounted for, and the claims that expansion has 'explained' the origin of subordination ring somewhat hollow.

Is the origin of nominalization obvious?

Of course, there can be one good reason why the nominalized verb would be taken for granted, and why its origin would not be included in the scenario for the genesis of subordination. If the origin of nominalized verbs such as 'shooting' were so clear and obvious that it simply did not warrant a mention, there would indeed be no reason to mention it. But is the origin of nominalization so obvious?

The genesis of grammatical markers has been the subject of intense study in the last few decades, and has been explored mostly under the umbrella of grammaticalization. It is thus natural that if one wanted to find out about the origin of nominalizers, one would search in the rich literature on grammaticalization. But as it happens, discussions of the origin of nominalization are conspicuous mostly by their absence from the grammaticalization literature. Hopper and Traugott's *Grammaticalization* (2003), for instance, does not mention 'nominalization' in the index. Heine and Kuteva's *Lexicon of Grammaticalization* (2002) has no mention of the source of nominalizing morphemes. Cross linguistic surveys of nominalization, such as Comrie and Thompson (2007) and Koptjevskaja-Tamm (1993, 2003) are wholly synchronic in orientation, and do not explore the origin of nominalizing markers either. Except for some discussions of Tibeto-Burman and other East Asian languages (to which I will return in a moment), there is a very curious silence on this subject.

At this point, one may immediately raise the following objection: but what about the extensive literature on the grammaticalization of case markers into markers on dependent verbs (Blake 1999, Genetti 1991, and many others)? What, in particular, about the grammaticalization of dative/allative markers into infinitive markers (Haspelmath 1989, Hopper and Traugott 2003:188ff., and so on)? Are these not exactly the paths by which nominalized verbs arise? Here we have examples, in language after language, of case markers which are extended to verbs, and result in nominalized verbal forms. Is this not the answer?

The problem is that if we look at the process in languages where verbal and nominal bases are clearly distinguished, we see immediately that when datives (and other case markers) are extended to verbs, they are actually added to 'verbal nouns', that is, to verbal forms that are already nominalized. The infinitive stems of modern Indo-European languages go back to such old verbal nouns (Szemerényi 1996:324-7). The dative adpositions that created the infinitives in modern European languages were added not to finite verbs, but to action-nominals and other nominalized forms (see

also Hopper and Traugott 2003:189-90). Thus the role of these dative adpositions is merely the renewal of nominal morphology on verbs that are already nominalized, not the creation of nominalization in the first place. The same thing can be seen in the Semitic languages. In Akkadian, for example, we can see during the historical period how the dative/allative preposition *ana* grammaticalized into an infinitive marker (Deutscher 2000:128-9). But the preposition was added to a verbal form that was already fully nominalized, one which originally took case endings. Hebrew shows a very similar picture.

We thus see that the grammaticalization of dative markers into infinitive markers does not explain the origin of nominalization. Rather, it presupposes nominalization. More generally, therefore, it is plausible that the extension to verbs of other nominal markers, such as classifiers (Aikhenvald 2000:332) or demonstratives (Greenberg 1991), may likewise only reflect the extension of nominal morphology to already nominalized verbs.[*]

A potentially more promising source for nominalizing morphemes appears, at least at first sight, to be compounding structures, as discussed primarily in Tibeto-Burman languages, but also in other languages from East Asia (see collection of papers in http://tibeto-burman.net/nominalizationworkshop.html), as well as, much more rarely, from elsewhere (e.g. the Niger-Congo language Supyire, Carlson 1994:108-16 quoted by Aikhenvald 2007:49). In these languages, lexical origins for nominalizing morphemes have in fact been suggested, especially for agent nominalizers, place-nominalizers, time-nominalizers, instrument-nominalizers and the like. Not surprisingly, the origins of such nominalizing morphemes can sometimes be traced back to full nouns meaning 'person', 'place', 'time', 'thing', and so on. For instance, in Tibetan a nominalizing suffix *-sa* is argued to have been historically a noun meaning 'ground' or 'place' (Delancy 1986, Givon 2007). The argument, presumably, would be that what started originally as N-N compounds ('N-place') was extended to V-N compounds ('V-place'), such as *yod-sa* 'live-place'. Then the head noun lost its independent status, and thus turned into a nominalizing suffix.

While there is no reason to doubt the ultimate lexical origin of morphemes such as *-sa*, I would like to point out a general theoretical problem in the compounding scenario. This is in fact the same problem that was mentioned above with regard to the alleged nominalizing role of case markers: one has to be wary of the possibility that the alleged V-N compounds are formed with verbs that are already nominalized. In languages where there is a clear morphological distinction between noun and verb bases, we see that it is difficult to form V-N compounds like 'live-place' with a real verb. Rather, the first element in the compound is already nominalized: 'living-place'. So the compounding scenario may again simply presuppose what it alleges to explain. Compounds with *sa* and other such nouns may not be the source of nominalization, as they may rely on pre-existing nominalization of the verb (even if that is zero-nominalization). Indeed, Trask (1995), who discusses the origin of the nominalizing morphemes in Basque, reaches a very similar conclusion. Rather like the Tibeto-

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[*] Indeed, the existence of remnants of nominal markers on finite verbs may in many cases not be the product of extension of nominal markers to finite verbs at all, but rather the result of a process by which nominalized verbs drift into the finite verb system by gradually acquiring more verbal characteristics. The renewal of the finite verb systems through gerunds, participles and other verbal nouns is a common and well known process (Bybee et al 1994). In the history of the Semitic languages, for instance, we can follow multiple waves of such 'finitizations' of verbal nouns (see e.g. Cohen 1984, Kouwenberg forthcoming, ch. 4), and the resulting finite forms may still carry with them remnants of their earlier nominal morphology.

Burman examples, some of the Basque nominalizing morphemes seem to go back to nouns meaning 'time', 'abundance', and so on. But the verbs which appeared in compounds with these nouns were in fact already nominalized.

Asymmetry between verbalization and nominalization

The problem with V-N compounds raises a more general issue, which may help to explain why the origin of nominalizing markers is so elusive, and why they have rarely been caught in the net of grammaticalization studies.

As has been pointed out by Hopper and Thompson (1985:176), and repeated on various other occasions since, there are fundamental cognitive and syntactic asymmetries between the processes of verbalization and nominalization. Verbalization seems to be by far the easier way around. Cognitively, verbalization requires no abstraction. The meaning of a denominal verb 'to N' is generally just a convenient label for any plausible activity involving the noun N in some way (to milk, to oil, to father, etc. cf. also Clark and Clark 1979). Syntactically, many languages find it relatively easy in to take nouns and use them as predicates in this way.

Going in the other direction, however, seems to be a much more involved affair. The 'reification' required in the creation of an action-nominal involves a high degree of abstraction. An 'explosion' is not a physical object that is somehow involved in the action of exploding. It is the action itself, repackaged as a thing. And indeed, it seems that languages on the whole tend to need much heavier morphological guns for nominalizing than for verbalizing (Hopper and Thompson 1985:176, Woodworth 1991:62 ff.)

The fundamental asymmetry between nominalization and verbalization is also reflected in the availability of direct grammaticalization paths for creating the category-changing marker. The lexical origin of verbalization markers can be fairly straightforward. There are constructions in which a verbal lexical head grammaticalizes, loses its lexical status, but in doing so bestows upon the resulting construction a verbal status. The obvious example is factitive verbalizing morphemes that derive from verbs meaning 'make'. The English *-fy*, for example, ultimately derives from the Latin verb *facere* 'make', through the grammaticalization the construction 'make N/Adj'. The verbal head was bleached, coalesced with the noun, and the resulting construction retained the verbal status of the original one.

But there does not seem to be any equivalent construction with a nominal head that can directly grammaticalize and create a noun from a verb. (Or to be more accurate, the only such constructions are ones that already involve nominalization or subordination.) If we are not allowed to presuppose subordination or nominalization, there is no syntactic arrangement in which a noun serves as a head of complex which contains a verb. So it is no wonder that it is difficult to find equivalents among nominalizing morphemes to the straightforward grammaticalization-genesis of verbalizers like *-fy*.

Indeed, if we look at the common nominalizing suffixes of English, for instance, both those of Germanic origins (such as *-ing*) and Latinate origins (*-tion*, *-age*), we see that none of them has a 'straightforward' history of grammaticalization. In fact, they all have rather convoluted histories. What seems to unite them is that as far as can be ascertained, they start out as N>N derivations (creating collective nouns or abstract nouns from simple nouns). For example the Germanic suffix *-ing*/*ung* seems originally to have been denominal. Kluge (1995, s.v. *-ung*) explains: 'Letztlich liegen indogermanische *k*-Erweiterungen zu n-Stämmen vor, so daß das Suffix ursprünglich

denominal gewesen sein muß'. Indeed, in Old English and older stages of other Germanic languages, *-ing/-ung* appeared more commonly with nominal bases (such as *cyn-ing* 'king', *Idum-ing* 'Edomite', and so on. cf. Munske 1964:66ff., and Jespersen 1948:205). The extension to verbs, and the function of nominalizing them, must therefore be a later development.

So we seem to be getting back to the same problem again and again: the morphemes that we see synchronically in the role of nominalizing verbs all somehow appear to go back to elements that were originally attached to nouns. In some mysterious way, such nominal and denominal morphology then migrates to verbs, and the acquisition of the power to nominalize is somehow meant to proceed from this process of migration. But how can the migration be explained unless the verbs were already nominalized in the first place?

Nominalization through back-formation

One mechanism that can provide a solution is a conceptual back-formation, which relies on the fundamental asymmetry between verbalization and nominalization to derive the latter from the former. If we take as given the ability to verbalize (which, is both cognitively and syntactically the easier way around), then we can derive nominalization from it by reverse analogy. The history of the French nominalizer *-age* can be used to demonstrate the steps involved in the process.

In modern French, *-age* is used as a nominalizer on a large number of verbs: *arrivage*, *arrosage*, *chauffage*, *pliage, raffinage, démontage, nettoyage*, and so on. But the origin of this suffix are clearly denominal. It comes from the Latin suffix -(*a*)*ticus,* which was used to form the designation 'something that relates to N' from a noun N: *aqua-ticus* 'something relating to water'*, silva-ticus* (something relating to the woods/wild (Modern French *sauvage,* English *savage*), and so on.

In Old French, the suffix, which had become *-age* after the relevant sound changes, was still commonly used in N>N derivations, for forming collective and abstract nouns from simpler nouns: *visage* 'collection of traits which make up the *vīsus* (appearance), *fleurage* 'ensemble of flowers', *corage* (from *cor* 'heart'), *hommage*, *vasselage*, *frerage*, *orphelinage*, and so on.

It is not known exactly with which verbs the passage of *-age* to verbs started. Meyer-Lübke (1966:61-3) uses as a demonstration the verb *auner* 'to measure by the *aune*' (*aune* = the measure of an outstretched arm, English 'ell'). But an equally good candidate could have been *marier* 'marry' (Deutscher 2005:249-251). The process, in any case, could have been one of back-formation. French had a noun *mari* 'husband', to which *-age* seems to have been added directly, giving *mari-age* 'the state of being a husband'. But the noun *mari* also gave rise to a verb *marier* 'to marry'. There were thus two different words in the language which both derived from the noun *mari*: the abstract noun *mariage* and the verb *marier.* As these two are so close in meaning, it was natural for the verb and the abstract noun to come to be linked in speakers' minds . The role of the noun *mari* as the original link between the abstract noun and verb could have faded from linguistic consciousness, and so speakers could naturally assume that *mariage* was derived from the verb *marier*, and that the abstract noun thus denoted, not 'the state of being a *mari*'*,* but rather 'the state resulting from the action of *marier*' (or the action of *marier* itself). This conceptual back-formation thus invested *-age* with a new power which it had not possessed before, to create an abstract noun from a verb. And once the link was established, the pattern could be

extended to other verbs, including those that, unlike *marier*, had never been denominal to start with.

To what extent this path is generalizable remains to be investigated. (In theory, a similar process of conceptual back-formation can also explain zero-nominalizations.) But it does at least provide one way in which nominalizing morphology could have made its way onto verbs, and a way in which morphemes which had not previously had the power to nominalize acquired this power. The important point about such a scenario is that it does not require us to *presuppose* nominalization (although it does presuppose verbalization), and so in theory, it can also explain the first emergence of nominalization in a language.

At the very least, is should be clear from the above that the origin of nominalization requires far more attention than it has so far been accorded. As long as we do not fully understand it, we cannot pretend that the process of expansion has explained the emergence of subordinate clauses. The following section suggests that discussions of 'integration' also run the risk of explaining subordination by presupposing subordination.

2. Subordination through integration - or integration of already subordinate structures?

The second path in Heine and Kuteva's typology for the emergence of subordinate clauses is the integration of two clauses into one. I will restrict the comments below to relative clauses. Heine and Kuteva (2007:225) argue that "presumably the most frequent source of markers introducing (restrictive) relative clauses is provided by demonstrative pronouns". They take this to imply that relative clauses originate, through a process of integration, from independent clauses containing a demonstrative. In other words, they argue that two initially independent clauses, one with a demonstrative, are somehow integrated into a main clause and relative clause. They sketch this development as follows (2007:226):

(2)   From [S_1+S_2] juxtaposition to S_1[S_2] relativization:

    a. There is the car; that (one) I like

    b. There is a car [that I like]

However, it seems that the actual process of integration that the examples attest to is rather different, and should be sketched as in (3):

(3)   a. There is the car; that (one)[I like]   (i.e. 'that one which I like')

    b. There is a car [that I like]

In other words, the argument here is that the process that creates relative clauses like (3b) is the integration of a main clause with an already subordinate structure, a relative clause headed by a demonstrative ('that one which I like'). What we have here is indeed a process of condensation: an erstwhile head of a relative clause loses its independence and becomes a mere relativizer. But this process does not show the emergence of subordination. It is simply the rearrangement of already subordinate structures.

As far as I can see, the examples that are provided to support the integration claim by Heine and Kuteva (as well as by Hopper and Traugott 2003:196 ff., and the

examples of condensation discussed in Givón 2007) are in fact of the type sketched in (3). However, rather than use these examples, I would like to discuss examples from Akkadian, because that language neatly shows the difference between (2) and (3), and because it also gives a good indication of the actual ultimate origin of relative clauses.

Akkadian relative clauses

Akkadian is a Semitic language which was spoken in ancient Mesopotamia, and is attested in writing over roughly two millennia, starting around 2500BC. The earliest attested period, from 2500BC to 2000BC, is conventionally called 'Old Akkadian', and it will be the main subject of discussion here. The main type of relative clauses in Old Akkadian was marked by an element that must originally have been a demonstrative pronoun (and whose cognates serve as demonstratives in other Semitic languages). The forms of this demonstrative are given in (4):

(4) | | NOM. | ACC. | GEN. |
|---|---|---|---|
| MASC.SG. | *šu* | *ša* | *ši* |
| MASC.PL. | *šūt* | *šūt* | *šūti* |
| FEM | *šāt* | *šāt* | *šāti* |

The relative marker agreed with the head noun in case, gender, and number, as in the examples below:

(5) *Šarru-kīn šar   māt-im* [*šu   Enlil māḫir-a lā iddin-u-šum*]
      Sargon   king.OF land-GEN [REL(NOM.M.SG) Enlil rival-ACC not he.gave-SUB-to him]
      'Sargon, king of the land, that Enlil has not given him a rival, [did so and so]...'
      (i.e. Sargon, king of the land, to whom (the god) Enlil has given no rival, [did so and so])

(6) *eql-am*   [*ša   … nītiq-u*]   *lišqi'ū*
      field-ACC [REL(ACC.M.SG)   we.passed-SUB] they.should.water
      'they should water the field that we passed'

Note the crucial fact that the verb in subordinate clauses in Akkadian is marked by a special subordinative suffix, glossed here SUB. This suffix mostly takes the form *-u,* but in Old Akkadian can also take the form *-n(i)*. This fact is important because it gives an explicit and unambiguous indication of whether a certain clause is independent or subordinate.

In later stages of Akkadian, after 2000BC, the case, gender and number agreement on the marker introducing the relative clause were discarded, and just one form, *ša* (the original singular masculine accusative) emerged as an all purpose invariable relativizer:

(7) *awīl-um*   [*ša ana bull-îm   illik-u*]
      man-NOM REL to   extinguish.INF-GEN he.went-SUB
      'the man that went to extinguish it...' (CH §25)

Given that the origin of the Akkadian relativizer is transparently a demonstrative pronoun, Akkadian at first sight may appear to be one more example in the long line of languages that attest to the integration of a paratactic clause with a demonstrative pronoun into a relative clause structure, just as Heine and Kuteva sketch in (2) above.

But as it happens, in Akkadian we have a few more details which make it

transparent that the actual development was nothing of the sort, and that the origin of relative clauses is entirely different. The story of the Akkadian relative clauses can be sketched briefly as follows (for a fuller account, see Deutscher 2001). Akkadian has both head and dependent marking in the genitival construct. The dependent noun is marked by a genitive case ending, and the head noun is marked by the 'construct state' (which for convenience I gloss .OF). The construct state is not shown by a particular suffix, but rather by the absence of a case suffix on the noun. Thus, the noun 'judgement' would usually appear with a case ending (NOM: *dīn-um,* ACC: *dīn-am,* GEN: *dīn-im*) but in the construct state, it is simply *dīn*:

(8) *dīn*   *šarr-im*
     judgment.OF   king-GEN
     'the judgment of the king'

Now, in addition to the main productive type of relative clauses in Akkadian, which was shown above, there was also another, older, relative construction in the language, one without any demonstrative as a relative marker. In this construction, the onset of the relative clause was marked only by the construct state on the head noun:

(9) *tuppi*   *addin-u-šum*
     tablet.OF   I.gave-SUB-to him
     'the tablet that I gave to him'

This older construction was still in semi-productive use in the earliest attested period, but became restricted to poetic and elevated styles after 2000BC.

Now, what is the origin of the newer type of relative clauses, those with a demonstrative pronoun? It is clear that the newer relative clauses were modelled on the older relative construction. Old Akkadian examples such as (10) below show that the demonstrative must have started out in life, very simply, as a pronominal head of an old style relative clause. This demonstrative pronoun must have been perceived to be in the construct state, and it simply functioned as a head of the relative clause, just as any noun would:

(10) *šūt*   [*in* TU.RA *uḫḫirū-n*]   *līḫuz*
     those(ACC.M.PL).OF [in illness were.delayed-SUB] he.should.take
     'he should take those who were delayed because of illness'

What should be clear is that the demonstrative pronoun was, from the very beginning, the head of a subordinate clause. (That this is so can be seen from the fact that the verb is in the subordinative form.) The newer type of RCs must have started out in life as some sort of appositional pattern: 'the judgement, the one which he gave [...should not be changed]'. However, this was not the juxtaposition of two independent clauses, but the apposition of an already subordinate relative clause, which had a demonstrative as its head. This structure is shown in (11a). Then, in a process of integration or condensation, as sketched by Givón (2007), the demonstrative pronoun was degraded from an independent head of a relative clause to a mere marker of the onset of the relative, as in (11b):

(11) a. <u>before integration</u>
        dīn-um   *šu*   [*idīn-u*]
        judgment-NOM   that (one).OF   [he.rendered-SUB]
        'the judgment, that (one)[he rendered] (...should not be changed)'

     b. <u>after integration</u>
        dīn-um   [*šu*   *idīn-u*]
        judgment-NOM   [REL   he.rendered-SUB]
        'The judgment[that he rendered] (...should not be changed)'

Akkadian thus shows that the demonstrative pronoun became a marker of relativization not through a process of integration of two independent clauses, but rather through the integration of an independent clause with an already existing relative clause, one which was originally headed by this demonstrative. So the process that turned a demonstrative into a relativizer was not the genesis of relativization, but only the renewal of a marker in an already existing subordinate structure. The old marker for the onset of the relative clause was the construct state on the head noun, the new marker was a demonstrative.

What, then, is the actual origin of relativization in Akkadian? Here we have to look at the origin of the older style of relative clauses, those introduced by the construct state on the head noun. And in fact, their origin is not difficult to guess when one compares (8) and (9) above. There is an exact parallel between the grammar of genitival constructs and of relatives clauses (see further in Deutscher 2001). A similar parallel between genitives and relatives has of course been demonstrated for Tibeto-Burman by Matisoff (1972) and in a lot of subsequent literature, and has also been pointed out for many other languages (Aristar 1991).

The most plausible origin of relative clauses in Akkadian is the expansion of genitival constructions. (In fact, this development must have occurred already in Proto-Semitic, since relative clauses marked by the construct state are attested in the earliest strata of most Semitic languages, cf. Lipinski 1997:324.) And how were the genitival structures extended to relative clauses? Presumably through the agency of nominalized verbs: something like 'the judgment of his giving' was expanded to 'the judgement which he gave', through the stages sketched by Heine (this volume). Givón (1991) in fact sketched a similar scenario for the development of relative clauses in Biblical Hebrew.

Akkadian thus shows that appearances can be deceptive. Its productive type of relative clauses is introduced by what had originally been a demonstrative. But this demonstrative did not get to there through the integration of two independent clauses. Rather, it got there through the integration of a main clause with an already existing subordinate structure. The actual origin of relative clauses in Akkadian must have been expansion, and thus, again, nominalization.

Is Akkadian the exception or the rule?

The main question we need to ask is whether the development in Akkadian was unusual, or whether it is actually representative of the many languages where relative clauses with demonstratives are claimed to have arisen through integration. The first port of call for the comparison should of course the Germanic languages, which have supplied the main evidence for the alleged integration of paratactic clauses in the 'demonstrative channel'. (For expositions of relativization in the early stages of the

different Germanic languages, see e.g. Stong-Jensen 1977, Mitchell 1985, Hock 1991, Harbert 1992, Pittner 1995.) While the Germanic languages differ in important details and present a picture that is far from simple, the general situation in early Germanic seems to be very similar to that in Akkadian. This can be illustrated by examples from Old Icelandic (Stong-Jensen 1977). In Icelandic, there was an existing relative clause structure with an invariable relative particle *es*, which could introduce relative clauses on its own:

(12)   *...vóro þar þeir menn* [*es   Norðmenn kalla Papa*]
          were   there those men [REL Northmen   call   Papa]
          'there were there those men that Northmen call Papas'   (Stong-Jensen 1977:14)

There were also relative clauses which were based on the model of (12), but which were headed by a demonstrative pronoun:

(13) *ok blótaðe   hrafna þriá   þá*   [*es hánom skylldo leið visa*]
        and worshipped ravens three.ACC.M.PL those.ACC.M.PL [REL him   should way show]
        'and he worshipped three ravens, those that should show him the way'
        (Stong-Jensen 1977:13)

The relation between (12) and (13) is parallel to the relation between the older and the newer types of relative clauses in Akkadian. (12) is equivalent to Akkadian relative clauses introduced only by the construct state on the head noun (as in 9 above), and (13) is equivalent to the newer type of relative clauses, which were based on the old model, but originally had a demonstrative as their head (as in 11a, or 11b, depending on whether one considers the Icelandic examples to have undergone integration or not). In any case, it is clear that the demonstrative *þá* in (13) is the head of an already existing relative clause, not an element of an independent clause.

The picture in Old English seems to be similar. The demonstrative *þam* in (14) is the head of an already existing relative clause, one formed with an invariable particle *ðe* (corresponding to Icelandic *es*):

(14) *Ða wæs æt ðam   geongan   grim andswaru eðbegete*
        then was for the.DAT.M.SG youth.DAT.M.SG grim answer   easy.to.get
        þam   [*ðe   ær   his elne   forleas*]
        DEM.DAT.M.SG [REL earlier his courage lost]
        'then was for the youth a grim answer was easy to get, (for) the one that earlier lost his courage' (Hock 1991:56)

Thus, the Germanic demonstrative pronouns which later came to be the sole markers for the onset of the relative clauses do not seem to have started as elements of independent paratactic clauses. Rather, just as in Akkadian, they started as heads of already existing relative clauses. The ultimate origin of relative clauses in Germanic may also, just like in Akkadian, be expansion, and thus nominalization. (In fact, Lehmann 1984:378 suggests a scenario for relativization through expansion for Old German.)

A similar picture also emerges with the examples of integration in other languages. As mentioned above, the examples of condensation of relative clauses discussed by Givón (paper for this symposium, as well as 2000:183) all seem to be of exactly of the same nature: the demonstrative pronouns that undergo condensation/

integration are in fact heads of already existing relative clauses, not elements of independent paratactic clauses.

The genesis of relative clauses through integration, allegedly exemplified in many languages by relative markers of demonstrative origin, may therefore turn out to be mostly a mirage. (This is not to deny, of course, that integration of independent clauses ever takes place. Especially adverbial clauses are often clearly derived from coordinated clauses. The doubts expressed here are about the integration of relative clauses through the demonstrative channel.)

Conclusion

I have argued that nominalization is the unsung hero in the story of subordination. Nominalization has so far largely escaped the net cast by grammaticalization studies, yet it is probably the single most important element in the genesis of subordination. It is the core element in the channel of 'expansion', and ultimately, it may also turn out to be behind many of the examples that are alleged to be cases of 'integration'. Any attempt to explain the genesis of subordination can thus only begin to make sense if it explains the origins of nominalization, and if it shows how the ability to repackage a verb as a noun arises in contexts where it had not existed before. I tentatively suggested one way that can account for the genesis of nominalization without already presupposing, based on back-formation from the process of verbalization. But the subject requires far more attention.

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