1. The empirical focus: Clauses and nominals

The distinction between verbs and nouns has been with us since the ancient Greek and Roman grammarians. This project, *Similarities and Differences between Clauses and Nominals*, will focus on examining the syntactic dimension of this basic distinction, in particular on what consequences this distinction has for the syntactic units that are built up around a verb or a noun, i.e. the project will be concerned with the differences and similarities between clauses and nominals. The central element of clauses is the verb, whereas the central element of nominals is the noun, and verbs and nouns have rather different possible syntactic combinations, as illustrated in the following examples:

(1) a. Da. (... mens) Maria omhyggeligt læste romanen
b. Da. (... under) Marias omhyggelige læsning af romanen
c. En. (... while) Maria carefully read the novel (= 1a)
d. En. (... during) Maria's careful reading of the novel (= 1b)

There are certain clear parallels here, e.g. that both the verb *læste/read* and the noun *læsning/reading* can have an agent, *Maria*, and a patient, *romanen/the novel*. There are also clear differences, e.g. the adverb *omhyggeligt/carefully* in the clause corresponds to the adjective *omhyggelige/careful* in the nominal. Similarly, whereas the agent and patient in the clause are...
expressed as nominative and accusative nominals respectively, Maria and romanen/the novel, the agent and patient in the nominal are expressed as a genitive nominal, Marias/Maria’s, and prepositional phrase, af romanen/of the novel.

The project will investigate to what extent such total and partial parallels can be postulated, and where clauses and nominals are simply different. We will also examine what conditions there are on the differences and similarities. Could they perhaps be derived from the differences between verbs and nouns? Cf. Croft’s (1991) appealingly simple characterisation: verbs predicate, nouns refer.

An important reason to undertake such research is that the deeper the similarities between clauses and nominals, the simpler it must be for a child to acquire a given language, because some of what the child has to acquire concerning clauses then can be re-used with respect to nominals (or vice versa). Thus the project might be able to contribute to the understanding of the impressive speed and efficiency with which an average child acquires its first language(s), cf. e.g. Vikner 1999.

Put somewhat differently, the question is whether the human brain handles clauses and nominals in the same way, cf. that (1a/c) and (1b/d) express almost the same content, such that the differences mainly depend on the function of the clause/nominal in the given context.

2. The foundation

2.1 The cross-theoretical foundation

In linguistics today, two theoretical paradigms dominate, the formal paradigm and the functional paradigm. Both approaches have many adherents worldwide and also in Scandinavia, whereas in Denmark, the interest has to a very large extent been focussed on the functional approach (cf. e.g. Engberg-Pedersen et al. 2005).

It is our opinion that if Danish linguistics is to assert itself on the international level, both now and in the future, then the dominant functional approach needs a formal and theoretical opponent which is both qualified and constructive (see e.g. Vikner 2004). We also believe that the formal approach needs to take the challenge posed by functional linguistics seriously, a challenge which is not always taken seriously in international formal linguistics at the moment.

Our project intends to apply the two approaches in a parallel fashion to a concrete empirical area (similarities and differences between clauses and nominals, as described in section 1 above). We think that we are the right mix of researchers, in that half of the four applicants, viz. Steffen Krogh and Henning Nølke, mainly work within a functional paradigm, whereas the other half, Sten Vikner and Johanna Wood, mainly work within a formal paradigm. Similarly, the prospective ph.d./post doc-candidates have a mixed background from both types of research environments.

Instead of splitting the project into smaller mini-projects depending on the theoretical approach (i.e. formal vs. functional), we will take the empirical data as the basis for the subdivision of the project (see section 3 below). We are convinced that this is possible because the different theoretical approaches share many fundamental assumptions, and very often are at least compatible, in such a way that the different approaches do not exclude but rather complement each other (this is thus one of the main ideas behind the modular perspective, which unifies the two approaches, see Nølke 1994, 2004, 2006).

We thus believe that both formal and functional approaches completely agree with Bourdieu's (1988:774–775) paraphrase of Kant (1929:93):

Theory without empirical research is empty, empirical research without theory is blind
i.e. that linguistic theory needs empirical support and that linguistic data need theoretical interpretation. The latter of these two points is made more forcefully by Neil Smith (1989:32):

*Any attempt to provide explanations presupposes a theory. The difference between so-called theory-neutral and theoretically based explanations is not really one between the presence and absence of an appeal to theory, but a difference in the sophistication and depth of the two theories involved.*

We furthermore agree that the optimal theoretical hypothesis is the one that by means of the fewest auxiliary assumptions ("the lowest cost") yields the highest number of further testable predictions ("the highest returns"). Linguists from different approaches in principle only start to disagree when it comes to deciding whether the higher returns yielded by hypothesis A over another hypothesis B also justify the higher costs (e.g. in terms of abstractness) that hypothesis A might have compared to hypothesis B.

2.2 The comparative foundation

The project is not just cross-theoretical, as discussed above, but also comparative. We think that comparative linguistics in addition to comparing languages empirically should also seek to account theoretically for as many surface differences as possible by deriving them from as few underlying abstract differences as possible. In this way it can be established which aspects of a given language, e.g. Danish, are also found in other languages, and which aspects are specific to a single language. Such a typological perspective makes it possible not only to establish typological correspondences and predictions (e.g. of the kind "only languages which have X, also have Y"), but also to explain and justify these theoretically.

By comparing both different languages (e.g. Danish vs. French or German vs. Yiddish) and different stages of the same language (e.g. Old English vs. modern English), we obtain a good basis for establishing what constitutes possible and impossible types of language variation. In this way, a solid foundation is set up for applied linguistics of many sorts, ranging from computational linguistics to research into learning difficulties, and thus theory and empirical research are integrated.

Comparative linguistics examines language differences. This is interesting and useful in itself, but it is also possible to take it a step further. We believe that comparative linguistics should examine which kinds of variation exist between languages, and which kinds do not exist. This will allow for important contributions to be made to our knowledge about the scope and the limitations of the human brain. An explicitly comparative angle also brings out the specific characteristics of each language more sharply than when each language is treated in isolation (see e.g. Nølke 2007, Vikner 2007).

The four applicants are all employed at the Institute of Language, Literature and Culture at the University of Aarhus. As this institute is home to a number of important foreign languages and at the same time firmly anchored in a Danish university context, comparative linguistics is one of the central concerns of the institute. It is thus in the interest of the institute and the faculty that we intensify the inquiry into similarities and differences between these different foreign languages, as well as between these foreign languages and Danish.

The project has a clear and very positive developmental perspective for the institute and the faculty, as on the one hand it is based on teaching and research resources already in place and on the other hand it will strengthen these resources.
Even though this may not always be obvious, comparative linguistics is in a way already centrally placed at the Institute of Language, Literature and Culture and also in the Faculty of Humanities more generally. When Danes are taught French morphology or German word order, it is natural that these are compared to Danish morphology and Danish word order. On the other hand, there is a very understandable tendency in the individual philologies to concentrate on comparing the relevant foreign language to Danish, whereas this project more ambitiously will focus on the larger context, e.g. by comparing German not just to Danish but also to e.g. Yiddish, English and French.

The project will also contribute to the intensification of the cooperation between faculties at the University of Aarhus, in that it will be an integrated part of the focus area Cognition, Communication and Culture, which is based at Faculty of Humanities and contains important contributions from the Faculties of Social Science (Psychology), Health Science (Centre for Functionally Integrative Neuroscience) and Theology (Science of Religion).

On a more concrete level, the comparative aspect will be visible in that the different parts of the project will make sure to include Danish, English, French, German, Yiddish etc. These ambitions are not unrealistic when it is taken into consideration that the four applicants (and the ph.d./post doc candidates) have been students and researchers of a number of topics within these languages, cf. the enclosed CVs and lists of publications.

3. The individual areas
From the many different areas in which one could seek similarities and differences between clauses and nominals, we take the following three to be the most important ones from a syntactic point of view: argument structure (3.1), modifiers (3.2), and determiners (3.3). More generally we will also attempt to set up common structures for clauses and nominals (both as field models much like Diderichsen 1946 and as tree structures).

3.1 Argument structure (grammatical relations)
As illustrated in example (1) above, grammatical relations, e.g. subject and object, are found both in clauses and in nominals. Apart from subject and object being realised differently in their canonical positions (e.g. noun phrase in clauses vs. prepositional phrase in nominals), and their being obligatory in the clause but optional in the nominal, they also behave differently when we consider their occurrence outside their canonical position. Light (i.e. pronominal) items can e.g. be moved to the left inside the clause in both Danish and French, even though the Danish leftwards movement requires the clause to be a main clause with only one verb (Vikner 2005, Engels & Vikner 2006), a requirement which is not made in French:

(2) Da. a. I dag har Thomas ikke læst avisen
     b. Today has Thomas ikke læst den
        (normal object) (light object)

(3) Da. a. I dag læste Thomas ikke avisen
     b. Today read Thomas den ikke (it) not (the paper)
        (normal object) (light object)

(4) Fr. a. Aujourd'hui Thomas n' a pas lu le journal
      b. Aujourd'hui Thomas ne l' a pas lu
         (= 2a) (= 2b)
In addition, in French (but not in the other languages), it is possible to move a light object inside the nominal to the left inside the clause, i.e. *en* may refer both to the complement of the noun *auteur* and to the complement of the verb *parler*:

(5) Fr. a. Il était lui-même l'auteur des nouveautés
Fr. b. Il *en* était lui-même l'auteur

('He was himself the author of the news')

(6) Fr. a. Il a déjà parlé des nouveautés
Fr. a. Il *en* a déjà parlé

('He has already talked about the news')

In all these cases, the light item is moved further to the left in the clause, whereas it is impossible in any language to take an object/complement of a noun and move it to the left inside the nominal. This also holds for e.g. negative items (Da. *han har ingen nyheder hørt*, ’he has no news heard’) which may also occur further to the left than their canonical position, but again in the clause only, not within the nominal.

A different asymmetry is found e.g. in German, where the canonical position for the object of a verb is to the left of the verb (Krogh 2008, Vikner 2001), whereas the canonical position for the ‘object’ of a noun is to the right of the noun. ((7a,b) are German versions of (1a/c) and (1b/d)):

(7) a. Ge. (... während) Maria sorgfältig *den Roman* las
b. Ge. (... während) Marias sorgfältigem *Lesen* des Romans

this is related to the placement of pre- and postmodifiers which belong to the next area, 3.2.

### 3.2 Modifiers

As shown for Danish/English (1) and for German in (7), modifiers like *omhyggelig/careful/sorgfältig* may occur to the left of what they modify, whether this is the central part of a nominal or of a clause. The distribution seen in German for objects (to the left of the verb, to the right of the noun) is found in French for modifiers. ((8a,b) are simplified French versions of (1a/c) and (1b/d)) (Nølke 1993, 1994):

(8) Fr. a. Elle a *soigneusement* lu le roman
Fr. b. Sa lecture *soigneuse* du roman

The project will examine more closely whether these two right/left asymmetries, (7) and (8), can be seen as connected and also whether they can be linked to the cases where a language has both options, but with different meanings. This is e.g. found with certain French adjectives or certain Danish and English adverbs (Nølke 2001, Engels 2005):

(9) Fr. a. *la nouvelle voiture* ('the new car, i.e. the car we did not yet have yesterday)
Fr. b. *la voiture nouvelle* ('the new car, i.e. the car that has just been made')

(10) En. a. Thomas will *surely* hit the target
En. b. Thomas will hit the target *surely*
(9a) but not (9b) may be about a second-hand car, and surely in (10a) expresses the attitude of the speaker to the content, whereas it in (10b) describes the way in which the action takes place. This is also where positional asymmetries like (11) belong (cf. Wood 2007a):

(11) En. a. I bought something expensive today
   En. b. I bought an expensive book today

3.3 Determiners (referentiality)
Whereas the grammatical relations in section 3.1 and the modifiers in 3.2 are not so difficult to characterise, determiners are more complicated. Both clauses and nominals contain elements that anchor the reference of the entire expression to something in the world (deixis, i.e. whether something is to be placed "here" or "there" in time and space, Vikner 2003, Wood 2007b):

(12) En. a. She has read the book
   En. b. She had read the book

(13) Da. a. Hun elsker _____ heste ('She loves horses')
   Da. b. Hun elsker de her heste ('She loves these horses')

(14) Fr. a. Elle aime les chevaux (= 13a)
   Fr. b. Elle aime ces chevaux-là (= 13b)

Determiners also include elements that determine the extent or amount of the expressions (quantification). Both what nominals refer to and what clauses refer to may be either countable or non-countable, and this is expressed in the determiner system (Vikner & Vikner 1997, Wood 2003, Krogh 2007):

(15) En. a. these many coins (countable)
   En. b. *these many money (non-countable)

(16) En. a. She frequently speaks French (countable)
   En. b. *She frequently knows French (non-countable)

The two phenomena mentioned above, localisation and quantification, have a fixed sequence in the nominal such that quantification follows localisation (i.e. the positioning in time and space):

(17) En. a. these two apples
   En. b. *two these apples

(18) Da. a. de her to æbler (= 17a)
   Da. b. *to de her æbler (= 17b)

Many linguists, both functional (Dik 1997:50, Rijkhoff 2002:218) and formal (Cinque 1999), suggest that this same sequence - localisation before quantification – is also found in the clause, even though this is not immediately observable. One of the tasks of the project will therefore be a critical evaluation of such an analysis and the evidence for the sequence within the nominal, also given that unexpected variation occurs:
(18) Ge. a. der halbe rote Apfel  
   Da. b. det halve røde æble  
   En. c. half the red apple

(19) Ge. a. die beiden roten Äpfel  
   Da. b. begge de røde æbler  
   En. c. both the red apples

The last set of data to be mentioned here as an example of something to be examined by the project is the repetition of determiners, as found in nominals in both English and Yiddish:

(20) En. a. They're built in a such a way that ... 
    (= in such a way, Wood 2002:109)  
    Yi. b. A meydil a sheynie 
    (= a sheyn meydil, 'a beautiful girl', Jacobs et al. 1994:408)

Within the clause, the closest similar example could be the repetition of the finite verb as in the Swiss German dialect from Berne:

(21) Be. ... dass er chunt cho Schach schpiile 
    (= 'that he comes come chess play ', i.e. that he is coming to play chess, Schönenberger & Penner 1995:289)

3.4 Interaction between the three areas

Even though we find it expedient to divide the potential similarities and differences between clauses and nominals as in sections 3.1-3.3 above, we have to admit that there are many phenomena which involve more than one of these three areas.,

As an example we might mention a parallel between the clause and the nominal which touches both upon grammatical relations (3.1) and determiners (3.3), viz. that a syntactic constituent can follow the pattern of one system to a certain point and then switch to follow the pattern of the other system.

In English, Yiddish and German, there is a form of the verb which may be used both as a verb and as a noun:

(22) En. a. (I see) him reading the novel  
     Yi. b. (Ikh ze) im leyenen dem roman  
     Ge. c. (Ich sehe) ihn den Roman lesen

In (22), reading/leyenen/lesen are used as verbs – i.e. what is outside the brackets constitutes an embedded clause. In (23) on the other hand, reading/leyenen/lesen are used as nouns – i.e. what is outside the brackets constitutes a nominal, which is why they may have the possessive his/seinem as determiners. This is also why the complement of the noun in (23), 'the novel', is expressed either as a prepositional phrase or as a genitive nominal, as normally only verbs (as in (22)) and not nouns (as in (23)) take an accusative object:

(23) En. a. (I disapproved of) his reading of the novel  
     Ge. b. (Ich hielt nicht viel von) seinem Lesen des Romans
In English and Yiddish it is, however, also possible to have a hybrid construction which has some characteristics of both a clause and a nominal, in that reading/leyenen has the possessive his/zayn as determiner (typical for nouns, as in (23)) but they take an accusative object (typical for verbs, as in (22)):

(24) En. a. (I disapproved of) his reading the novel
Yi. b. (Ikh hob nit gehalten fun) zayn leyenen dem roman

The project will here examine whether there are other mixed phenomena between the two systems and whether it is always the rightmost part which is clausal and the leftmost part which is nominal as in (24), or whether the opposite also occurs.

References
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