grammis and *ProGr@mm*

Two freely accessible multimedia hypertexts on German grammar

Part I: *grammis*

Why grammars cannot be simple

- Competent speakers can answer questions about the correctness of expressions of their language. Asked, whether – in German – you should say *Ich bin fertig* or *Ich habe fertig*, they will answer: „It's *Ich bin fertig*" – without recurrence to a grammar or textbook.

- So why must grammars be so utterly intricate?

- The answer may be puzzling, but it is, what we expect of grammars, that induces their complexity.

- As Grammars cannot, like humans, react ad hoc, they ought to be prepared to answer **any** question about expressions of a language.

- To cope with this task, grammars reduce the problem by defining classes of expressions, that share formal properties, such as morpheme classes, phrase classes, and by defining relations among classes of these kinds.

- With every definition, grammars depart from what people know about their language by merely being competent speakers of this language.

How *grammis* tries to help out

- While there is no way to overcome the principle complexity of the problem, the use of new electronic media can help to soften the task, and – at least to certain extent – facilitate navigation to users, looking for some specific information in the haystack of grammar.

- This is where *grammis* enters the scene. Based on one of the most detailed grammars of German – the *Grammatik der deutschen Sprache* by Gisela Zifonun, Ludger Hoffmann, Bruno Strecker et al. – *grammis* employs all the possibilities offered by multimedial hypertext to prevent users from becoming desperate in view of the torrents of grammatical terms that will inevitably come across.

The main components of *grammis*

grammis contains six main components:

- *Grammatik in Fragen und Antworten (Grammar in Questions and Answers)*
- *Systematische Grammatik (Methodical Grammar)*
- *Grammatische Fachbegriffe (Grammatical terms)*
- *Grammatisches Wörterbuch (Grammatical Dictionary)*
- *Grammatische Bibliografie (Grammatical Bibliography)*
- *Grammatische Ontologie (Grammatical Ontology)*

Grammis is located at this address:

http://hypermedia.ids-mannheim.de/index.html

Overview

- The *Grammar in Questions and Answers* picks up major difficulties and cases of doubt in German Grammar in the form of typical questions answered by short texts that put the idea across.

- The *Methodical Grammar* provides structured and multimedially treated grammatical knowledge presented on three levels of information: compact texts, detailed texts and in-depth texts.

- The module *Grammatical Terms* provides compact explanations and refers to more elaborate texts within the *Methodical Grammar* as well as to further readings.

- The *Grammatical Dictionary* describes the grammatical properties of items like prepositions, connectors, affixes, and selected verbs.

- The *Grammatical Bibliography* contains most of the publications on German grammar ever since 1965.

- The *Grammatical Ontology* grasps significant relations between terminological concepts within the realm of grammar and allows visual navigation and inquiry.

Why all these Components?

- *grammis* tries to address users with quite different backgrounds, such as
  - ordinary language users with no or almost no grammatical knowledge
  - „professional" language users such as journalists, any kind of scientists and teachers without or almost without specific linguistic education
  - language teachers in secondary schools and colleges
  - students and lecturers of German language

- While all components of *grammis* may be used separately, they were designed to support one another.
  - Users of the *Grammar in Questions and Answers* might start out with a simple question, and, later on, become interested in the detailed descriptions of the *Methodical Grammar*. Hyperlinks will lead them to the appropriate information with just one mouse click.
  - Reading a unit of the *Methodical Grammar,* users risk to encounter terms, they do not understand. Since many grammatical terms are defined as hot words, often a mouse click will open a window containing a preliminary explanation and corresponding examples which often might be sufficient to overcome a momentary lack of understanding.

Grammar in Question and Answers I

- It is a commonplace that those, most in need of help in matters of grammar, are, at the same time, those, least capable to use one.

- To benefit from grammars a user has to be initiated in their technical language, otherwise he is likely to give up a long time before he ever got to the special information, which might have been helpful to him.

- To break open this circle, the *Grammar in Questions and Answers* relies on a know how, every language user possesses, namely the ability to interpret an example as such, and not merely as an isolated phenomenon.

- Being able to interpret events or objects as examplary of classes of events or objects, as a matter of fact, is basic to the ability to acquire any language.

Grammar in Question and Answers II

- Taking this for granted, the method of *Grammar in Questions and Answers* is simple: Instead of complex descriptions of grammatical structures, a list of exemplary questions provides a basis for explanations.

- Should users have trouble in finding an appropriate question, they may still search by means of words or sequences of words that are not terms but rather typical for this kind of problem. Chances for hits are not too bad, even when looking for highly frequent words such as German *der*, as only those occurrences of *der* will be found, that are covertly marked as *object words*, because in these places their meanings or structural properties are treated.

- In contrast to popular guidebooks, the *Grammar in Questions and Answers* does not rely just on the competence of its authors: All answers are based on extensive research in the biggest corpus of machine-readable German texts, a corpus actually containing over 3.6 billion word-forms.

http://hypermedia.ids-mannheim.de/pls/public/fragen.ansicht?v_kat=0

Methodical Grammar

- The *Methodical Grammar* constitutes the heart of *grammis*. It provides its informational backbone.

- Originally intended as a genuine hypertext, it turned out to contain many rather extensive texts. We just did not succeed in cutting down all the complex considerations to pieces of the size of typical monitor screens.

- The contents of the *Methodical Grammar* are essentially based on syntactical and semantic considerations, which are supplemented by reflections on the communicative functions of parts of speech.

- The overall structure of the *Methodical Grammar* looks, and, in fact is fairly conventional:

http://hypermedia.ids-mannheim.de/pls/public/sysgram.ansicht

The composition of the *Methodical Grammar*

- The *Methodical Grammar* distinguishes four main aspects of grammatical categorization, which, in principle, might be regarded as independent of specific qualities of a given language:

  - elementary and complex parts of speech, such as words, noun phrases, prepositional phrases, sentences, subordinate clauses, connectors

  - syntagmatic relations within sentences, such as functional components (i.e. complements, supplements), valence, inflectional morphology, formation of words (i.e. complex nouns like *Staatsbesuch*, *Urlaubsantrag*), correspondence (in number, person, gender), word order, intonation

  - paradigmatic relations between sentences: gender, number, person, tense, voice, modality of verbs and whole sentences

  - pragmatic functions
    - mainly the conceptual design of events and states of affaire
    - the general functions of speaking, like uttering statements, commands, wishes, questions, and, as German speciality, Heischen

Some examples

- Nominalphrasen (noun phrases)
  http://hypermedia.ids-mannheim.de/pls/public/sysgram.ansicht?v_typ=d&v_id=1469

- Funktionen der Grenztonmuster (functions of sound patterns)
  http://hypermedia.ids-mannheim.de/pls/public/sysgram.ansicht?v_typ=d&v_id=2339

- Das Präsens (present tense)
  http://hypermedia.ids-mannheim.de/pls/public/sysgram.ansicht?v_typ=d&v_id=254

- Von elementaren zu erweiterten Dikta (from elementary to elaborated dicta)
  http://hypermedia.ids-mannheim.de/pls/public/sysgram.ansicht?v_typ=d&v_id=2382

Grammatical Terms

- Apart from providing „on the spot" explanations of grammatical terms for users of the *Grammar in Questions and Answers* and the *Methodical Grammar* the component *Grammatical Terms* offers a data base of terms typical for g*rammis,* listed in alphabetical order:

    http://hypermedia.ids-mannheim.de/pls/public/termwb.ansicht

- This component should by no means be mistaken as some kind of dictionary of grammatical terms, since it deliberately leaves out terms other than those underlying *grammis*, as, for example, terms of *HPSG* or Chomsky's *Government and Binding* theory.

- While it may be regarded as incomplete by adherers of these theories, it could and should be helpful to users with a traditional grammatical training still practiced in German grammar schools. It accounts for many terms, they may remember, and thereby guide them to the places, where they should find the information, they are looking for.

Grammatical Dictionary

- Many problems of German grammar are connected to certain words, as, for example, the choice of case governed by a preposition or a verb. The *Grammatical Dictionary* accounts for this, and provides information on the grammatical properties of words that perform syntactical tasks within the formation of sentences.

- As for so called functional words like prepositions, the *Grammatical Dictionary* does not even try to provide explanations of their meanings, for this would make no sense at all: Trying to explain the meaning of any preposition would inevitably lead into a vicious circle.

  http://hypermedia.ids-mannheim.de/pls/public/gramwb.ansicht?v_app=g

Grammatical Bibliography

- The *Grammatical Bibliography* is of interest primarily to fellow linguists specialized in German grammar.

- It originally started out in the 80th as a print publication by Peter Eisenberg et al., at that time lecturer at the Free University of Berlin. By the end of the 90th Eisenberg handed it over to the *Institut für Deutsche Sprache* in Mannheim, where it was henceforth continued in the form of a data base, that by now is integrated in *grammis*.

- The *Grammatical Bibliography* comprises more than 28.500 bibliographical entries, beginning in 1965 up to this day.

http://hypermedia.ids-mannheim.de/pls/public/bib.ansicht?v_app=g&v_bereich=BDG

Grammatical Ontology

- Theories dealing with grammatical phenomena are all but uniform, a fact that had to lead, and actually has led, to an overwhelming mass of grammatical terms and sometimes even to incommensurate term sets.

- As *grammis* finds itself in the middle of this terminological Babel, chances are, that users familiar with other linguistic theories might miss, what grammis can do for them. They might simply not recognize the text passages treating the points of interest to them.

- Now, the *Grammatical Ontology* tries to help them out by logically and thematically combining the terms used in *grammis* to other term sets in a data base.

The *Grammatical Ontology* is situated here:

http://hypermedia.ids-mannheim.de/pls/public/ontologie.html

Part II: ProGr@mm

ProGr@mm – an interactiv course of German grammar

- *ProGr@mm* (short for: *Propädeutische Grammatik*) mainly offers the same information on German grammar as *grammis* does, but whereas the latter contends itself on providing the information, *ProGr@mm* is design as an interactive course to be used accompanying seminars at universities.

- Compared to *grammis* the main features of *ProGr@mm* are:

  - Users have to register and to log-on each time they enter *ProGr@mm.*

    http://hypermedia.ids-mannheim.de/programm

  - There are two kinds of users: lecturers and students. Certain functions of *ProGr@mm* only are open to lecturers, such as

    - creating courses open to registered participants

    - composing guided tours for the participants of their courses

    - adding supplementary information.

      http://hypermedia.ids-mannheim.de/pls/public/plus.seminarleiter?v_typ=o

  - To many learning matters interactive exercises are offered together with the respective solutions.

  - While *Progr@mm* treats less themes than *grammis*, it holds an additional component called *Kontrastiv* (contrastive), containing special information for learners of *German as a foreign language* from a French, an Italian, a Norvegian, a Polish, and a Hungarian view.

Some Exercises of ProGr@mm

- Typen von Verben (Types of verbs)

  http://hypermedia.ids-mannheim.de/uebungen/synt_funk/verbalkomplex/Typverben.htm

- Mittel des flexionsmorphologischen Formenbaus
  (Means of building flexional forms)

  http://hypermedia.ids-mannheim.de/uebungen/FM/MittelNO.htm

- Hilfsverb oder Vollverb? (Auxiliary or main verb?)

  http://hypermedia.ids-mannheim.de/uebungen/synt_funk/verbalkomplex/HilfsvVollv.htm

- Reduktionstest (Testing by reduction)

  http://hypermedia.ids-mannheim.de/uebungen/synt_funk/komp/Reduktionstest1/Reduktionstest1.htm

- Perfekthilfsverb (Auxiliary verb for building past tense forms)

  http://hypermedia.ids-mannheim.de/uebungen/wortarten/perfekthilfsverben.htm