German Focus Particles and their Influence on Intonation[1]

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[1]translation: Die deutschen Fokuspartikel und deren Auswirkung auf die Intonation

Contents

0.1 Preliminary Remarks

This paper was written at the Institute for Natural Language Processing, University of Stuttgart[2] as a "*Diplomarbeit*" comparable to a Final Thesis in the United States.

It would never have been possible to write this paper without the help of the following people:
Rainer Bäuerle, Franz Beil, Glenn Carroll, my supervisor Prof Grzegorz Dogil, Matthias Jilka, Jörg Mayer, Gregor Möhler, Detlef Prescher, Stefan Rapp and everybody who supported me during this time.

[2]see http://www.ims.uni-stuttgart.de

Chapter 1

Introduction

According to Jilka (forthcoming) [16], spoken German uses far fewer pitch accents than standard American. It is commonly assumed that German makes use of focus particles to achieve comparable gradation of meaning (e.g. dependent on context, 'only' can be translated by "*allein*", "*erst*", "*noch*" or "*nur*"). As some focus particles are homonymous, this paper examines whether intonation patterns exist which serve to distinguish focus particles from their homonymous counterparts. For example the particle "*selbst*" can be used as a focus particle, a reflexive pronoun, a noun, a fixed expression or to mark a conditional construction. Furthermore the common features of focus particles and their influence on intonation should be analyzed. The focus particles are expected to assign a falling pitch accent on the semantic head[1] of its focus. Moreover semantic aspects also influence the intonation contour. Examples will be presented for deaccenting and contrastive focus.

German grammars do not give consistent definitions of particles. For this reason I will sketch to describe the different descriptions in section 1.1. Then a short overview will be given on a German prosodic labelling system that was used to label a spoken corpus that is available at the Institute for Natural Language Processing at University of Stuttgart. The spoken corpus consists of four hours of acted speech, 2 hours of a feature series and 1.5 hours of news stories. In section 2 six particles were chosen in order to show different phenomena that influence intonational patterns. I attempt to describe each phenomenon with at least one example. The data points to the existence of syntactical, semantical and phonetical levels that interact with the assignment of pitch accents which can be observed in the presented data.

[1] The term 'semantic head' will be used very freely, generally 'lexical head' would be the exact term.

1.1 What are particles?

German grammars use the term *particle* in different ways. In the most common German grammar, the Duden [7], adverbials, prepositions and conjunctions belong to the class of particles.

The Duden also groups the following classes together as adverbials: adverbials,

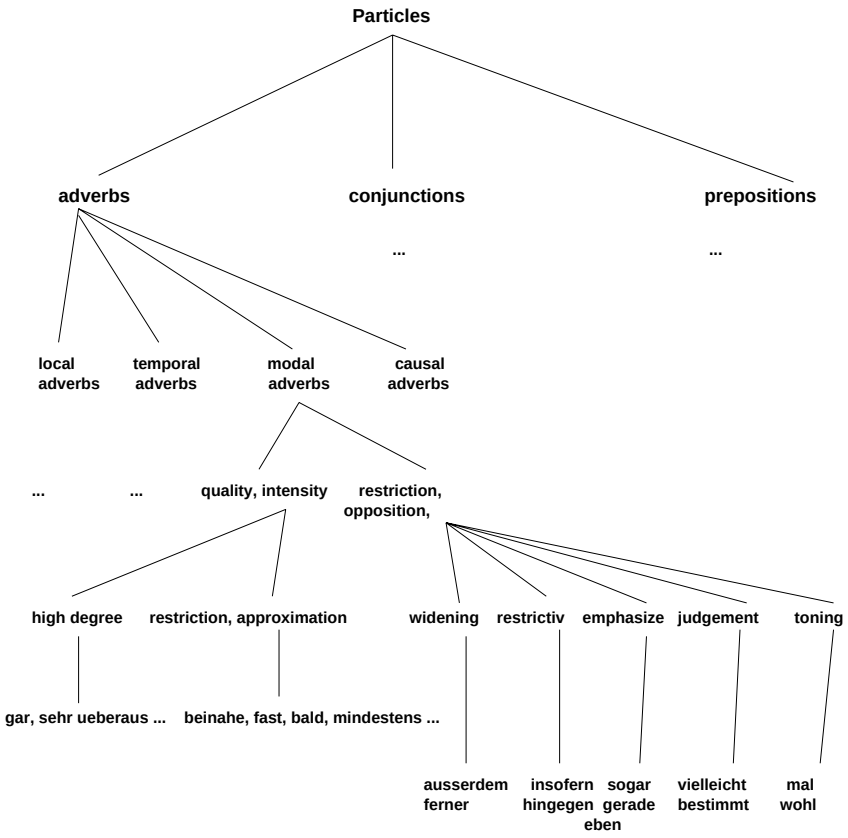
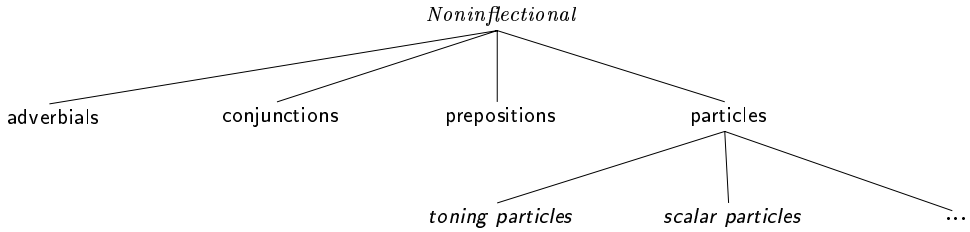


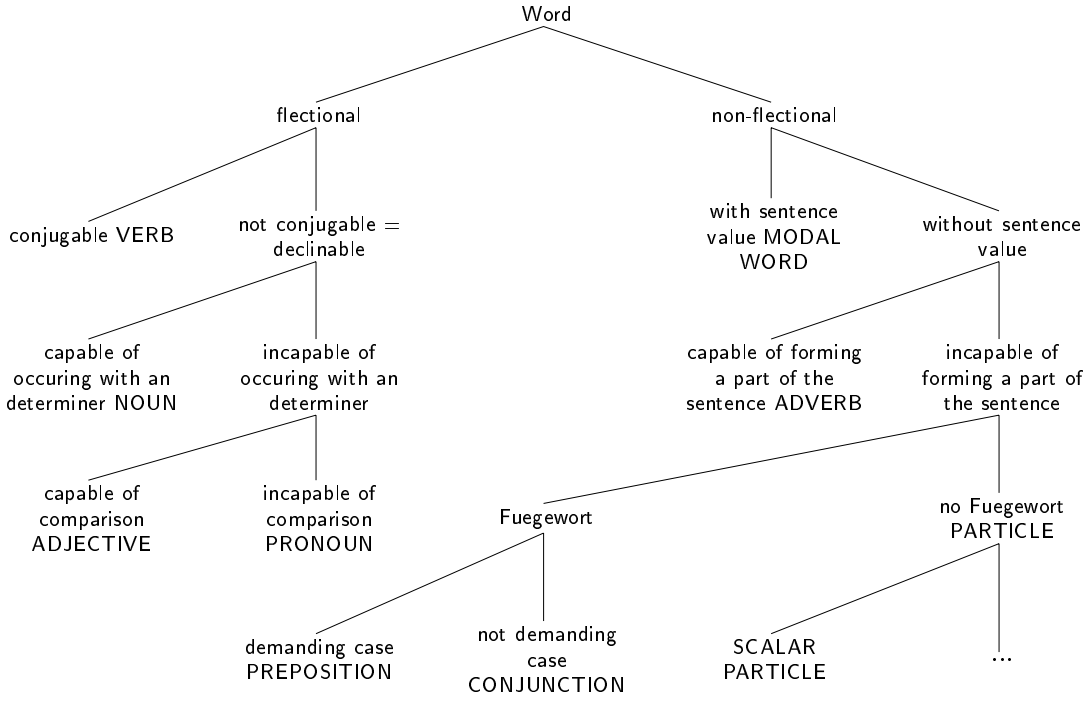
Figure 1.1: Particles - in Duden

pronominal adverbials, modal words, scalar particles, intensifying particles (fig. 1.1).

Another grammar, Grammatik des Deutschen [11], analyzes particles under morphological aspects. The generic term is *Non-Inflectional*.



Flaeming [11] used the same sort of analyses, but he put the particle class in a bigger context.



Helbig/Buscha [13] label toning particles, focus particles, modal particles and scaling particles simply as particles. They used no generic term for particles. In their view they are an independent class.

Engel [9] used the same categories as Altman, but he also widened the term *particles*. He added predicative adjectives and called them copula particles.

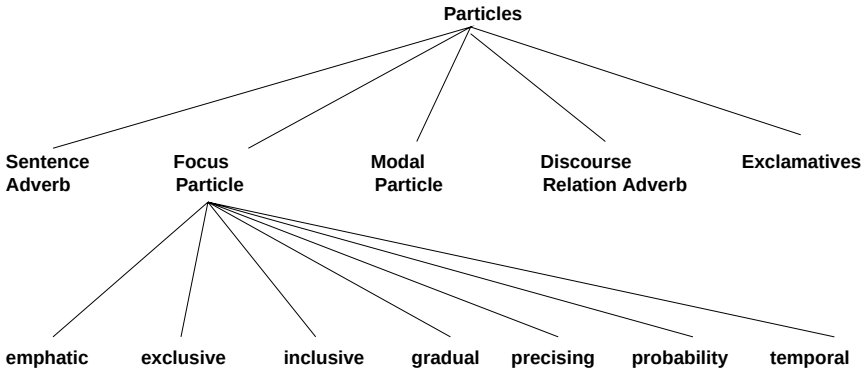


Figure 1.2: Particles - VERBMOBIL

In this study I try to use the definition of the German project, VERBMOBIL. In VERBMOBIL focus particles are devided into different classes according to semantical aspects (called focus adverbs) (see figure 1.2).

1.1.1 Definition of Focus Particles

The German term "*Fokuspartikel*" was created by H. Altmann in 1976. In earlier works focus particles were called scalar particles[2]. However, this is not an adequate label, as only a small number of focus particles do scale. Focus particles are a class of words which are defined by their semantical function: **focus particles and their scope are the focus of the sentence.**

"After John Bos [focus] particles do not introduce a focus themselves, but they have the property to apply to constituents, which are focused and prosodically stressed. The focus sensitive particles introduce presuppositions, which depend on the constituents in focus that appear in their scope. [5]" Bos claims that " the focus particles do not add anything to the meaning of the sentence, but rather 'judge' whether the sentence in which they appear is acceptable in a given context or not [3]." The semantic function of focus particles is to establish a relation between propositions which may be explicit or implicit. Focus particles imply alternatives(values) to their relational elements and they include or exclude these alternatives in a larger context. If some values are excluded, it is a restricting particle and if some values are included, it is an additive particle. It may be assumed that focusing particles with different semantic meanings differ in their tones. In the present paper I will not consider toning particles like 'ja *(yes)*', 'denn *(then)*, 'doch (example: Das mußt du doch zugeben!)', 'wohl (Wer hat das wohl geschrieben?)'.

[2]Gradpartikel

Focus particles can be syntactically described as follows: **The focus particles can not be the aim of a question, but together with their scope they can be the answer to one.**

Morphologically, focus particles are not flectional. They share this feature with other word classes.

The following words belong to the class of particles according to Helbig/Buscha [13]. As mentioned in the introduction, there are more particles in German than in English. Therefore it is not easy to find an adequate translation for each particle. Often the particles in different contexts are not translatable. Sometimes they can only be circumscribed.
aber (really),
allein (only),
auch (too),
beinahe (nearly),
beispielsweise (for example),
bereits (on the very next day),
durchaus (absolutely),
eben (just, simply),
erst (only),
etwa (about),
etwas (some, something),
fast (nearly),
ganz (entire, whole),
gar (even),
genau (exactly),
gerade (I was just about to leave),
höchst (highly, most),
nahezu (nearly),
noch (only, just),
nur (only),
schon (already, just),
selbst (even),
sogar (even),
ungefähr (about),
weit (by far),
weitaus (by far),
wirklich (really),
ziemlich (quite, almost)
Of course the above mentioned particles do not have only one meaning. It would be advantageous to find a way to disambiguate homonyms. It is the aim of this paper to find some keys to separating the different meanings of a particle. For this purpose

the following particles were chosen for analysis:

- **selbst** as a focus particle, a reflexive pronoun, a noun 'the self', a fixed expression 'by itself' or to mark a conditional construction 'even if'.
- **noch** as focus particle with an additive reading, a comparative reading, a perfective reading and an imperfective reading. Furthermore it functions as the negation of 'already' and as part of a coordinating conjunction.
- **nahezu** as focus particle
- **beinahe** as focus particle
- **fast** as focus particle, in a comparative construction
- **nur** as focus particle, as modal particle, in a restrictive construction, as a multipartite conjunction

1.1.2 Particle Accumulation

German particles do not appear in every combination that could theoretically be derived. They depend on distributive restrictions. Helbig/Buscha (1996) [13] pp. 498 for example mentioned that they do appear in a specific order.

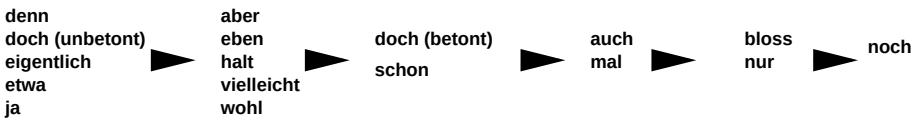


Figure 1.3: Particle Order

Unfortunately, theirs is an incomplete presentation (see figure 1.3). It would be very interesting to complete this diagram, but corpora will have to be analyzed in much more detail in order to find out in which positions focus particles can appear. Figure 1.3 enumerates only modal particles. As some particles can be used as focus particles as well as modal particles, it would be interesting to investigate this problem more thoroughly.
I assume that there is an order between focus particles that restricts the possibility of combinations of each other. If this order is inverted, then the particle more to the

left (in this order) is the focus of the preceding particle. The inversion of this order points out that the first particle is a focus particle[3]. For example

(1.1)
- "*auch nur*" (only) (see also 2.6.5) versus
- "*nur auch*" (only too).

As 'auch *(too)*' precedes 'nur *(only)*', the first particle in the first example tends to be a modal particle except if there is a tone on 'auch *(too)*'. What seems to be clear is, that if this order is inverted like in the second example, the first particle is a focus particle and the focus is either the second particle or the following constituent. This subject should be studied more deeply. It is not clear which one of the particles is a modal particle. However I assume that if the above mentioned order is kept, then the first particle tends to be a modal.

1.2 German Prosodic Annotations and very short historical overview

It is the purpose of this chapter to introduce only the main aspects of German prosody. It is a summary of chapter 3 of the precise description of German intonation given by Jörg Mayer [20], who also participated in the development of G(erman)ToBI(S) [12], a labelling system for the transcription of German intonation. It is based on the Tone Sequence Model (TSM) that was first introduced for English by Pierrehumbert (1980) [22]. In the beginning of the nineties the TSM was implemented by a research group around Pierrehumbert and Beckman resulting in the ToBI - Tones and Break Indices - labelling system. Pierrehumbert & Hirschberg (1990) [23] provide a compositional model for the semantic interpretation of ToBI labels. This model is simplified and generalized by Hobbs (1990) [14]. In this study I will use the terms *openness and completeness* that introduced by Hobbs. With the help of these theories I will attempt to find explanations for the phenomena that were found in the data. The above mentioned theories are described in detail in Mayer (1997) in chapter 2 [20].

1.2.1 GToBI and GToBI(S)

GToBI constitutes a compromise between various systems that were developed at different German universities (Saarbrücken, Braunschweig, Stuttgart). Nevertheless, the data was labelled using the Stuttgart system GToBI(S) which is described in this section. Its non-tonal components are nearly identical to those of the ToBI-system.

[3] otherwise I suspect that the first particle is used as a modal particle

1. Non-tonal components

   (a) Breaks Indices
   The break indices are nearly identical to those in ToBI. Only the categories are a little bit changed. Break-index 1 stands for normal word boundary and is the default value that does not have to be labelled. More detailed information about the Break Indices in general can be found in Mayer (1997) [20].

2. Tonal components
   The tonal components are the main part of GToBI(S). They are based on Féry's TSM-analysis of German intonation (Féry, 1993).

   (a) Boundary Tones
   In GToBI(S) only the position but not the tonal specification of terminal ip (intermediate phrase) or IP (intonational phrase) boundaries is marked. The tonal specification can be derived from the trailing tone of the phrase-final pitch accent. Féry regards the terminal tone L% as redundant[4]. The representation of the pitch contour was the main task in the original model. In Férys' model this function is taken over by the trailing tones. After a **rising pitch accent** (H-trailing tone) the fundamental frequency does not decline remarkably. It is sufficient to label

   - "-"
     for intermediate phrase boundaries (ip), which is interpreted as H- and
   - "%"
     for intonational phrase boundaries (IP) interpreted as H%

   After a **falling pitch accent** (a L-trailing tone) with the contour staying low then "-" is interpreted as "L-" and "%" as "L%". If the contour rises nevertheless then ,according to Féry's analysis, a real "H%" boundary is labelled. Thus there are the following terminal boundary categories left in GToBI(S).

   i. ip boundaries **-**
   ii. IP boundaries without terminal tone: **%**
   iii. IP boundaries with rising terminal tone (only after falling nuclear accent): **H%**

3. Pitch Accents
   The accents of GToBI(S) are identical to the categories that are introduced in

[4] As the model develops further, these modifications were not used when the data was labeled. Since there are no problems in compatibility, the labelled data using the modifications can be mapped onto the data without such modifications.

Féry (1993) [10]. There are five accents[5]: H*L, L*H, HH*L, L*HL and H*M.

(a) H*L
'Peak Accent'. It is a high target (local fundamental frequency maximum) in an accented syllable, followed by a steep pitch descent into the lower third of the pitch range (L-target). If the accented syllable is the last syllable of the phrase, then the L target is also within in the accented syllable, in all other cases the low target is reached after the accented syllable (The exact positon depends on speech velocity as well as syllable and segmental structure).

(b) L*H
A L-target (local fundamental frequency minimum) in an accented syllable followed by a steep ascent to the higher third of the pitch range (H-target). If the accented syllable is the last syllable of a phrase, then the H-target lies within the accented syllable, otherwise the high target is reached after the accented syllable.

(c) HH*L
'Early Peak'. There is a H-target in the preaccented syllable followed by a steep or gradual pitch descent. This accent has to be realized over at least two syllables (the preaccented and the accented one). It is necessary that there be a pitch descent between the preaccented and the accented syllable. The descent could be realized step gradually, i.e. as a downstepped H-target in the accented syllable, or steeply i.e like a H*L accent that has been pushed to the left. As a rule, the first variant is realized when the accented syllable is not phrase-final. The second variant is used when the accented syllable is in fact phrase-final. HH*L can only be used when the preaccented syllable is a metrically weak syllable, meaning it can not be stressed.

(d) L*HL
'Rise-Fall'. An early L target in the accented syllable followed by a pitch peak (H target) and a steep pitch descent (L target). If the accented syllable is not phrase-final (this does not occur very often, since there is usually an ip boundary immediately following an L*HL), the three tonal targets can spread over three syllables. However, L*HL frequently spreads over only two syllables or just one long syllable. Thereby the position of the H target depends strongly on the segmental structure of the syllables.

(e) H*M
'Stylization'. H*M can only appear in nuclear position. The pitch contour

[5]GToBI(S) does not imploy the symbol "+". A star is is followed by the standard notation "*". The positions of all other tones depend on that of the starredtone: they are either *leading tones* (prefixes) or *trailing tones* (suffixes). Therefore H*L is equivalent to H*+L etc.

ends in the middle of the pitch range. A H target in an accented syllable is followed by a trailing tone either on the H level (then the M target is realized in the final syllable) or on the M level, creating a plateau contour. If the H*M accented syllable is phrase-final, then the nucleus of the syllable is usually either considerably lengthened or duplicated so that both targets can be realized clearly.

The labels H*, L*L, ..L and ..H are used to represent linking processes.

(a) H*/..L
Partial Linking. A H target (H*) in an accented syllable followed by a weak pitch descent. The pitch descent should end in the syllable before the next accented syllable (..L).

(b) L*/..H
Partial Linking. A L target (L*) in an accented syllable followed by a weak pitch ascent. The pitch ascent should end in the syllable before the next accented syllable (..H).

(c) H*
Complete Linking. There is a H target in the accented syllable. The pitch contour between H* and the next syllable is equivalent to an interpolation between the neighboring tones.

(d) L*
Complete Linking. There is a L target in the accented syllable. The pitch contour between L* and the next syllable is equivalent to an interpolation between the neighboring tones.

As in ToBI the symbol "!"denotes **downstep**. It only can appear before non-phrase-initial H tones.

GToBI(S) is a phonological transcription system. The main purpose of this system is not the adequate description of the fundamental frequency contour. Various smoothing algorithms can take over this task. GToBI(S) tries to annotate only those events that are categorical and interpretable. While GToBI(S) is a means to annotating spoken language, Mayer [20] dissertation and the present study attempt to interpret these labels.

1.3 Default Tones and the Interaction with Focus Tones

During the analysis of the spoken corpus a L*H tone at the phrase boundary (ip, IP) was observed that can neither be explained by the influence of focus particles

nor a theory of new and old information. I assume that this L*H has more than one function.

	Meaning of	
	H-tone	L-tone
Class 1 (Starred Tones, Prefixes)	salient + new (H* of H*L, HH*L, H*)	salient + not new (L of L*H)
Class 2 (Suffixes, Phrase Accents, Boundary tones)	incomplete, open-ended (H of L*H)	underspecification concerning completeness (L of H*L , HH*L)

Figure 1.4: Hobbs' Tone Components

According to Hobbs (1990) [14] the meaning of tones is entirely compositional, see figure 1.4. The basic elements are H and L-tones. Hobbs defines their meaning as follows:
It seems that there are different layers at which tones are assigned to syllables. The interaction between the different layers is rather interesting, as these particular L*H is chosen by default to structure the information in an utterance when no explicit boundary tone were used. The H suffix of the L*H tone before an ip or IP boundary can be interpreted as expressing openness or incompleteness (Hobbs [14]).

Figure 1.5 describes the interaction between the layers.
Word accent, which is determined by duration and intensity, is assigned at the word layer. On the constituent layer pitch accents H*, H*L, L*H, HH*L, which are relevant to information structure, are added. On the phrase layer the boundary tones characteristic for statements (L suffix), questions (H suffix) and enumerations (H suffix for openness) are assigned. At the sentence layer, finally, the individual speaker assigns narrow focus tones and the emotive L*HL pitch accent. It can be assumed that the pitch accents assigned on a higher level overwrite the tones on a lower level.

1. According to Cinque [4] the default rule claims that the most deeply embedded constituent of a sentence gets a H*L-tone (the semantic head). The following phenomena constitute exceptions to the rule.

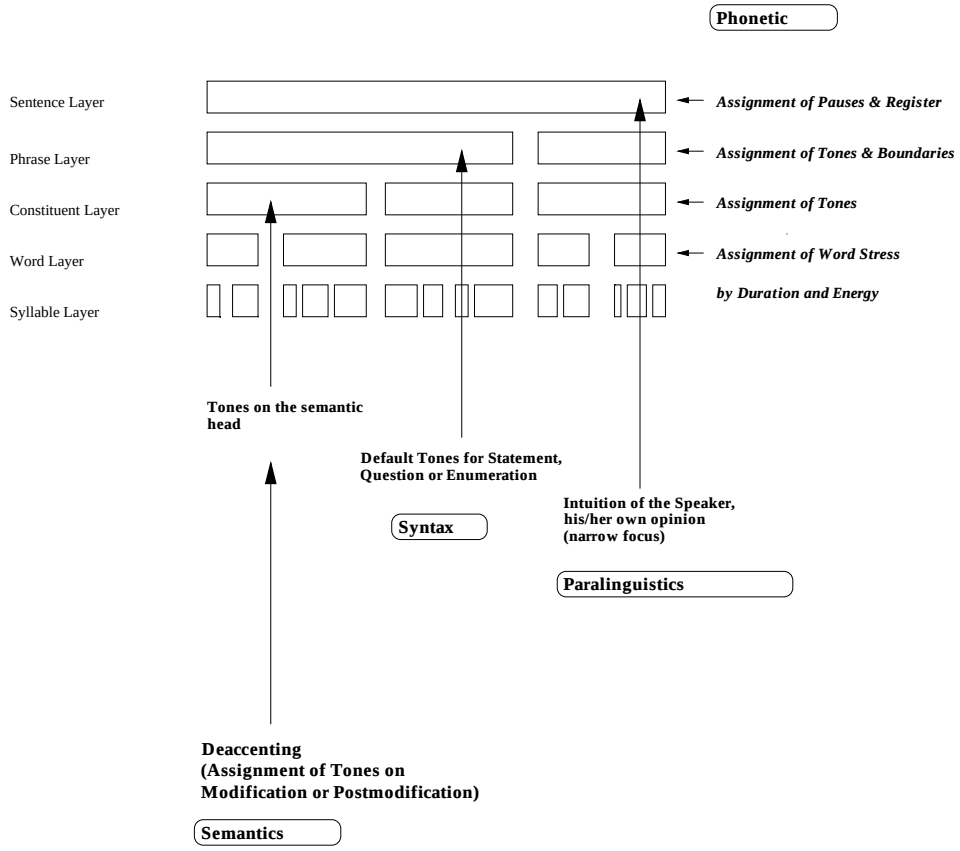


Figure 1.5: Layer Model

(a) **Yes/No-questions**
end with a L*H on the most deeply embedded semantic head of a constituent[6] provided that there are no particles present that could interact with the default tones. There is always the restriction that there are no particles around that interact with the default tones.

(b) Exclamations

(c) Deaccenting. According to Kuhn (1996a) [18] there are phenomena that can not be explained by focus only. If the semantic head of a constituent

[6]The term *constituent* is used very freely in this study. Maybe the term chunk, first suggested by Abney (1987) [1], may be more adequate. He originally mentioned this term in connection with phonology and distinguishes between c-projections and s-projections. C-projections describe the phrasal projections inside of the syntactic structure. S-projections describe how the semantic head of a phrase is projected. He defined chunk as starting with the functional head and ending with the semantic head. This definition was taken over by the German project Sparkle that wrote a German grammar for a syntactic parser on this basis.

has been mentioned before, the focus shifts to the modifier (adjective, left to the semantic head) - as new information - or to the post-modifier (PP or NP, to the right of the semantic head). If there is no modifier then the constituent is completely deaccented, i.e. it gets a L*H-tone for 'not new information'.

There were plenty of examples for deaccenting in the data, but no examples for yes/no-questions and exclamations[7]

2. Another general rule refers to intermediate phrase boundaries. If there are verbs which subcategorize subordinate phrases, there is usually a L*H accent on the last word before the conjunction. It is also possible that the L*H tone spreads to the intermediate phrase boundary.

In example (1.2) the context is first presented in brackets, followed by an English translation and a representation of two intonation contours with the corresponding wave forms as well as tone and word labels [8]. Example (1.2) shows a L*H-tone on 'Astronomen *(astronomers)*' and on 'Mars'.

[7] I assume that tones can be overwritten by tones that appear in yes/no-questions and exclamations. However this needs further research.

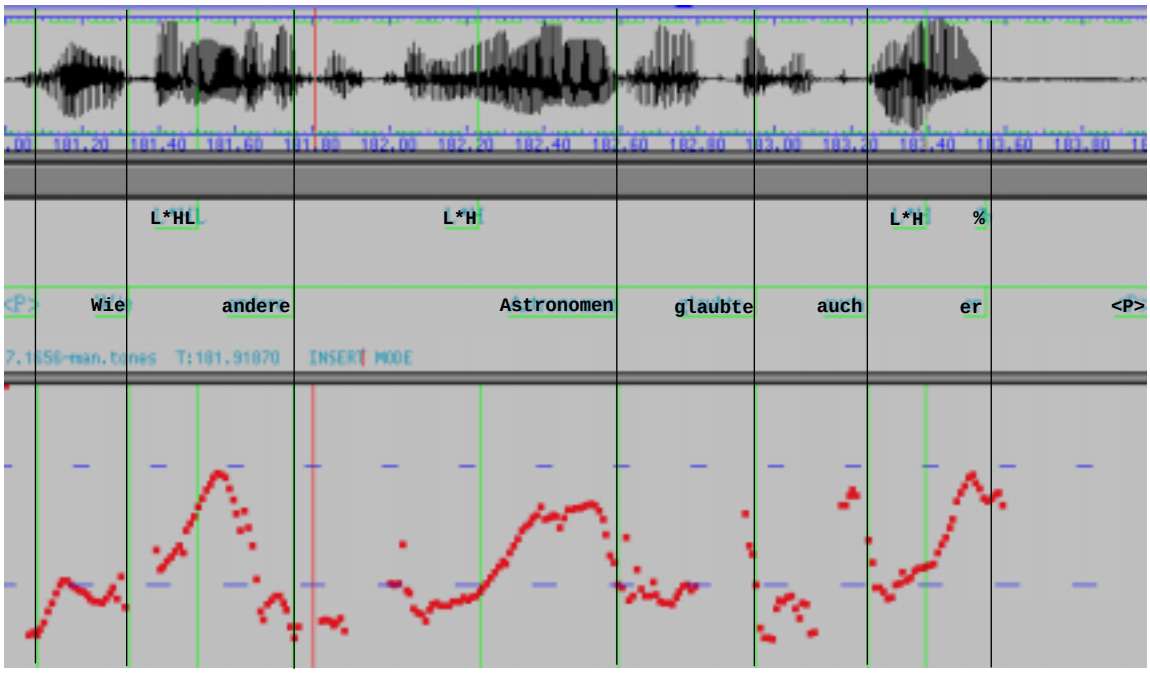
[8] The tone labels below the German sentence in the example utterance are not aligned with the syllables in which they appear. The tone labels are aligned to the left margin of the word.

(1.2) GE: [*Sternzeit 27. Dezember. Johannes Kepler. Nicolaus Copernicus bekommt die meiste Anerkennung für seine These, daß die Erde nicht das Zentrum des Universums ist, sondern daß sie die Sonne gemeinsam mit anderen Planeten umkreist. Den Beweis konnte er jedoch nicht erbringen. Der Mann, der das tat, wurde heute vor 425 Jahren in Weil der Stadt bei Stuttgart geboren. Es war Johannes Kepler, einer der begabtesten Mathematiker seiner Zeit. Trotz seiner Sehbehinderungen und anderer Gesundheitsprobleme gelangen ihm bemerkenswerte Entdeckungen. Kepler mußte nebenher seine Mutter sogar gegen die Vorwürfe der Hexerei verteidigen. Johannes Kepler begegnete am 4.2.1600 in Prag zum ersten Mal Tycho Brahe, der erstaunlich genaue Messungen von Sternen- und Planetenpositionen zusammengetragen hatte. Nach dem Tode Brahes ernannte Kaiser Rudolph II Kepler zum Kaiserlichen Mathematiker. Er übernahm Brahes Beobachtungsmaterial über Mars, das dieser in Dänemark gewonnen hatte. Keplers große Erkenntnisse basierten auf genau diesen Aufzeichnungen.*]

Wie andere Astronomen glaubte auch er, <P> daß Mars <P> die Sonne
*L*HL L*H - L*H % L*H - L*H*
in einer perfekten Kreisbahn umläuft.
*H*L !H*L %*

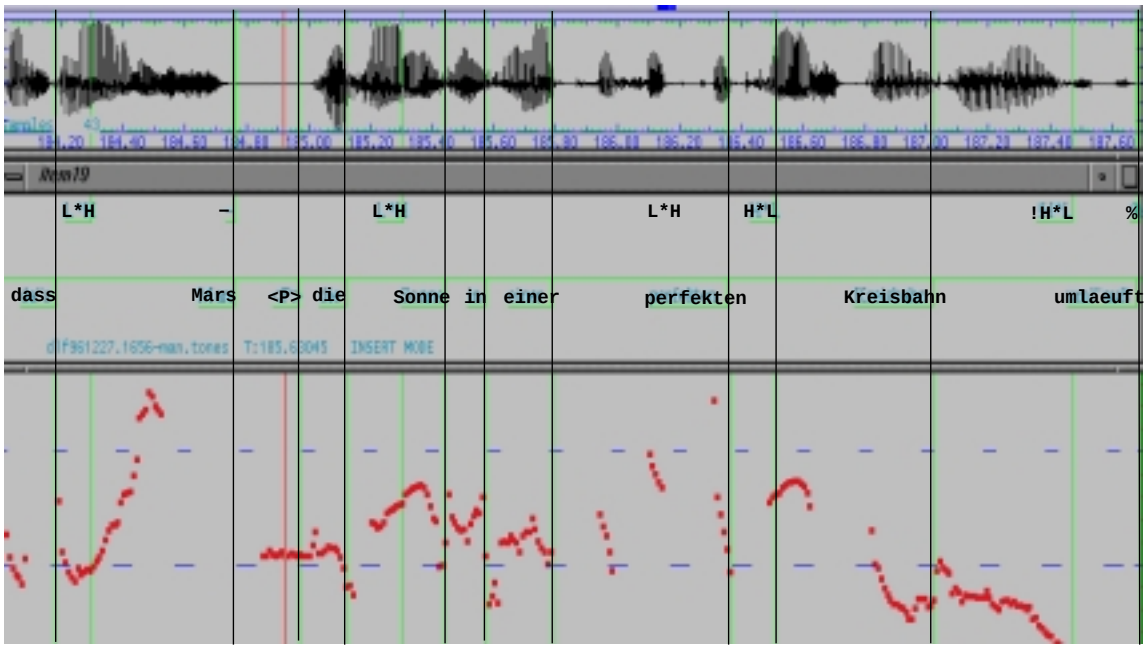
EN: [Startime 27th December. Johannes Kepler. Nicolaus Copernicus receives the most recognition for his thesis that Earth is not the center of the universe, but that it revolves around the sun together with other planets. However he was not able to prove this. The man who proved this, was born 425 years ago in Weil der Stadt near Stuttgart. It is Johannes Kepler who was the most talented mathematician of his time. Despite his poor eyesight and other health problems he made some remarkable discoveries. At the same time Kepler had to defend his mother against accusations of witchcraft. In Prag on February 4, 1600 Johannes Kepler for the first time met Tycho Brahe who had made very precise measurements of star and planet positions. After Brahe's death Emperor Rudolph II appointed Kepler Imperial Mathematician. He took over Brahe's observation data about Mars, observed in Denmark. Kepler's great insights were based exactly on these notes.]

Like other astronomers he too believed that Mars revolves around the sun in a perfect circle.



(1.3) GE: **Wie andere Astronomen glaubte auch er, <P>**
*L*HL L*H - L*H %*

EN: Like other astronomers he too believed.



(1.4) GE: **daß Mars <P> die Sonne in einer perfekten Kreisbahn umläuft.**
*L*H - L*H H*L !H*L %*

EN: that Mars revolve around the sun in a perfect circle.

3. The last tone before a enumerative comma, a relative clause or another a subordinate clause is a L*H. Exceptions are possible if there is is a particle that interacts either with the tonal structure, a contrastive meaning or an emotional expression of the speaker.

Chapter 2

Particles

2.1 "*Selbst*"

The German word "*selbst*" can appear in different kinds of contexts. It can be used as a focus particle, a reflexive pronoun (referring to an NP, PP), a noun 'the self', a fixed expression 'by itself' or to mark a conditional construction 'even if'.

2.1.1 "*Selbst*" (Even) as a Focus Particle

In this function "*selbst*" is used in the same sense as "*sogar*" (even). The focus particle is followed by either a noun phrase (NP), a prepositional phrase (PP) or an adjective phrase (AP).

Description: "*Selbst*" emphasizes one alternative out of a set of alternative events and highlights it. The event can be unexpected or already known.

In the case of an unexpected event, the speaker s/he can assign a L*HL tone to the head of the following phrase. L*HL overlays the tone of a focus particle which is usually H*L or !H*L.

A L*H-tone on "*selbst*" can only appear at the beginning of the syntactic phrase.

The following examples show the possible syntactic positions of 'selbst'.

- Punctuation or sentence beginning followed by "*selbst*" ...

  (2.1) GE: *Selbst Aminosäuren zählen dazu.*

  EN: Even amino acids are included.

- Punctuation or sentence beginning followed by a conjunction and "*selbst*" [...] like:

  (2.2) GE: *Doch selbst die gigantischen Schwarzen Löcher [...]*

  EN: But even the gigantic black hole [...]

  (2.3) GE: *[...], daß selbst heute noch [...]*

  EN: [...], that even still today [...]

- Part of sentence followed by a negated verb followed by "*selbst*" and its focus and a comma [...] like in indirect questions, e.g.

  (2.4) GE: *Sagt nicht selbst der Sohn Gottes, daß [...] [26]*

  EN: *Does not the Son of God say Himself that [...]*

- Noun phrase followed by "*Selbst*" and a second noun phrase
  If "*selbst*" follows an NP and bears a L*H-tone, then the decision whether it is a reflexive pronoun or a focus particle depends on the occurrence of an immediately following intermediate phrase boundary. In the case that such an ip boundary does indeed occur "*selbst*" is interpretated as a reflexive pronoun (referring to the preceding NP). Otherwise it is a focus particle (referring to the subsequent NP). There may be more hints helping to decide which NP "*selbst*" refers to, e.g. duration.

1. **Focus on the Semantic Head**

   (a) **L*HL-tone**
   In the Sternzeit-example (2.5) [24], the different types of molecules in outer space are described. The speaker did not expect that amino acids belong to the set of molecules that exist in outer space. "*Aminosäuren*" (amino acids) gets a L*HL-tone in order to mark that even this element belongs to the set of molecules that exist in outer space.

   (2.5) GE:

{**Selbst**	**Aminosäuren**}	*zählen*	*dazu.*
	*L*HL*		*!H*L %*
Even	*amino acids*	*include*	*to this*

   EN: Even amino acids are included.

   The same phenomenon is shown in example (2.6) [24] the subject of which is a planetary nebula. This term was introduced by William Herschel. The preceding context talks about an object in space that could not be clearly

identified by experts. Even the renovned astronomer William Herschel did not classify this object as a planetary nebula. The word "*Herschel*" recieves a L*HL-tone. This information is new and should normally get a H*L-tone, but is overlayed by the L*HL.

(2.6) GE: {**Selbst** *William* **Herschel**} <P> *stufte das Objekt nicht als Planetarischen*
*L*HL L% H* L*H*
Even William Herschel classified the object not as planetary
Nebel ein.
*!H*L L%*
nebula

EN: Even William Herschel did not classify the object as a planetary nebula.

Another Sternzeit-example, (2.7) [24] talks about the history of our solar system. Grinspoon speculated that in the beginning of our solar system it was too cold on Earth for life to develop. However, Venus had better conditions and he assumed that these conditions could have supported life. It is possible that some life forms adapted to the changing conditions on Venus. He suspects that even today (German original is:" *selbst heute noch ")* there exist organisms on Venus. "*Heute*" has a L*HL-tone and this tone overlays the new information-tone H*L.

(2.7) GE: *Grinspoon spekuliert* <P> *daß* {**selbst** **heute** *noch*} *mikroskopische*
*L*H % L*HL H*L*
Grinspoon speculates that even today still microscopic
Organismen auf der Venus leben.
*!H*L %*
organisms on the venus live

EN: Grinspoon speculates that even still today microscopic organisms exist on Venus.

(b) **H*L-tone**

Example (2.8) [24] describes the discovery of a supernova. A Canadian astronomer studied some photographs of the Greater Magellanic Cloud. He discovered a very bright star that had not been observed before. The star could be seen with naked eyes even from a distance of 170000 light years (German original is:" *selbst aus einer Entfernung von 170000 Lichtjahren ")*. The semantic head "*Lichtjahre*" (light years) recieves a new information H*L-tone.

(2.8) GE: {**Selbst** *aus einer Entfernung von 170 000* **Lichtjahren**} <P>
*L*H L*H L*H L*H !H*L*
even from a distance of 170 000 light years%
erkannte man die Supernova deutlich mit <P> *bloßem Auge.*
*L*H L*H L*H !H*L L%*
make out one the supernova clearly with naked eye

EN: Even from a distance of 170000 light-years, one make out the supernova with the naked eye.

2. **Focus on Modifiers**

No examples were found in the corpus. However the constructed example (2.9)

can demonstrate this case.

(2.9) GE: [*Saturn ist nicht mit bloßem Auge erkennbar. Es gibt drei Teleskope*]

{**Selbst**	*durch*	*das*	**größte**	*Teleskop*}	*ist*	*Saturn*	*nicht*	*zu sehen.*
*L*H*			*H*L*					*!H*L %*
even	*through*	*the*	*biggest*	*telescope*	*can*	*Saturn*	*not*	*be seen*

EN: [Saturn can not be seen with the naked eye. There are three telescopes.]

Even through the biggest telescope Saturn can not be seen.

2.1.2 "*Selbst*" (Even if/Even when) in a Conjunctional Construction

In this function "*selbst*" can appear in a sentence after punctuation marks, sentence initial or, rarely, in combination with other particles (as in example 2.10). Examples are "*Selbst wenn [...]*" (even if [...]) , "*Selbst whpronomen [...]*" (even whpronoun [...]) , "*Selbst als [...]*" (even when [...]);

Focus is assigned to the verb (not to the auxiliary) at the end of the phrase. In the following example (2.10) the verb "*aufnehmen*" (take back) gets a !H*L. Interestingly, there is a L*H on "*selbst*". [1].

1. **Tone on the Particle**
   The Werther-example (2.10) [26] talks about a woman whose brother hated the servant of his sister. The brother complained about the servant so that if she did not want to lose her own good reputation, she could not take the lad back into her service. The L*H-tone on "*selbst*" could be realized also on "*wenn*", probably caused by a different phrasing structure.

(2.10) GE:

[...]	*daß*	*die*	*Frau,*	*auch*	**selbst**	**wenn**	*sie*	*gewollt,*	*ihn*	*nicht*	*wieder*	*hätte*	
			*L*H*		*L*H*			*L*HL*		*L*H*			
	that	*the*	*woman*	*too*	*even*	*if*	*she*	*wanted*	*him*	*not*	*again*	*would*	
aufnehmen	**können**												
*!H*L*	*%*												
take back	*have been able*												

EN: [...] that the woman could not have taken the lad back in even if she had wanted to.

[1] I assume that shorter sentences recieve a so-called "*Hutkontour*" (hat pattern), meaning that the high tone of L*H is interpolated to the high tone H*L of the focused element. This did not occur in the following example because the speaker put an emphatic (narrow) focus LH*L on 'gewollt *(wanted)*', and because negation exhibits a particular intonation pattern, too.

2.1.3 "*Selbst*" (Itself,Himself,Herself) as a Reflexive Pronoun

If the particle bears a **H*L, !H*L or H*** tone it must be a reflexive pronoun[2].

Description: In this function "*selbst*" emphasizes that the event itself is the agent, the location|source|goal or the theme. "*selbst*" can only refer to an NP, AP or PP that precedes it.

"*Selbst*" is a quite flexible particle and can appear in many different positions. The following examples will demonstrate some of these.

1. **Reflexive Pronoun directly after its antecedent**
   The Sternzeit-example (2.11) [24] talks about Flamsteed who was the first Royal Astronomer. In fact he was a self-educated astronomer, meaning he taught "*sich selbst*" (himself) astronomy. The construction "*sich*[3] *selbst*" is the most frequent reflexive construction in the corpus.

   (2.11) GE: *So brachte er sich* **selbst** *das Wissen der Astronomie bei*
   *? H*L !H*L L%*
   in this way taught he himself by himself the knowledge the astronomy

   EN: In this way he taught himself the knowledge of astronomy.

2. **Reflexive Pronoun from its antecedent**
   In the original text the example (2.12) [24] follows immediately. Flamsteed also had to buy his own equipment. He had to buy "*selbst*" (himself) his own telescope.

   (2.12) GE: *Flamsteed mußte sein Teleskop* **selbst** *anschaffen.*
   *H*L %*
   Flamsted had to his telescope himself acquire

   EN: Flamsted himself had to acquire his telescope.

   The subsequent example (2.13) [26] is part of Werther's diary. Werther wrote about an aquaintance, Miss von B.. When Werther went to see her, he also met the aunt with whom she was living. He had a negative impression of Miss von B.'s aunt. Miss von B. agreed with this impression and did confess this to 'me [Werther] myself' (German original is:" *mir [Werther] selbst ")*. This construction is inherently ambiguous but can be disambiguated by intonation. If is a H*L-tone on "*selbst*" and not on "*gestand*" (confess), "*selbst*" is a reflexive pronoun. If, on the other hand, the verb "*gestand*" (confess) would have a H*L-tone and "*selbst*" had no tone, then "*selbst*" would be a focus particle.

[2]Provided that it does not start with a capital letter, or is preceded by 'von'
[3]and all other reflexive pronouns

(2.13) GE: [*Die Physiognomie der Alten gefiel mir nicht. Ich bezeigte ihr viel Aufmerksamkeit, mein Gespräch war meist an sie gewandt und in minder als einer halben Stunde hatte ich so ziemlich weg,*]

<P> was mir das Fräulein nachher **selbst** *gestand: [...]*
*H** *H*L %*
that me the lady after that myself confessed

EN: [The old lady's physiognomy was off-putting. I paid a great deal of attention to her and addressed most of my conversation to her, and in less than half an hour I could see for myself]

what the young lady afterwards admitted to me herself: [...]

3. **Reflexive Pronoun in elliptical constructions**
Example (2.14) [26] is ambiguous too and it also could be disambiguated with additional information from tones. Werther talked with himself and wished himself a good night. He had to laugh at himself. There is a **H*L** on "*selbst*" (*myself or even*), therefore the right translation is *myself.*

(2.14) GE: *[...] sagte ich so auf einmal: " Gute Nacht lieber Werther!"*
*H*L %*
Good night dear Werther
<P> und mußte hernach **selbst** *über mich lachen.*
*H*L %*
and had to afterwards myself about myself laugh.

EN: ([...] I suddenly said: 'Good night, dear Werther!' and then could not help laughing at myself.)

2.1.4 Noun 'Selbst (*Identity*)'

No occurence of "*selbst*" as a noun was found in the spoken corpus. The only help in identifying the word "*Selbst*" lies in the fact that it **never appears at the beginning of a sentence** and **starts with a capital letter**. "*Selbst*" as a focus particle, reflexive pronoun or in conjunctional constructions never appears with a capital letter, unless it is in the beginning of a sentence. The example (2.15) is taken from a written newspaper corpus [25].

(2.15) GE: *Lindenberg bleibt bei sich, verausgabt sich nicht mehr als Sprachrohr für die Gebeutelten um ihn herum, hält sich nur noch auf mit dem zermürbten, versoffenen* **Selbst**.

EN: Lindenberg remains with himself, he does not commit himself to the weak around him, he only is preoccupied with his own resigned and drunken self.

2.1.5 Fixed Expression 'Selbst (*By Oneself*)'

The fixed expression "*von selbst*" means 'of one's own accord' or 'by oneself'.

In example (2.16) [26] Albert, a friend of Werther's, tells the story about what has happened to him recently. His servant loaded a pistol because they were afraid of being attacked. The servant was not very careful with the pistol and a shot smashed a girl's thumb. Albert says that he likes his servant apart from some of his bad habits. Albert excuses his servant by saying '[it is not taken for granted] that every general rule has its exceptions' (German original is:" *versteht sich's nicht von selbst [...] ")*. (If the construction "*von*" plus "*selbst*" appears, it is always a fixed expression.)

(2.16) GE: *[...] Zwar <P> denn versteht sich's nicht* **von selbst,** *daß jeder allgemeine Satz*
*L*H L*!H L*H % L*HL H*L*
However then understand itself not from itself that every general sentence
Ausnahmen leidet
*L*H H%*
exeptions bears

EN: [...] but after all, can we not take it for granted that every general rule has its exceptions?

There is also a construction that is restricted to literary use. It is not used anymore in colloquial German. In example (2.17) Werther [26] recounted a conversation with a farmer lad who was employed by a widow whom he highly praised. Werther says that the image of the servant's devotion and tenderness follows him the whole time and that he [Werther] is as 'kindled by it myself [himself]'.

(2.17) GE: [*Wenn ich Dir sage, daß bei der Erinnerung dieser Unschuld und Wahrheit, mir die innerste Seele glüht, und daß mich das Bild dieser Treue und Zärtlichkeit*]
überall verfolgt und daß ich <P> wie **selbst davon** *entzündet lechze und schmachte.*
*H*L - L*H !H*L !H*L !H*L %*
all over follows me and that I how itself by be kindled thirst after and yearn for

EN: [If I tell you that with this remembrance of the purity and truth my inner soul glows and that this picture of faithfulness and tenderness]

follows me the whole time and that I like by itself be kindled, I thirst after and yearn for.

2.1.6 Phrase Boundaries and "*Selbst*"

There are two types of boudaries on the phonetic level: the intermediate phrase boundary **(-)** and the intonation phrase boundaries **(%, H%, L%)**. German phrases end either in a low or a high tone. If the **intonation phrase** ends with a **H**% it is

interpreted as a question.
If "*selbst*" immediately precedes an intermediate phrase boundary or an intonation phrase boundary then it is a reflexive pronoun. The same holds true on the syntactic level. If "*selbst*" (with small initial letter, without a preceding "*von*") appears before a punctuation mark it is a reflexive pronoun. ("*Selbst*" can get a **L*H** before a comma or a dash.)

1. **Falling tone on "*selbst*"**
   The subsequent example (2.18) [24] gives the context of a stone that hit the high plains of Mars 16 million years ago. This territory is nearly as old as the planet itself.

   (2.18) GE: *Das Territorium ist fast so alt wie der Planet* **selbst.**
   H !H*L %*
   The territory is nearly as old as the planet itself.

   EN: The territory is nearly as old as the planet itself.

2. **Rising tone on "*selbst*"**

   (a) Coordination
   Werther [26] talks about a conversation that Lotte and Werther had with a vicar and his wife they were visiting. The topic of the conversation in example (2.19) is ill-humor and whether it is a vice. The vicar says that ill humor is not that reprehensible. Werther does not agree.
   The reflexive pronoun is inside a coordinated phrase: *(oneself and*[4] *one's neighbor)* (German original is:" *sich selbst und seinem Nächsten ")*. The L*H on "*selbst*" indicates that the information is incomplete and that it is completed with "*Nächsten*", which recieves a H*L-tone.

   (2.19) GE: *Mitnichten, <P> gab ich zur Antwort, wenn das, womit man sich*
   *H*L - L*H L*H*
   Not at all, gave I as answer if the with which one oneself
   selbst *und seinem Nächsten schadet, diesen Namen verdient.*
   *L*H - H*L H*L %*
   oneself and his neighbour injure this name deserve

   EN: 'Not at all,' I replied, 'if things that do harm to oneself and one's neighbours deserve the name of evil.

   (b) Intermediate Phrase Boundary
   The Werther-example (2.20) [26] talks about Werther trying to hold on to his resolution not to see Lotte. However, he always finds an excuse to see her again. He likes to carry out a task and to bring "*ihr selbst*" (in person) the answer.
   After "*ihr selbst*" (in person) there is a high intermediate phrase boundary.

[4] If "*selbst*" precedes "*und*", then it is always a reflexive pronoun

In this example it is not clear which person is the antecedent for "*selbst*". The first possible antecedent is Werther, "*ich*" (I) and the second is Lotte, "*ihr*" her. Both interpretations are possible. In this example the intonation does not disambigue the antecedent problem. Nevertheless the particle belongs to the reflexive pronouns because there follows an ip boundary.

(2.20) GE: *Oder sie gibt mir einen Auftrag und ich finde schicklich, ihr* **selbst** *die*
*L*H L*H - H*L L*H - L*H -*
Or she gives me a task and I seemly her in person the
Antwort zu bringen. [...]
*H*L*
answer to bring.%

EN: Or she gives me some errand to run, and I think it proper to take her the answer [in person]; [...]

It is also obvious that "*selbst*" at the beginning of an intonation phrase or a syntactic phrase is never a reflexive pronoun, but always a focus particle. Compare also 2.1.1 for examples.

2.1.7 Frequency of the different types "*Selbst*"

In Spoken Corpus

In the overall corpus of about 8 hours of speech (... words), there were 77 sentences containing the particle "*selbst*".

- Selbst (*even*) as a **focus particle**
  appears 9 times (11.6 %). The focus particle bears a **L*H** tone 3 times. The other focus particles were without tones. At the beginning of a phrase "*selbst*" tends to bear a L*H.

- Selbst (*even if, even when*) in a **conjunctional construction**
  appears once (1.3 %).

- Selbst (*itself, himself, herself*) as a **reflexive pronoun**
  appears 64 times (83.1 %). 22 times the reflexive pronoun had a H*L tone, a H* 4 times and just once a ..L which has the same meaning as H*L e.i. there were 42.2 % of instances with a falling tone. 30 cases of "*selbst*" bore a L* or a L*H. Out of the 30 , 22 had a L*H followed by a high boundary which means that there was an ip or an IP ending. [5]

- Selbst as **a noun**
  never appears.

[5] It is also possible that another L*H occurs between the boundary and the L*H.

- Selbst (*by itself*) as a **fixed expression**
  appears once (1.3 %).

In Written Corpus

In comparison with the spoken corpus, the following frequencies were determined from a written corpus based on the German newspaper "*Die Tageszeitung*". In it the word "*selbst*" appears 71586 times.

- Selbst (*even*) as a **focus particle**
  If "*selbst*" is written with initial **capital letters**, it is interpreted as a focus particle in 7122 of 8651 cases (82.3 %).

- Selbst (*even if, even when*) in a **conjunctional construction**
  appears 2843 times (3.9 %). Out of the 2843 'Selbst wenn' appears 1239 times at the beginning of a sentence.

- Selbst (*itself, himself, herself*) as **reflexive pronoun**
  The reflexive pronoun "*selbst*" occurs in 9495 cases after a reflexive personal pronoun.

- Selbst as **a noun**
  The word "*Selbst*" with capital initial letter emerged 8651 times. 116 times it appears after an article, 128 times after an adjective, 33 times after an attributive possessive pronoun and 13 times after a preposition with article. This means about 290 times it has the meaning of *the self* [6]. In the latter interpretation there is the syntactic restriction, that "*Selbst*" can never appear after a noun, cardinal number or a verb.

- Selbst (*by oneself*) as **fixed expression**
  appears 875 times (1.2 %).

[6] There are some tagging faults, so it is possible that it is less than the mentioned number

2.2 "*Noch*"

The German particle "*noch*" has several different meanings. In the literature the following readings are listed: additive reading (referring to an additional event), comparative reading (establishing a scale), perfective reading (describing an event with beginning or end) and imperfective reading (duration without a concrete beginning and end). It also functions as the negation of 'already' (describing as an event that has not yet happened) and as part of a coordinating conjunction (negative enumeration). An interesting result of this work is that with respect to prosodic characteristics the additive, the comparative and the perfective uses of "*noch*" can be subsumed under one intonational group. Thus their division into different groups may be artificial. It is reasonable to assume that "*noch*" distinguishes between the number of degrees that are established by it.

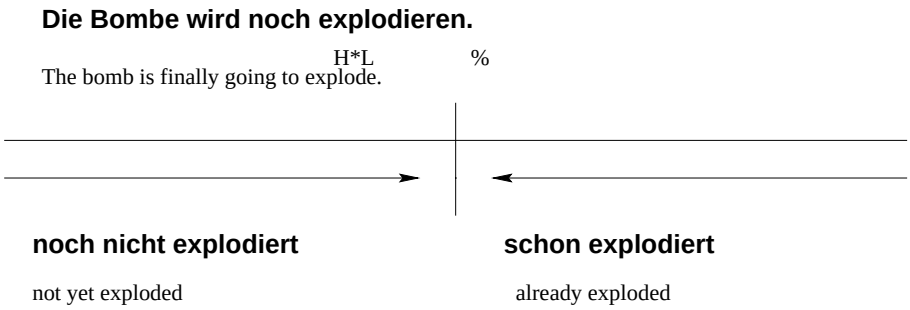


Figure 2.1: Perfective reading

I suggest that the **perfective reading** (see 2.1) establishes two perspectives of an event.

The **additive reading** (see figure 2.2) scales a number of quantities (in the beginning the set of quantities may be empty), so that the element specified by "*noch*" represents the high end of scale.

The **comparative reading** (figure 2.3) scales between the positive and the superlative.

Although I suggest to collapse these three groups I attempt to group the examples according to the categories established in the literature. It is not always clear which group an example belongs to. Perhaps the following discussion can serve as a starting point for the definition of new semantic classes of "*noch*".

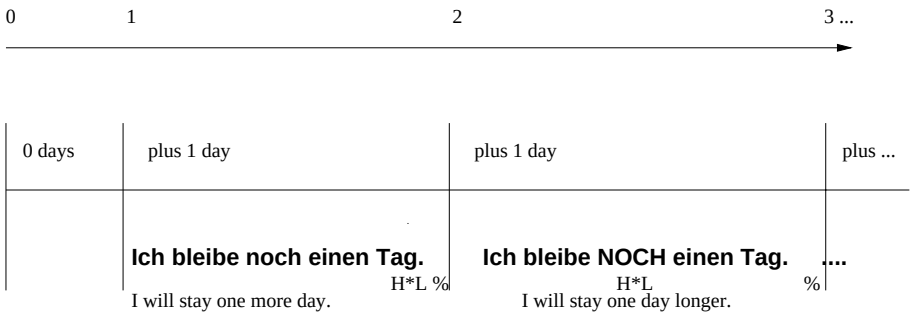


Figure 2.2: Additive Reading

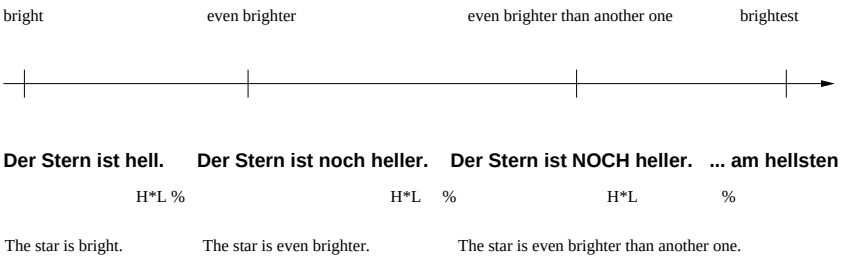


Figure 2.3: Comparative reading

2.2.1 Additive "*Noch*"

Description: The recipient understands an event as additional to another one mentioned in the preceding context.

The scope of the particle is the following constituent. König (1991)[17] suggests to replace the additive particle by "*auch noch*" (too, also) for reasons of clarity.

1. **Focus on the Semantic Head**
   The reading in the Sternzeit-example (2.21) [24] is additive. The set of "*Herausforderungen*" (challenges) is empty and one event is added "*noch eine echte Herausforderung*" (a real challenge). The semantic head "*Herausforderung*" (challenge) gets a H*L-tone in order to provide the information that the event is new. The L-suffix of the !H*L is identical with default boundary tone typical of statements.

(2.21) GE:

Zur	*Zeit*	*<P>*	*bietet*	*Saturn*	*Himmelsfreunden*	**noch**	*eine*	*<P>*	*echte*	
	*L*H*			*L*H*	*!H*L*					
At	*the moment*		*offers*	*Saturn*	*sky friends*	*also*	*a*		*real*	
Herausforderung.										
*!H*L*	*%*									
challenge										

EN: At the moment Saturn offers sky friends a real challenge.

Although "*zur Zeit*" (at the moment) implies that "*noch*" can be translated by 'still', the reading 'Saturn is still offering a real challenge' is not possible because of the intonation. In order to obtain an imperfective reading, a speaker should produce a rising tone on "*noch*" followed by an ip boundary. This reading could be forced through a rising tone on "*Himmelsfreunden*" (sky friends) which spreads to "*noch*".

In the following example (2.22) Werther [26] describes a drive with Lotte and friends back home from a ball out in the country. They set out when the sun was still a quarter of an hour from touching the mountains (German original is:" *die Sonne war noch eine Viertelstunde vom Gebirge ").*
As in the previous example the semantic head "*Viertelstunde*" (quarter of an hour) gets a H*L-tone to mark the event as new.

(2.22) GE:

<P>	*Die*	*Sonne*	*war*	**noch**	**eine**	**Viertelstunde**	*vom*	*Gebirge,*	*<P>*	*als*	*wir*	
	?					*H*L*		*L*H*	*%*		*H**	
	The	*sun*	*was*	*still*	*a*	*quater hour*	*from*	*the mountains*		*as*	*we*	
vor	*dem*	*Hoftore*	*anfuhren*									
		*L*H*	*H*L*									
in front of	*the*	*courtyard*	*drove up*									

EN: The sun was still a quarter hour from touching the mountains as we drove up at the gate of the courtyard.

2. **Focus on the Modifier**
Example (2.23) is about the first day of spring. The semantic head "*Tage*" (days) of the constituent "*noch 93 Tage*" (93 more days) has already occured in the preceding context and therefore is deaccented. Instead of the semantic head, the modifier "*93*" gets a pitch accent expressing that the information is new. In this case it gets a L*HL, a late peak, meaning that the speaker is especially emphasizing the modifier. The L*HL is superimposed on the H*L.

(2.23) GE: [*Genießen Sie diesen ersten* **Frühlingstag**. *Der Winter war streng. <P> Die Natur <P> erwacht.*]

<P> Auch wenn Sie heute zu beschäftigt sind, bleiben Ihnen immerhin **noch** *<P>*
H H* L*H - H*L*
Even if you today too busy are remain you at least still
93 *Tage um das Frühjahr voll auszukosten.*
*L*HL !H*L H*L %*
93 days to the spring full enjoy to the full

EN: [Enjoy this first day of the spring. The winter was hard. Nature is awakening.]

Even if you are too busy today you still have 93 more days to enjoy spring to the fullest.

3. **Focus on the Particle**
If additive "*noch*", which is always followed[7] by a quantifier and a noun, bears a **H*** or a **H*****L** pitch accent, then its meaning is: 'the same quantity again', in relation to the presupposed quantity. This phenomenon is accompanied by the deaccentuation of the specified NP.

The Sternzeit-example (2.24) [24] is about Apollo 11's two tasks. One was to land on the moon, the second one was another scientific task (German original is:" *noch eine wissenschaftliche Aufgabe ").*
"*Noch*" (another) recieves a H*-tone and "*Aufgabe*" (task) is deaccented. The speaker regards the moon landing mission as a scientific task thus he puts a high tone on "*noch*" to get the meaning 'another'.

(2.24) GE: [*Sternzeit. Kratzer im Mondgesicht. Heute vor 27 Jahren endete die erste bemannte Mondlandemission, <P> als die Kapsel von Apollo 11 im Pazifischen Ozean aufschlug.*]

Es gab danach jedoch **noch** **eine wissenschaftliche Aufgabe** *für Apollo*
*L*H L*!H H* ..L !H*L*
There existed after that however another a scientific task for Apollo 11.
*H*L %*
11

EN: [Startime. Scratches in the face of the moon. Twentyseven years ago today the first manned **mission to the moon** ended, when the Apollo 11 module hit the Pacific Ocean.]

However, after that there was another scientific task for Apollo 11.

Werther-example (2.25) [26] describes certain circumstances that led to a catastrophy. The good relationship between Werther and Lotte was destroyed. Furthermore there was another strange circumstance (German original is:" *noch*

[7] This is not possible with preceding quantity expressions, as 'I want to stay here **ten more years**'. "*Ich möchte (***zehn Jahre***) (noch hier bleiben).*"

ein sonderbarer Umstand ") that was also responsible for that catastrophy. There is a high tone on "*noch*" causes it to express the meaning 'another'.

(2.25) GE: [*Hätte eine <P> glückliche Vertraulichkeit sie früher wieder einander näher gebracht, wäre Liebe und Nachsicht wechselweise unter ihnen lebendig worden und hätte ihre Herzen aufgeschlossen, vielleicht <P> wäre unser Freund noch zu retten gewesen.*
*L*H H*L %*
]

<P> **Noch ein sonderbarer Umstand** *kam dazu.*
H ..L %*
Further a remarkable circumstance came along

EN: [If they had been brought closer again at some earlier stage, in a spirit of happy intimacy, a mutual love and consideration would have arisen between them, and would have opened their hearts; and perhaps our friend might yet have been saved.]

There was a further remarkable circumstance.

4. **Additive versus Perfective "*noch*"**
König (1991) [17] (pp.147) discusses the difference between the additive and the perfective use of "*noch*", stating that "there is a close relationship between the additive use and the perfective use".

He counts the example(2.26) as an additive use of "*noch*". The problem with that is that the verb "*bleiben*" points to a durational event. What is more there is the temporal restriction 'for a long time' "*lange Zeit*". I am assuming that this time specification also points to a period of time with no explicit end or starting point.
Additionally, in the additive use of "*noch*" it should be possible to put a high (**H***) tone on "*noch*" in order to recieve the interpretation 'another quantity'. In the example (2.26) a H* on "*noch*" is unacceptable because of semantic aspects. The meaning " *[8] *NOCH eine lange Zeit*" (* yet another long period of time) is not derivable. These observations lead to the conclusion that "*noch*" example (2.26) represents a case of the imperfective, not the additive, use.

(2.26) GE: *Kaffee wird noch lange Zeit ein Luxusartikel bleiben.*

EN: Coffee will [continue to] remain a luxury for a long time to come.

The Sternzeit-Example (2.27) supports this assumption. It is not possible to assign a high pitch accent to "*noch*" to get the meaning "*NOCH einmal jahrelang*" (for another years).

[8] The star * means ungrammaticality

(2.27) GE: {**Noch jahrelang**} *werden Astronomen mit der Auswertung ihrer Beobachtungen*
H*L - H*L H*L H*L
For years will astronomers with the interpretation their observations
vom Kometen Hyakutake beschäftigt sein
H*L H*L %
of comet Hyakutake occupied be

EN: The astronomers will be occupied with the interpretation of their observations of the comet Hyakutake for years to come.

It seems that "*noch*" followed by an indefinite time specification can not be used additivly.

2.2.2 Comparative "*Noch*"

Description: On the scale between positive and superlative value the addressee interpretes "*noch*" with a comparative adjective as 'stronger' (i.e. closer to the superlative value) than a mere comparative adjective.

1. **Focus on the Semantic Head**
Sternzeit-example (2.28) [24] describes the star constellations one could see in the sky at the time of the broadcast referring the scale of Mars' brightness:

bright-brighter-brightest.

The new information is that it will be brighter later in the year. Therefore "*heller*" (brighter) gets a H*L[9]

(2.28) GE: [*Links vom Mond finden Sie Mars. Er geht kurz nach dem Mond auf. Mars wirkt wie ein hellerer Stern mit leicht rötlichem Schimmer.*]
Später Jahr <P> wird er {**noch heller.**}
L*H - H*L %
Later year will get it even brighter

EN: [You will find Mars on the left hand side of the moon. It rises shortly after the moon. Mars looks like a brighter star with a slightly red glimmer.]

Later in the year it [Mars] will become even brighter.

2. **Narrow Focus on the Particle**
If "*noch*" is assigned H*-tone, then one more degree is added on the scale the superlative degree. The scale of example (2.29) [24] is:

acceptable-no more acceptable-inhospitable-more inhospitable-most inhospitable.

[9] The L-suffix of the H*L is identical with default boundary tone typical of statements.

The fact that the star is not very hospitable (surface temperature 480^0 C) has been mentioned before. Thus the semantic head can be deaccented and the new-information tone is assigned to the particle. In the present example the semantic head "*unwirtlich*" (inhospitable) can optionally[10] bear a tone.

(2.29) GE: [*In letzter Zeit debattieren Wissenschaftler viel über die Chancen von Leben in anderen Welten unseres Sonnensystems. Dabei ist jedoch nur selten von Leben auf der Venus die Rede. Ihre Oberflächentemperatur steigt bis auf 480 Grad Celsius.*]

Wolken aus Schwefelsäure <P> machen die Kohlendioxidatmosphäre des Planeten
*L*H % H*L !H*L*
Clouds of sulphur acid make the carbon dioxide atmosphere of the planet
{noch unwirtlicher.}
H !H*L %*
even more inhospitable.

EN: [Lately, scientists have discussed a lot about the chances of life in other worlds of our solar system. However, life on Venus is rarely an issue. Its surface temperature may reach 480^0 C.]

Clouds of sulphuric acid make the carbon dioxide atmosphere of the planet even more inhospitable.

The Sternzeit-example (2.30) [24] talks about bright and pale stars. In the context mentions some degrees of brightness and their respective frequency:

numerous - not much - rare - even rarer - none.

With respect to this scale it can be stated that stars that are pale and cool (red dwarfs) are very numerous. Stars that shine a hundred times brighter than our sun are rare. Stars that shine a thousand times brighter than our sun are "*noch seltener*" (even more rare).
In the latter example "*noch*" gets a H*L, adding a new degree to the established scale.

[10] Perhaps because the information has only be mentioned implicitly before.

(2.30) GE: [*Wie die Roten Zwerge sind auch die Weißen Zwerge sehr schwer zu finden. Kein einziger ist mit bloßem Auge zu sehen. Andererseits sind die Sterne* **selten**, *die wesentlich heller als die Sonne sind. Doch strahlen sie soviel Licht ab, daß wir sie leicht erkennen können. Riesensterne scheinen hundertmal heller als die Sonne. Das erdnächste Beispiel ist der orange Pollux, der in 35 Lichtjahren Entfernung im Sternbild der Zwillinge leuchtet.*]

{**Noch seltener**} *sind die Supergiganten die tausendfach heller als die Sonne*
*H*L !H*L - L*HL !H*L !H*L*
Even rarer are the supergiants which thousand times brighter as the sun
sind.
L%
are.

EN: [Like the red dwarfs the white dwarfs are very difficult to find. Not a single one can be seen with the naked eye. On the other hand stars that are much brighter than the sun are **rare**. However, they radiate so much light that we can identify them easily. Giant stars shine one hundred times brighter than the sun. The one closest to Earth is orange-colored Pollux. It is 35 light years away from us and is located in the constellation Gemini.]

The supergiants which are thousands of times brighter than the sun are even rarer.

2.2.3 "*Noch*" as Focus Particle (Perfective)

Description: The addressee understands the event as an event with a starting or an end point.

In order to test if "*noch*" is used perfectively, Hoepelman & Rohrer(1981) [15] suggest replacing "*noch*" by "*doch noch*" (finally). A disadvantage of this test is that "*doch noch*" (finally) erroneously always implies that something finally happened against all expectations. Characteristic for the subsequent examples are temporal specifications that point to the perfective use of "*noch*".

1. **Focus on the Semantic Head**
   The Werther-example (2.31) [26] describes Werther's ride back home together with Lotte and others from a ball. At the end of the ride he asks to meet her again the same day again.

   The semantic head "*sehen*" (meet) gets a high tone. The L-suffix spreads to the end of the sentence.

(2.31) GE: [*So lange ich diese Augen offen sehe, sagte ich, und sah sie fest an, so lange hat's keine Gefahr. Und wir haben beide ausgehalten, bis an ihr Tor, da hr die Magd leise aufmachte und auf ihr Fragen versicherte, daß Vater und Kleine wohl seien und alle noch schliefen.*]

Da verließ ich sie mit der Bitte, <**P**> **sie selbigen Tags noch sehen zu dürfen;**
*L*H* *L*!H %* *L*HL* *!H*L* *L%*
<**P**> **sie gestand mir's zu**
*L*H %*

EN: ['As long as your own eyes are open,' I replied, gazing evenly at her, 'there is little chance of my sleeping.' - And we both remained awake as far as her gate, where the maid quietly opened up and, in answer to her questions, assured her that her father and the little ones were well, and all still asleep.]

I took my leave of her, first asking if I might see her later the same day; she consented [...]

2. **Focus on Modifier**

The example (2.32) [24] talks about a joint project of NASA and DARA, involving the installation of an infra-red telescope. The main subject is the planning of the schedule, which represents the old information in the example utterance. The new information is that "*noch in diesem Jahr*" (before this year is over) they will buy a jumbo jet.

There is a narrow focus on "*diesem*" (this). Furthermore it gets an emphatic L*HL-tone that overlays the H*L-tone.

(2.32) GE: **Noch in diesem Jahr** *kauft man einen Jumbojet,* <*P*> *Boeing 747,* <*P*>
*L*HL* *L*!H* *L*HL L*!H* *L*H L*H -*
Still in this year buy one a jumbojet Boeing 747
der das Zuhause des Teleskops sein wird.
*H*L* *!H*L* *L%*
that the home of the telescope be will

EN: Before this year is over they will buy a jumbo jet, a Boeing 747 that will be the home of the telescope.

In example (2.33) Werther hopes he can leave earlier, but has to stay longer than expected.

(There is no contrastive accent on "*doch*" (finally). The time specification is topicalized from the position after "*noch*". The modifier "*vierzehn*" (fourteen) recieves a H*L-tone.

(2.33) GE: [*Am achtzehnten Junius. Wo ich hin will, das laß ich im Vertrauen eröffnen.*]

Vierzehn Tage muß ich **doch noch** *hier bleiben, <P> und dann habe ich mir weis*
*H*L H*L % L*H*
fourteen days have to I finally here stay and then have I me clear
gemacht, <P> daß ich die Bergwerke im [irgendwo]schen besuchen wollte.
*H*L - H*L L*HL %*
made that I the mines in [somewhere] — visit wanted to

EN: [18 June. Where I am going? I shall tell you, in confidence.]

I have to remain here a fortnight longer after all, and then I have fooled myself into thinking I shall visit the mines at —; [...]

2.2.4 Perfective versus Imperfective "*Noch*"

Dogil (1998) [6] argues that perfective "*noch*", that describes an event with a starting or an end point, assigns a H*L-tone to the semantic head of the following or (less common) preceding constituent. The constituent can for example be a time restriction.

A durational or imperfective "*noch*", that describes a duration without time restriction, has a L*H or assigns one to the verb (except modal verbs and auxiliaries) which expresses the duration.

The data shows that it is not always clear what type of "*noch*" was used. Sometimes it can be interpreted as either perfective or imperfective.

It seems that the speaker of the feature series 'Sternzeit' could sometimes not decide to which constituent he should assign "*noch*". He lengthened "*noch*" but he did not make a clear intermediate phrase boundary nor did he put a tone on "*noch*". Thus it remains unclear which "*noch*" was used. The explanation may be that "*noch*" has nearly no restriction on its occurence within a sentence. "*Noch*" can appear before or after a constituent and it can be topicalized together with the constituent to which "*noch*" refers. As the addressee and the speaker presumably tend to assign a focus particle to the following constituent the two patterns for the different readings are going to be mixed.

Another reason for the assignment problem could be that the material is read text rather than spontaneously produced speech. Possibly, it is not clear to the speaker which "*noch*" was intended in the particular case. This could lead to a pattern mix as in example (2.34) . A decisive answer to this issue has to be left to further research and more elaborate experiments.

The example (2.34) [24] will demonstrate this conflict between imperfective and perfective use of "*noch*". The theme is the advantages of the observatory EUVE. The observatory has been in orbit for a long time. There are two possible readings for "*noch*" in the example sentence "*fünf Jahre nach seinem Start noch wichtige Informationen*"

(a) 'Five years after its start EUVE can still deliver important information' : it expresses a continuity of delivering information

(b) 'Five years after its start EUVE can finally deliver important information' : it focuses on the event that it is finally possible to get information from EUVE, against the expectation that it should not work any more (retire).

(2.34) GE: [*Durch die Beobachtung der Sterne hat EUVE uns mehr denn je darüber verraten, wie Sterne leben und sterben. Außerdem entdeckte EUVE starke Strahlungspulse, die von einigen der kleinsten Sterne ausgehen. Und er entdeckte in der Umlaufbahn des Jupitermondes Io eine ringförmige Scheibe aus heißem Gas. EUVE hätte längst in den Ruhestand gehen sollen. Um der NASA Kosten einzusparen übernehmen heute Computer die einfachsten Funktionen. Falls größere Probleme auftauchen, rufen sie nach menschlicher Hilfe.*]

So kann <P> EUVE auch **fünf Jahre nach seinem Start noch** *wichtige Daten*
H H*L L*H - L*HL !H*L - L*H L*!H H*L*
liefern.
L%

EN: [EUVE told us more than ever about how stars live and die through the observation of the stars. Furthermore EUVE discovered strong radiant impulses that are caused by the smallest stars. And it discovered in the orbit of Jupiters' moon Io a ringlike disc out of hot gas. EUVE should have retire long ago. In order to save NASA money computers take on simplest functions. If there appear bigger problems they call for human help.]

Thus EUVE can still supply important information five years after its' start.

If an imperfective meaning was intended in the above mentioned example then we would expect a L*H on "*noch*" with an intermediate phrase boundary after the particle "*noch*". There is a L*H on "*Start*" (start) but there is no clear intermediate phrase boundary after "*noch*", it is just lengthened[11]. Thus it is not clear what kind of "*noch*" was intended.

Example (2.35) shows a conflict on the lexical level. On the one hand the verb "*sind [...] in Gebrauch*" (are [...] in use) points to an imperfective reading, on the other hand there is also a time specification "*heute*" (today)[12] that points to a perfective reading. As there are two different readings of "*noch heute*" the imperfective meaning 'to this day' suits to the imperfective verb. The second reading of "*noch heute*" (the very same day) does not fit together with the semantic of the verb.
In the context, the work is described that was done by Flamsteed who lived in the 17th century and did innovative work. He published a catalogue with

[11] The duration feature is not presented in the above example. It can only be detected from hearing the speech file

[12] Comparing to the example: "*Ich komme noch heute*" (I will come the very same day.)

almost 3000 stars.
The expectation is that Flamsteed's work has no relevance any more but against this expectation his numbers are used "*noch heute*" (still today). The time specification gets the new information H*L-tone.

(2.35) GE: *Seine Arbeit verwendete man zwar niemals für die Navigation <P>* **doch** *sind die*
*L*HL L*H % H**
His work is used one however never for the navigation but are the
Flamsteed-Nummern bei der Bezeichnung blasserer Sterne {**noch heute**} *in Gebrauch*
H H*L L*H L*H H*L L%*
Flamsteed numbers for the denotation paler stars still it today in use.

EN: However his work was never used for navigation, but the Flamsteed-numbers still has been used today for the denotation of paler stars.

2.2.5 Imperfective "*Noch*"

Description: The recipient understands the information as a state without a specific ending or beginning point. The verb must imply a durational state. It is assumed that the constituent which expresses a duration gets a **L*H**.

According to Hoepelman J & Rohrer C (1981) [15] imperfective "*noch*" is "connected with periods - and not with moment - of time". They suggested a test to distinguish imperfective from perfective "*noch*": replacing "*noch*" by "*immer noch*". "*Immer noch*" is an aggraviated expression of imperfective "*noch*".

1. **Focus on the State Expression**

   (a) Tone on the Full Verb
   The following example (2.36) [26] talks about the last day of Werther. He is writing a last letter to his love Lotte describing how he is waiting. Restlessly, he repeated the walks to the window to check the position of the sun.

   The scale that is established in this context is diminishing. It converges to the point where the sun sets.

   (2.36) GE: *Ich trete an das Fenster meine Beste und sehe, <P> und* **sehe noch**
   *L*H*
   and see still
   durch die stürmenden vorüberfliehenden Wolken einzelne Sterne des ewigen
   *H*L !H*L H*L*
   through the stormy flying clouds a few of the stars of eternal
   Himmels.
   *!H*L %*
   heaven

   EN: I step to the window, dearest, and through the tempestuous clouds being driven by I can see, I can still see a few of the stars of eternal heaven.

The repetition[13] of 'and I see and I still see' (German original is:" *und sehe, und sehe noch ")* establishes a state of seeing. The verb 'see' gets a L*H-tone in order to express the durational aspect of the verb.

(b) Tone on the Conjunction
Example (2.37) describes a state of waiting. A small vehicle is planned to make its first excursion on Mars. It is expected to take photos of the surrounding and to test the ground as well.

(2.37) GE: **Während** *man* **noch** *gespannt darauf* **wartet,** *wie die Mission des Mars*
*L*H H* L*H - L*H L*H*
Pathfinder verlaufen wird, <P> planen Wissenschaftler bereits neue, <P>
*!H*L L*H % H*L? H*L L*!H*
kompliziertere Rover <P> für Marsreisen in der Zukunft.
*H*L - H*L %*

EN: While one has been still waiting how the mission of Mars' Pathfinder will go, scientists are meanwhile planning new more complicated Rovers for journeys to Mars in the future.

The conjunction "*während*" (while) gets a L*H-tone. It expresses the state of waiting. It is a longer period of time where another event is taking place. This event is described by the second part of the sentence: the planning of a new Rover. (The rising tone on "*während*" is optional. The durational semantics can be extracted only from the semantics of the conjunction.)

(c) Tone on the Particle
Werther describes in example (2.38) his friend (my dear fellow) a situation where a farmer lad, who was fired because of his relationship to a widow that employed him, made a confession to Werther. The particle "*noch*" gets a L*H-tone in order to focus on the state of standing.

(2.38) GE: [*Und hier mein Bester, fang' ich mein altes Lied wieder an, das ich ewig anstimmen werde; könnt' ich dir den Menschen vorstellen, wie er vor mir stand,*]
<P> wie er **noch** *vor mir* **steht.**
*L*H !H*L %*

EN: [At this point, dear friend, I sing my old familiar tune, as I always will: if only I could show you the man as he stood before me,]

as he still stands before me!

2. **Narrow Focus on the Particle**[14]

Description: (Contrast Accent) If the speaker believes that an imperfective (durational) state is limited and his/her expectation is that this will

[13]The aspect of the verb is also reflected in the syntactical structure [13].

[14]All examples had the structure: Syntactic boundary - "*noch*" - finite verb
The particle was topicalized: it was put in the fore field

change, then there will be a **H***-tone on the particle "*noch*". It is a narrow focus on "*noch*" which marks a contrast to the knowledge of the speaker (mentioned before or after) that this state is limited. **It recieves a perfective reading.**

The following example (2.39) describes a trip to Saturn. It was possible to book a place. Several hundred thousand people have booked already. The speaker expects that the available tickets are limited because he knows that only a limited number of people can travel. He focuses on the end of that duration and therefore he puts a H*L on "*noch*".

(2.39) GE: [*6 August 1996. Reservierung für eine Reise zum Saturn. Mehrere hunderttausend Menschen haben sich bereits für eine Reise zum Ringplaneten Saturn angemeldet.*]

Noch	*gibt*	*es*	*Platz*	*für einige hunderttausend*	**mehr.**
*H*L*					*L*HL*
Until now	*there*	*is*	*room*	*for some 100 000*	*more*

EN: [ ) 6th August 1996. Reservations for a trip to Saturn. Some hundred thousand people already booked a trip to the ringplanet Saturn.]

Until now there has been room for some hundred thousand more.

Example (2.40) shows the same pattern. Subject is the declining moon. The information that the day after tomorrow the moon will reach its last quarter is given in the context. The speaker focuses on the illumination of the moon. He knows from the context that this state will continue until the day after tomorrow. Expressing the ending of the illumination he puts a H*-tone on "*noch*".

(2.40) GE: [*4 August. Die dunkle Mondseite. Übermorgen erreicht der Mond sein letztes Viertel.*]

Noch	*ist*	*etwas*	*mehr*	*als*	*die*	*Hälfte*	*der*	*erdzugewandten*	*Mondseite*	*vom*
*H**			*L*H*			*H*L*		*!H*L*	*?*	
Until now	*is*	*a little bit*	*more*	*than*	*the*	*half of*	*the*	*facing the earth*	*moonside*	*from*

Sonnenlicht	*beleuchtet.*	
	*!H*L*	*%*
sunlight	*lighted*	

EN: [4th August. The dark side of the moon. The day after tomorrow the moon will reach its' last quater.]

Until now a little bit more than half of the moonside that looks to the earth has been lighted from sunlight.

2.2.6 "*Immer noch*" (still), "*Immer noch nicht*" (still not)

Description: If the speaker believes that the expectation about an event differs

from the reality, then there is a **H*** on "*immer noch*" (still)[15]. If there is - according to the belief of the speaker - no expectation there is no falling pitch accent on "*immer*".

1. **Focus on the End of the State Expression**
   In example (2.41) [24] it is described that the shuttle pilots were military pilots in the past. The speaker's expectation is that pilots are civil pilots now. Contrary to all expectation most of the pilots are still military pilots. This information is new and therefore there is a high tone on "*immer*".

(2.41) GE: [*Neue Astronauten. Heute bereiten sich 35 amerikanischen Frauen und Männer darauf vor, in die Fußstapfen von John Glenn und Neil Armstrong zu treten. Sie bewerben sich beim Johnson Space Center der NASA um ein Trainingsjahr als Space-Shuttle-Astronauten zu beginnen. Diejenigen, die das Astronautentraining durchstehen, könnten frühestens 1998 an Bord eines Shuttles fliegen. 1959 wählte man die erste Gruppe von 7 amerikanischen Astronauten aus. Man nannte sie die Merkur-Sieben. Zu ihnen gehörten neben Alan Shepard, dem ersten Amerikaner im Weltraum, und John Glenn, dem ersten Amerikaner in einer Erdumlaufbahn, fünf weitere Militärpiloten. Seitdem hat es im US-Raumfahrtprogramm mehr als 260 Astronauten gegeben. Für die Shuttle-Astronauten gibt es zwei Kategorien, die Piloten, die den Shuttle fliegen und die Missionsspezialisten, die Experimente im Weltraum durchführen.*]

<P> *Piloten kommen* **immer noch vorwiegend aus dem Militär**
*L*H* *H** *!H*L* *H*L %*
pilots come still mainly from the military.

EN: [New astronauts. Today 35 American women and men are preparing themselves to follow in John Glenns' and Neil Armstrongs' footsteps. They apply for a training year as space-shuttle astronauts at NASAs' Johnson Space Center. Those who master the astronauts' training could fly on board of a shuttle 1998 at the earliest. In 1959 the first group of 7 American astronouts were selected. They were called the Merkure-Seven. Beside Alan Shepard, the first American in the outer space and John Glenn, the first American in the orbit, five other military pilots were among them. Since that time there have been more than 260 astronauts in the US space travel program. There are two categories of shuttle astronauts: the pilots who fly the shuttle and the mission specialists who carry out the experiments in outer space.]

Pilots still mostly come from the military.

Example (2.42) [21] describes the expectation of the spokesperson that the government troups would surrender. The new information of the spokesperson was that the troups have not surrendered yet. Therefore there is a **H***-tone on "*immer*" as in example 2.41.

[15] The expression "*immer noch*" is exchangable by "*noch immer*"

(2.42) GE: [*Der Abtransport der Zivilbevölkerung aus der von den bosnischen Serben besetzten Uno-Schutztruppe Cepa ist jetzt fast abgeschlossen. Wie die Unprofor-Sprecherin Sochacki heute früh in Sarajevo mitteilte, sind zwischen viertausend und fünftausend Menschen bereits evakuiert. Eine andere Gruppe soll noch von den Serben in der näheren Umgebung von Cepa festgehalten werden. Einzelheiten dazu wurden nicht bekannt.*

Die bosnisch-moslemischen Regierungstruppen, die in Cepa stationiert waren, <P>
*L*H L*!HL - H*L? L*H %*
haben sich nach Mitteilung der Uno-Sprecherin **immer noch nicht** *ergeben.*]
*L*H - L*H L*!H - H* H*L L%*
Über die Kapitulation der eintausendfünfhundert Mann starken Einheit, die sich in den Bergen versteckt halte, werde noch verhandelt.

EN: [The relocation of the civilian population from the UN zone Cepa occupied by Bosnian Serbs is nearly finished. According to the UN-profor spokesperson Sochacki, between 4000 and 5000 people have already been evacuated. It is said that another group is still detained near Cepa. Details were not be known. According to the UN-spokesperson the Bosnian Muslim government troups, which were stationed in Cepa, did not surrender yet.]

Negotiations, about the capitulation of the unit of 1500 person that hide in the mountains, are still in process.

2. **Focus on the State Expression**
"*Immer noch*" in Sternzeit-example (2.43) [24] has just a figurative meaning. In comparison to stars that are farer away from us, Saturn is still near us. The information should be deducible from the context. So there is no H* on "*immer*". It is a lasting state that Saturn has been still near to the Earth in comparison to stars in other solar systems.

(2.43) GE: [*Der Abstand zum Ringplaneten Saturn beträgt dagegen etwa eins Komma drei Milliarden Kilometer. Bei dieser großen Entfernung benötigt das von den butterfarbenen Saturnwolken reflektierte Sonnenlicht eine Stunde und 14 Minuten, um uns auf der Erde zu erreichen. <P>*]

Natürlich wohnt Saturn im Vergleich zu den Sternen **immer noch nebenan.**
*L*H L*H L*H %*
Of course lives Saturn in comparison to the stars still beside us.

EN: [However the distance to the ringplanet Saturn is about 1.3 billion kilometer. For this distance the sunlight that is reflected by the buttercolored clouds of Saturn, takes 1 hour 14 to reach us on earth.]

Of course Saturn is still living next to us in comparison to the stars.

2.2.7 "*Noch nicht*" (not yet) - Negation of "*schon*" (already)

Description: The addressee understands the event has not happened yet. If there is

a pitch accent on "*noch*" itself, then it signals an expectation that the event will happen soon (contrast accent). According to Löbner (1986) [19] "*noch nicht*" is the negation of "*schon*" (already).

1. **Focus on the Negation Particle**
   Werther writes his friend in example (2.44) about a couch trip on the way home from a ball in the country. He wrote that he has not yet told him [his friend] (German original is:" *noch nicht erzählt ")* about this trip.
   The negation particle refers to the verb "*erzählt*" (tell). The event of telling what had happened is negated.

(2.44) GE:

Was	*auf*	*unserer*	*Hereinfahrt*	*vom*	*Balle*	*geschehen*	*ist,*	*habe*	*ich*	**noch**	**nicht**
	*H*L*		*L*H*		*L*H*		-				*H*L*
What	*on*	*our*	*way*	*home*	*from the*	*ball*	*happened*	*had*	*have*	*I*	*yet*	*not*

erzählt; <P> habe auch heute keinen Tag dazu.
*% H*L L%*
told have too today no day for it

EN: What happened during the drive home from the ball I have not yet told you, nor have I the time to do so today.

2. **Focus on the Particle "*noch*"**
   There occured no example in the spoken corpus where "*nicht*" appeared exactly after "*noch*". In most cases "*noch*" is topicalized and "*nicht*" precedes the verb. The example (2.45) describes possible new discoveries on the Moon and Mars, which discoveries will be revolutionary, if true.
   There is a H* on "*noch*" that points to an expectation of the speaker that these assumptions will be born out. In 7 of 8 cases there was a falling tone on the topicalized "*noch*". This leads to the assumption if "*noch*" is topicalized, then there is an expectation and a contrast accent.

(2.45) GE: [*Zur Zeit bekommen Mars und der Mond viel Aufmerksamkeit. Zwei Marsmeteoriten auf der Erde könnten auf früheres Leben auf unserem Nachbarplaneten hinweisen. Und am Mondsüdpol könnte sich in einem schattigen Krater ein großer Eisblock befinden. Beide möglichen Entdeckungen werfen ein neues Licht auf unser Sonnensystem. Vielleicht gibt es viel mehr Leben als wir es bisher für denkbar gehalten haben.*]

Noch	*sind*	*diese*	*Vermutungen*	**nicht**	*<P>*	**bestätigt**	
*H**		*..L*	*H*L*			*H*L*	*%*
until	*now*	*are*	*these*	*assumptions*	*not*	*bore*	*out*

EN: [At the moment Mars and the Moon attracts attention. It is possible that two meteorites of Mars points to former life forms on our neighbor planet. It is also possible that on the Moon's South Pole is a big ice block in a shady crater. Both possible discoveries show our solar system in a new light. Possibly, there is much more life than we would credit it.]

Until now these assumptions are not bore out.

3. **Topicalization of the Focus**
   If the focus of the particle cluster is topicalized as in example (2.46) then the topicalized semantic head of the constituent gets a **L*H** to mark that the information is not complete.

(2.46) GE: [*[...] Wie die Erde hat auch Ganymed sehr wahrscheinlich einen eisenreichen Kern, der von einem Gesteinsmantel umgeben ist. Dieser schwimmt auf dem Kern und erzeugt ein magnetisches Feld. Das Magnetfeld schützt Ganymed vor dem sehr viel stärkeren des Jupiter. Ganymed ist der einzige Mond im Sonnensystem, von dem Wissenschaftler mit Sicherheit sagen können, daß er ein eigenes Magnetfeld hat.*]

Sehr *wahrscheinlich gibt es auch eines auf dem Jupitermond Io. <P>*

Sicher *ist man sich darüber* **noch nicht.**
*L*H !H*L %*
Sure is one oneself about it not yet

EN: [[...] Ganymed has, like the Earth, probably a ferrous core that is surrounded by a rock mantle. This rock mantle swims on the core and generates a magnetic field. This magnetic field protects Ganymed from the much more stronger Jupiter. Ganymed is the only moon in our solar system where the scientists are sure that it has its' own magnetic field.]

It is very likely that there is one on Jupiters' moon Io too. But one cannot be sure.

4. **Negation inside of a Constituent**
   If there is a **H*L** on the semantic head of the constituent (as in example (2.47)) that follows the negation particle, then the recipient understands the event as an exclusion of other alternative events.

(2.47) GE: *Sollten die Verhandlungen scheitern, wird eine Fortsetzung in etwa zwei Wochen <P>*
*L*H - H* L*H L*H %*
an einem **noch nicht** {**festgelegten**} *Ort erwogen.*
H H*L H* !H*L %*

EN: If the negotiations break down, then continuation of the negotiations in about two weeks at an as yet undetermined site, will be considered.

2.2.8 Particle Accumulation

auch noch

Description: The recipient understands the event as an additional event to a set of events. "*Auch*" (too/also) refers to the subsequent constituent and "*noch*" refers to the verb.

1. **Focus on NP**
   Example (2.48) describes the celebration day Lammas. It is a day that divides the seasons from each other. Additional to the 'classical' celebrations like equinoxes and solstices the approximate midpoint of the seasons was important too (German original is:" *[ist] auch noch die ungefähre Mitte der einzelnen Jahreszeiten wichtig ")*. The focus is "*ungefähre Mitte der einzelnen Jahreszeiten*". It is a complex NP and the noun "*Mitte*" (midpoint) bears no H*L pitch accent to mark the inforamtion as new because it is incomplete. [16] "*Noch*", however, refers to the state of being important.

(2.48) GE: [*Die wichtigsten Daten im jährlichen Zyklus sind die Sonnenwenden, wenn die Sonne an unserem Himmel am weitesten nördlich oder südlich steht und die Tagesundnachtgleichen. Sie markieren den Punkt in der Mitte zwischen den Sonnenwendpositionen. Viele alte Völker feierten diese Ereignisse mit bestimmten Festen und Ritualen. Einigen Himmelsbeobachtern reichten diese vier besonderen Tage nicht aus.*]

Für sie war **auch noch die ungefähre Mitte der einzelnen Jahreszeiten** *wichtig.*
L*H - H*L L*H !H*L %

EN: [The most important dates in the yearly seasons are the solstices, when the sun at our sky is the most northern or the most southern point, and the equinoxes. They mark the point between solstice positions. Many ancient cultures celebrated this event with certain festivities and rituals. Some sky observers were not content with only four particular days.]

The approximate midpoint of the seasons was also important for them.

2. **Focus on the State Expression**
   Example (2.49) is about a conversation between Werther, Lotte, a vicar and his wife. The subject is ill-humour and whether it is a vice or not. Werther says that in his opinion ill-humour is a vice because 'we rob each other of the pleasure [...]' (German original is:" *rauben wir auch einander noch das Vergnügen [...] ")*.
   "*Auch noch*" refers to the event of 'having to rob pleasure'. It is not clear which tones are overlayes by the L*HLs on "*müssen*" and "*Vergnügen*". Maybe the L*H on "*müssen*" overlays a L*H (that marks that it is not complete) and the L*HL on "*Vergnügen*" (pleasure) overlays a H*L that would be there if there was no modifier of "*Vergnügen*" (pleasure).

[16] This intonational pattern treats the information 'Mitte der einzelnen Jahreszeiten *(midpoint of the seasons)* as one information unit.

(2.49) GE: [*Ist es nicht genug, daß wir einander nicht glücklich machen können;*]
müssen wir **auch noch einander das Vergnügen rauben,** *das jedes Herz sich noch*
*L*HL* *L*HL* *L*H* - *L*H*
manchmal selbst gewähren kann.
*L*H* *L*H* *L*H* *%*

EN: [Is it not enough that we are unable to make each other happy?]

Must we also rob each other of the pleasure our hearts can all still give at times?

3. **Focus on the Particle**
There was no example in the spoken corpus with a tone on the particle "*auch*". A narrow focus on the particle "*auch*" may express an emotive (i.e. impatient) attitude of the speaker.

nur noch

Description: The recipient understands the event as an exclusion of a set of events. The preceding[17] or subsequent constituent that is modified by "*nur*" (only). It means that this element is the only element of a set. "*Noch*" refers to the duration that is established by the verb.

1. **Focus on Semantic Head**
In example (2.50) the topic is the visibility of star Mira. It occasionally changes its light intensity. The particle "*noch*" modifies the state of seeing. The focus particle "*nur*" (only) chooses one element in a set of alternatives. The semantic head "*Teleskop*" gets a H*L-tone. It is the only element of a set of possiblilities (i.e. naked eye, binoculars, telescope) that remained after the star got paler.

(2.50) GE: [*In ihrer hellsten Phase sieht man sie leicht mit bloßem Auge.*]
Erreicht sie jedoch ihr dunkelstes Stadium, <P> kann man sie **nur noch {durch ein**
*L*H* *L*HL* *L*H* *%*
Teleskop} entdecken.
*H*L* *L%*

EN: [In its brightest phase it is recognizable with naked eye.]

However if it reaches the darkest state then it is recognizable only by telescope.

2. **Focus on the Modifier**
Example (2.51) discusses the reason for the disapparance of dinosaurs. Scientists assumed that a collision of a huge asteroid with the earth was the reason for the wiping out. Under the seafloor they found fossils supporting this theory. Layers (which were dated before the collision) with plenty of fossils were followed by

[17] I assume that the particle cluster can only be postpositive if it refers to the verb.

layers (which were dated after the collision) with almost no fossils (German original is:" *nur noch vereinzelte Fossilien ")*.
The scope of "*nur*" (only) is the following constituent "*vereinzelte Fossilen*" (occasional fossils). Out of a set of alternatives (i.e. plenty of, few, thousands of, occasional) one alternative was chosen. The semantic head is deaccented because fossils occured in the previous text. Thus the modifier "*vereinzelt*" (occasional) gets the new information H*L-tone. "*Noch*" refers to the state of being detectable.

(2.51) GE: [*In den vor dem Zusammenprall abgelagerten Schichten, gibt es* **Fossilien** *im Überfluß.*]

Nach	*dem*	*Einschlag*	<P>	*sind*	**nur**	**noch**	{**vereinzelte**	**Fossilien**}	*nachweisbar,*	<P>			
*L*H*		*%*		*H**			*!H*L*		*!H*L*	*%*			
After	*the*	*impact*		*are*	*only*		*occasional*	*fossils*	*detectable*				
ein	*guter*	*Hinweis*	*darauf,*	<P>	*daß*	*es*	*nicht*	*mehr*	*viel*	*Leben*	*gab.*		
	*H*L*	*H*L*	*L*H*	*%*	*H**				*L*HL*	*!H*L*	*L%*		
a	*good*	*pointer*	*on*		*that*	*there*	*no*	*any more*	*much*	*life*	*existed*		

EN: [In the layers that settled before the collision there are plenty of **fossils**.]

After the impact there are **only occasional fossils** detectable. It is a good pointer that there did not exist very much life no more.

3. **Focus on Particle**

Sternzeit-example (2.52) [24] deal with the rotation of two galaxies which rotate in two different directions. However after a certain time the rotation direction will change and they will turn only in one direction.
The particle "*nur*" (only) got a high tone, a narrow focus. The high tone on "*nur*" may open a set of alternative particles with the same meaning. Or it has something to do with expectations of the speaker who did not expect that the rotary direction could ever change. The semantic of "*nur*" as focus particle does not change. "*Noch*" refers to the state of still rotating and "*nur*" chooses "*eine Richtung*" out of a set of alternatives (i.e. one, two, three ...directions).

(2.52) GE: [*Möglicherweise handelt es sich bei M64 um zwei Spiralgalaxien, die zusammen eine neue Galaxie gebildet haben. Wenn das zutrifft, reiben sich die beiden Galaxiescheiben in M64 mit hoher Geschwindigkeit gegeneinander. Das kann nicht ewig so weitergehen. Durch die Reibung zwischen den beiden Scheiben fallen Gase in das gemeinsame Zentrum der Galaxien und begünstigen dadurch die rasche Bildung neuer Sterne. Diese Gase könnten sogar zur Entstehung eines gigantischen Schwarzen Lochs im Mittelpunkt von M64 führen. In etwa einer Milliarde Jahren dürften alle Gase in der zentralen Scheibe verbraucht sein.*]

Danach wird etwas mehr Ordnung <P> in M 64 einkehren, <P> weil sich
*H*M H* L*HL !H*L -*
After that will some more order in M 64 come because itself
das kosmische Rad dann <P> **nur noch in eine Richtung** *dreht.*
*H*L H*L H*L %*
the cosmic cycle then only still in one direction go round

EN: [It is possible that M64 consists of two spiral galaxies which together form a new galaxy. If that is true then the two discs rub eachother with high velocity. That can not go on forever. Gases are falling to the joint midpoint of the galaxies through the friction between the two discs. This supports a quick formation of new stars. These gases could even support the formation of a black hole in the middle of M64. In about one billion years the gases in the central disc will be used up.]

After that there will come more order into M64 because the cosmic cycle will go round in only one direction then.

2.2.9 Conjunction "*Weder [...] Noch*" (Neither Nor)

Description: The addressee understands the states/event as an negated enumeration of at least two events. Both states/events are not going to happen.

All examples agree in the **L*H**-tone on the semantic head after "*weder*" (neither) and in 5 of 8 cases there was a falling tone on the semantic head that was following "*noch*" (nor). I assume it is the same phenomenon as coordination which is discussed in chapter 5. The **L*H**-tone marks the information as incomplete that will be described in details by (eg. a subsequent relative sentence).

1. **Rising Tone on Both Parts**
   Nachrichten-example (2.53) [21] was read by two different persons. Interestingly, they do not agree in all pitch accents. The **L*HL**-tone (late peak) on "*Zugabeverordnung*" (addition decree) in example (2.53) supports the assumption that those tones are set on a higher level than new and old information tones, **H*L** and **L*H**. **L*HL**s overwrite **H*L**s.

(2.53) GE:

Nach	*dem*	*heute*	*veröffentlichten*	*Urteil*	*der*	*Richter*	*ist*	*das*	*Angebot*
		L*H				L*H H%			H*L
		L*H		!H*L		L*H -			H*L
According to the		*today*	*published*	*judgement*	*of the*	*judges*	*is*	*the*	*offer*
der	*Bundesbahn*	*und der*	*Citybank*	<P>	**weder**	*unlauterer*	**Wettbewerb**		<P>
	L*!H H%		H*L H%		L*H		L*!H	%	
	L*!H -		L*H %		L*H		L*H	%	
of the	*Federal Railway*	*and the*	*citybank*		*neither*	*unfair*	*competition*		
noch	*ein*	*Verstoß*	*gegen die*	**Zugabeverordnung.**					
?			L*HL	%					
	HH*L		H*L !H*L	%					
nor	*a*	*offence*	*of the*	*addition decree*					

EN: The offer of the Federal Railway and the Citybank is according to the judges' judgement of today neither unfair competition nor an offence of the addition decree.

If the information about the enumerated negative events is not completed, then it is very likely that there is a L*H on the semantic head after "*noch*".

Example (2.54) gives the context of Merkur and the Moon which look alike. The conditions on both objects are nearly similar. They were hit by stones in the early history of our solar system and there is "*weder Wasser noch Luft*" (neither water nor air) on both of them.
The subsequent relative sentence after "*Luft*" (air) describes the effects of water and air. Therefore "*air*" gets no H*L-tone because the information is not completed.

(2.54) GE:

Da es	*auf beiden*	*Objekten*	**weder**	**Wasser**	**noch**	**Luft**	*gibt,*	<P>	*die*	*zur*	
		H*L		L*H		L*H H%					
As there	*on both*	*objects*	*neither*	*water*	*nor*	*air*	*exists*		*that*	*to the*	
Erosion der	*Krater*	*beitragen*	*könnten,*	<P>	*blieben*	*die*	*Landschaften*	*in*		*den*	
L*H		L*H	%		L*H		L*H				
erosion of the	*crater*	*support*	*could*		*stay*	*the*	*landscapes*		*during*	*the*	
letzten drei	*Milliarden*	*Jahren*	<P>	*praktisch*	*unverändert.*						
L*H H*L		%			H*L %						
last	*three billions*	*of years*	*more or less*	*unchanged.*							

EN: As there exists on both objects neither water nor air that could support the erosion of the crater, the landscapes have stayed more or less unchanged during the last three billion years.

2. **Rising Tone on Two Parts, Falling Tone on the Last Part**
An interesting case of "*weder [...] noch*" (neither [...] nor) construction occured in example (2.55) which appears more often in literary texts. Instead of the negation enumerative particle "*weder*" (neither), there is a plain negation particle that overtakes the function of "*weder*" (neither).
The context is about Werther's love to Lotte and that he does not understand that another man [Albert] loves Lotte as he does. He has the impression that he 'neither knows nor has anything but her' (German original is:" *nichts anderes kenne noch weiß noch habe als sie ").*

(2.55) GE: *Ich begreife manchmal nicht, wie sie ein anderer lieb haben kann, lieb haben darf, da ich sie so ganz allein, so innig, so voll liebe,* <P> **nichts** *anders kenne* **noch**
L*H L*H L*H
nothing else different know nor

weiß, <**P**> **noch habe** *als sie!*
L*H H* !H*L %
know about nor have than her

EN: At times I cannot grasp that she can love another man, that she dare love another man, when I love her and her alone with such passion and devotion, and neither know nor have anything but her!

3. Falling tones on all Parts
In Example (2.56) Werther describes a conversation with a farmer lad who was fired from his mistress because of his love of her. The farmer lad talked about his situation, in which he was so overcome by his love that he was unable to 'eat or drink or sleep' (German original is:" *essen noch trinken noch schlafen ")*.
On all three parts there is a falling tone. The topic of coordination is discussed in section 5 later in this paper .

(2.56) GE: [*Er bekannte, ja er erzählte mit einer Art von Genuß und Glück der Wiedererinnerung, daß die Leidenschaft zu seiner Hausfrau sich in ihm tagtäglich vermehrt, daß er nicht gewußt habe, was er tue, nicht wie er sich ausdrückte, wo er mit dem Kopfe hingesollt.*]
Er <P> *habe* **weder essen noch trinken noch schlafen** *können. [...]*
L*H H*L H* H*L %

EN: [He admitted, indeed he told me with a kind of relish, taking pleasure in the recollection, that his passion for his mistress had increased day by day until in the end he did not know what he was about or (as he put it) what was to become of him.]

He was unable to eat or drink or sleep [...]

2.3 "*Nahezu*"

2.3.1 "*Nahezu*" (Almost, Nearly) as Focus Particle

Description: The addressee understands *"nahezu NP"* as an NP1, whereas NP1 is a subset of NP (but NP1 is not the same as NP) and NP minus NP1 is small [18]

Figure 2.4 is a graphic illustration of example (2.59) :

(2.57) GE: *nahezu die gesamte Mondoberfläche*

EN: [...] almost all of the moon surface

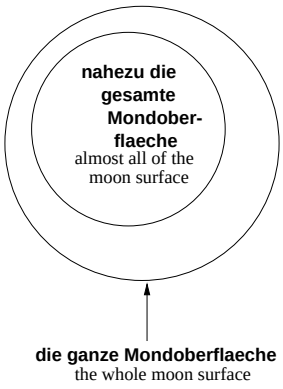


Figure 2.4: Example

1. **Focus on Semantic Head**
   The subject of the following Sternzeit-example (2.58) [24] is Pluto, which is in opposition to the sun. Pluto rises when the sun sets and can only be seen with a very big telescope. It is almost impossible to find it [Pluto] (German original is:" *[...] nahezu unmöglich, ihn zu finden ").*

   The semantic head "*unmöglich*" (impossible) receives a HH*L-tone[19] to mark the event as new.

[18] In set theory:
"*nahezu NP*" ≡ NP1 , whereas NP ⊈ NP1 and NP-NP1 is small

[19] The HH*L-tone has the same semantics as H*L. The H-prefix only points out that the unaccented first syllable is high.

(2.58) GE:

Leider		*ist*	*Pluto*	*so*	*klein*	*und*	*so*	*weit*	*von*	*uns*	*entfernt*
*H*M*			*!H*L*	*L*H*	*!H*L*	-		*L*H*			*L*H* *%*
Unfortunately	*is*		*pluto*	*so*	*small*	*and*	*so*	*far*	*from*	*us*	*away*
<**P**> *daß*	*es*	{**nahezu**	**unmöglich**}	*ist,*	*ihn*	*zu*	*finden.*				
			*HH*L*				*H*L* *%*				
that	*it*	*almost*	*impossible*		*is*	*him*	*to*	*find.*			

EN: Unfortunately, Pluto is so small and so far away from here that it is almost impossible to find it [Pluto].

2. **Focus on Modifier**
Sternzeit-example (2.59) [24] is about the history of Moon atlases. During the development of atlases the first step were drawings of Moon. The next step were photos taken from Earth followed by photos taken from space probes. The context talks about the valleys and the mountains of Moon.

The generic term is moon surface therefore the semantic head "*Mondoberfläche*" (moon surface) is deaccented thus the modifier "*gesamte*" (whole) recieves the H*L to mark that the information is new. The H*L-tone on "*nahezu*" (almost) does not change the semantics of the focus particle and expresses a narrow focus on the focus particle. This narrow focus on "*nahezu*" can be interpreted as 'astonishment'.

(2.59) GE:

Mitte	*der*	*sechziger*	*Jahre*	*fotografierten*	*die*	*Lunar*	*Orbiter*	*der*	*NASA*			
		*H*L*	*L*!H*	- *H*L*		*L*HL*	*L*!H*		*L*!H* *%*			
Mid	*of*	*sixties*	*years*	*took photos*	*the*	*Lunar*	*Orbiter*	*of*	*NASA*			
<**P**> *aus*	*ihren*	*Mondumlaufbahnen*	{**nahezu**	*die*	*gesamte*	**Mondoberfläche**}.						
		*H*L*	- *H*L*		*!H*L*	*%*						
from	*its*	*lunar*	*orbit*	*almost*		*the*	*whole*	*moon*	*surface.*			

EN: In the middle of the sixties the NASAs' Lunar Orbiter took photos from its lunar orbit of almost all of the moon surface.

3. **Focus inside of an NP**
The following example (2.60) [24] describes the conditions on Venus (high temperatures). Additionaly, Venus is enveloped by an almost closed cloud cover (German original is:" *einer nahezu geschlossenen Wolkendecke ").*

The focus particle "*nahezu*" modifies the adjective "*geschlossen*" (closed). This information is new and "*geschossen*" gets an H*L-tone.

More detailed information about the "*Wolkendecke*" (cloud cover) is described by the post modification "*mit hohem Schwefelsäureanteil*" and therefore "*Wolkendecke*" receives an L*H-tone. This L*H points out that the information is not closed.

(2.60) GE: [*6 Juni. Ein sehr unterschiedlicher Zwilling. Heute abend zeigen sich Venus und die sehr schmale Mondsichel Seite an Seite. Beide Himmelskörper stehen nach Sonnenuntergang sehr tief am westlichen Himmel und verschwinden ca. eine Stunde nach ihr hinter dem Horizont. In gewisser Weise kann man Venus als Zwilling der Erde bezeichnen. Die beiden Planeten ähneln sich in Größe und Struktur und wohnen im inneren Sonnensystem. Doch auf der Venus würde Sie nichts mehr an die gute alte Erde erinnern. Die Venusatmosphäre ist wesentlich dichter und besteht vorwiegend aus Kohlendioxyd. Sie fängt ähnlich wie in einem Treibhaus die Sonnenenergie ein. Dadurch entstehen auf ihrer Oberfläche Temperaturen von bis zu 475 Grad Celcius.*]

Auch	*ist*	*der*	*Planet*	*von*	*einer*	{**nahezu**	**geschlossenen**}	*Wolkendecke*	<P>	*mit*	*hohem*
					L*H	L*H	H*L	L*H	%		
Also	*is*	*the*	*planet*	*of*	*a*	*almost*	*closed*	*cloud*	*cover*		*with*	*high*
Schwefelsäureanteil					*eingehüllt.*						
H*L					!H*L						
portion	*of*	*sulphuric*	*acid*		*enveloped.*						

EN: [June 6th. A very different twin. Tonight Venus and the very thin crescent moon appear side by side. After sunset both celestial bodies are deeply in the western sky and disappear one hour later behind the horizon. In some ways Venus can be called a twin of Earth. They are similar in size and structure and live in the inner solar system. However, almost nothing would remind you of good old Earth. The atmosphere of Venus is considerably thicker and consits mainly out of carbon dioxide and collects solar energy similar to a hothouse. Thus there are on the surface temperatures of up to 475^0 C.]

The planet is also enveloped by an almost closed cloud cover with a high portion of sulphuric acid.

4. **Focus on a Post-Modifier**

The subject of the subsequent example (2.61) [24] are nebulas. The double nebula NGC 2392 is near the stars Castor and Pollux in the constellation twins. The double nebula has almost the size of the well-known gas torus M 57 (German original is:" *nahezu die Größe des bekannten Ringnebels M 57 ")*.

The semantic head of this complex phrase is "*Ringnebel M 57*" (gas torus M 57) has a !H*L tone to mark that the information is new. The modifier "*bekannt*" (wellknown) receives a falling tone as well as the name of the gas torus "*M 57*". It would be enough to put a falling tone on "*M 57*" to mark the whole phrase as new.

(2.61) GE:

Er	*hat*	{**nahezu**	*die*	*Größe*	<P>	*des*	*bekannten*	**Ringnebels**	**M**	**57**}	*in*	*der*	
		L*H		L*!H -			H*L	!H*L	H*	H*L			
It	*has*	*almost*	*the*	*size*		*of the*	*wellknown*	*gas torus*	*M*	*57*	*in*	*the*	
Leier.													
!H*L %													
lyre.													

EN: It is almost the same size as the well-known gas torus M 57 in the lyre.

5. **Narrow Focus on "*Nahezu*"**
   There was no example found in the data. There are two possible explanations for a H*L-tone on "*nahezu*": In the constructed example (2.62) the semantic head was deaccented thus "*nahezu*" shows a H*L-tone. Another explanation is that there is a narrow focus on "*nahezu*".

(2.62) GE:

Nicht alle,		*aber* {**nahezu alle**}		*waren gekommen*	
	*L*H*	*H*L*		*!H*L*	*%*
Not	*everybody but*	*almost*	*everybody were*	*come.*	

EN: Not everybody but almost everybody came.

2.3.2 Frequencies of 'Nahezu'

The focus particle "*nahezu*" was found in the corpus 4 times. It was always used as focus particle. Furthermore, there is no homonymous expressions. One "*nahezu*" had a **L*HL** and one a **L*H** tone but never a **H*L**.

The **L*HL** expresses the personal opinion of the speaker. S/he put an emotive pitch accent on the word itself. Nevertheless there is a **H*L** tone on the semantic head of the constituent.

2.4 'Beinahe'

2.4.1 "*Beinahe*" (Almost, Nearly) as Focus Particle

Description: The addressee understands *"beinahe NP"* as an NP1, whereas NP1 is a subset of NP (but NP1 is not the same as NP) and NP minus NP1 is small [20]

1. **Focus on Semantic Head**
   Sternzeit-example (2.63) [24] is about the beauty of spiral nebulas. The speaker called them cosmic spinning tops. The forms seem to be 'almost fragile' (German original is:" *beinahe zerbrechlich ")*.

   The semantic head of the constituent is "*zerbrechlich*" (fragile) which recieves the new information H*L-tone.

   (2.63) GE: [*Sternzeit 27. März. Eine Galaxie in einer Galaxie. Spiralnebel sind wunderschöne Kreisel.*]

   - *Milliarden von Sternen bilden Formen* <**P**> *die* {**beinahe zerbrechlich**} **erscheinen.**
     *H*L L*H H% H*L %*
     Billions of stars shape forms which almost fragile seem to be.

   EN: [Startime March 27th. A galaxy in a galaxy. Spiral nebulas are magnificent spinning tops.]

   Billions of stars are shaping forms which seem to almost fragile.

There were no other examples in the spoken corpus. But 'beinahe *(almost)*' can be exchanged by the synonymous expressions 'fast' and 'nahezu'.

2.4.2 Particle Accumulation

The following particle combinations are extracted from a written newspaper corpus [25]. It is certain that more examples exist than subsequently mentioned. Unfortunately it is not possible to deliver any analysis about these combinations as there are no recorded examples.

- beinahe auch (noch)

[20] In set theory:
"*nahezu NP*" $\equiv$ NP1 , whereas NP $\not\subseteq$ NP1 and NP-NP1 is small

- beinahe nur (noch)
- beinahe sogar
- beinahe schon (mal)
- beinahe fast
- beinahe genauso

2.5 'Fast'

2.5.1 "*Fast*" (Almost, Nearly) as Focus Particle

'Fast' can modify nouns, adjectives, measurement and time. If it modifies a noun or adjective, its most natural translation is 'almost'. If measurement and time are modified, then it is more appropriately translated with 'nearly'.

Description: The addressee understands *"fast NP"* as an NP1, whereas NP1 is a subset of NP (but NP1 is not the same as NP) and NP minus NP1 is small [21]

1. **Focus on Semantic Head**

(a) **"*Fast*" (nearly, almost) preceding an NP**
The following example (2.64) talks about the sky at that day. It looks nearly like the sky 85 years ago when Titanic sank. 85 years ago the moon had reached almost its new moon phase (German original is:" *fast seine Neumondphase ")*.

The semantic head is "*Neumondphase*" (new moon stage) exibits a !H*L[22] to point out that the information is new.

(2.64) GE: *Damals hatte der Mond* {**fast** *seine* **Neumondphase**} *erreicht*
*L*H !H*L %*
At that time had the moon almost its new moon stage reached.

EN: At that time the moon had nearly reached its new moon stage.

The following example (2.65) appeared in the same context as the previous example (2.64). There are programs where one can walk virtually through Titanic. So almost everybody "*fast jeder*" can find the most famous wreck. The NP "*jeder*" (everybody) gets a H*L-tone to mark the information as new.

(2.65) GE: *Heute* <**P**> *kann* {**fast** **jeder**} *das berühmteste Wrack der Geschichte finden.*
*? H*L !H*L !H*L % find.*
Today can almost everybody the most famous wreck of history

EN: Today, almost everybody can find the history's most famous shipwreck.

[21] In set theory:
"*nahezu NP*" ≡ NP1 , whereas NP ⊈ NP1 and NP-NP1 is small
[22] The !H*L-tone is semantically exchangable by H*L

(b) **"*Fast*" (nearly, almost) preceding an AP**
The topic of example (2.66) [24] is the comet Hale-Bopp which points almost directly (German original is:" *fast direkt ")* to M 34.

The adverb "*direkt*" (directly) which is the focus of "*fast*"almost gets the new-information !H*L-tone.

(2.66) GE: *Der Schweif des Hale-Bopp zeigt* {**fast** <**P**> **direkt**} *auf M 34.*
*L*H L*!H H* !H*L !H*L %*
The tail of Hale-Bopp point almost directly at M 34.

EN: The tail of Hale-Bopp points almost directly at M34.

Example (2.67) [24] describes the sky of July 8th. The speaker gives some hints in which direction Venus can be found.

The directions has already been introduced in the context. Thus the adjective "*genau*" (exactly) gets the new-information tone.

(2.67) GE: [*8. Juni. Der Mond in Begleitung. Heute abend zeigt sich der Mond in wunderschöner Gesellschaft. Er scheint in einem hellen Sterndreieck und in Venusnähe. Auch dient er als Wegweiser für einen der hellsten Sternhaufen des Nachthimmels unserer Erde. Achten Sie eine halbe Stunde nach Sonnenaufgang auf Venus. Sie zeigt sich tief im Westnordwesten.*]
<P> Links von der Venus <**P**> {**fast genau**} **im Westen** *finden Sie Procyon,*
*L*H L*!H % H*L L*!H !H*L -*
<P> einen der hellsten Sterne an unserem Nachthimmel.
*H*L !H*L %*

EN: [Startime 8th July. The moon with companion. Tonight the moon has wonderful company. It shines in a bright star tirangle and is located not far from Venus. Furthermore Moon serves also as a sign to one of the brightest star cluster of Earth's night sky. Keep attention to Venus half an hour after sunset. Venus appears deeply in west-north-west direction.]

On the left hand side of Venus almost exactly in the west you will find Procyon, one of the brightest stars at our nightly sky.

The subsequent Sternzeit-example (2.68) [24] describes the relation between Mars and Earth. At that time when 'Sternzeit' was broadcasted Mars was very close to Earth. It shined brighter than all stars at the sky. In 1988 Mars was even closer. In that year it shined nearly three times brighter (German original is:" *fast dreimal heller ")*. The semantic head is "*heller*" (brighter). The focus of "*fast*" is "*dreimal*". The new information is that in September 1988 Mars shone three times "*dreimal heller*" than today.

(2.68) GE: [*[...] Deshalb leuchtet er heller als normal. Weil die Umlaufbahn des Mars jedoch recht stark elliptisch ist, verändert sich der Abstand zwischen dem Roten Planeten und uns von Opposition zu Opposition dramatisch. In dieser Woche liegen knapp 95 Millionen Kilometer zwischen Mars und Erde. Im September 1988 war Mars nur knapp 59 Millionen Kilometer von der Erde entfernt.*]

Damals leuchtete er {**fast dreimal** *heller*} <**P**> *als heute nacht.*
*L*H H*L - H*L %*
At that time shined it nearly three times brighter than today night.

EN: [[...] Therefore it shines **brighter** than usually. The distance between the red planet and us changes from opposition to opposition dramatically because the orbit of Mars is very strongly eliptical. During this week there are nearly 95 billion kilometers between Mars and Earth. In September 1988 Mars was only about 59 billion kilometers from earth.]

At that time it shined nearly three times brighter than tonight.

There was no example in the corpus where 'fast *(almost)*' is topicalized as for instance in the following example:

(2.69) GE: *Fast hätte ich ihn rausgeschmissen.*

EN: I very nearly kicked him out

2.5.2 Comparison "*Fast so [...] wie*" (almost as [...] as))

As there are only two examples in the corpus, it is not possible to give a conclusive analysis of the comparison use of "*fast*". Nevertheless there seems that there is a particular intonation pattern. There was a high pitch accent on "*fast*" as well as a rising tone on the adjective. This points out that the compared element gives the main information, for example 'so alt wie x *(as old as x)*'.
The subject of the following example (2.70) [24] is a stone that hit Mars. The uplands of Mars are almost as old as "*fast so alt wie*" the planet itself. The compared element "*der Planet selbst*" (the planet itself) receives the new-information tone.

(2.70) GE: *Das Territorium ist* {**fast so alt** } *wie der Planet selbst.*
H L*!H !H*L %*
The territory is almost as old as the planet itself.

EN: The territory is almost as old as the planet itself.

Example (2.71) [24] is about the space probe Galileo which met Jupiter's moon Kallisto. The size of Kallisto is compared with the planet Merkur. Kallisto is almost as big as the planet Merkur (German original is:" *fast so groß wie der Planet Merkur ")*.

The element, Kallisto was compared with is "*Merkur*" which recieves a new-information tone.

(2.71) GE: *Kallisto* <**P**> *ist* {**fast so groß** } *wie der Planet Merkur.*
*H** *L*!H* - *H*L %*
Kallisto is almost as big as the planet Merkur.

EN: Kallisto is almost as big as planet Merkur.

2.5.3 Fixed Expression 'Fast'

"*Fast*" as fixed expression occurs at the end of a sentence. It is similar to an idiomatic expression.

(2.72) GE: *Wir haben es fast. Wir habens fast.*

EN: We're almost there. We've almost finished

2.5.4 Particle Accumulation

There were no examples in the spoken corpus of particle combinations. The following combinations are extracted from a written newspaper corpus [25]. So it is not possible to give an analysis of these combinations.

- schon fast so
- fast [immer] (auch)
- fast schon (so)
- fast nur (noch)
- fast noch
- fast gar

2.5.5 Frequencies

"*Fast*" occured 29 times in the corpus, of which 10 were before a measurement or time phrase. There was never a $\mathbf{L^*H}$ on "*fast*". 11 times there was a $\mathbf{H^*}$ or a $\mathbf{H^*L}$ on "*fast*". 13 times the head of the chunk got a $\mathbf{H^*L}$ or a $\mathbf{!H^*L}$. 3 times the semantic head was deaccented and got a $\mathbf{L^*H}$. 3 times the semantic head was known and the

tone wandered to the new aspect of the chunk. In all other cases "*fast*" (almost) recieved a $\mathbf{H}^*$ or a $\mathbf{H}^*\mathbf{L}$ tone.

The 'comparison' sentences 'almost as [...] as' (compare 2.5.2) occured 3 times. "*Fast*" (almost) always beared a $\mathbf{H}^*$ tone. It seems that this construction needs a falling tone on "*fast*" (almost). If there is a intermediate phrase boundary before "*[...] wie*" ([...] as), then there is a $\mathbf{L}^*\mathbf{H}$ on "*wie*" ([...] as).

2.6 "*Nur*"

The particle "*nur*" can be used as a focus particle, as a modal particle, as a restrictive conjunction or as a multipartite conjunction.

2.6.1 "*Nur*" (Only) as Focus Particle

Description: The adressee understands the focus of "*nur*" as a singular choice out of a sets of alternative choices.

1. **Focus on the Semantic Head**

(a) H*L on Semantic Head
Sternzeit-example (2.73) [24] is about the appearence of the moon. A soviet space probe took the first photos from the back of the moon. There are only little vulcanic seas (German original is:" *nur wenige vulkanische Meere ")*. The falling pitch accent on the semantic head "*Meere*" (seas) points out that the information is new[23].

(2.73) GE:
Auf der Rückseite gibt es mehr Berge und Krater als auf der
*L*H - H*L*
At the back there are more mountains and crater than on the
Vorderseite, <P> jedoch {**nur wenige vulkanische Meere**}, <**P**> *jene*
*% L*H L*H !H*L*
front but only little vulcanic seas% those
dunklen Flecken, die den <P> Mann im Mond zeichnen.
*L*H L*H - L*HL H*L %*
dark spots that the man in the moon show.

EN: On the back there are more mountains and crater than on the front, but only little vulcanic seas, those dark spots that show the man in the moon.

The story about the first royal astronom of England, John Flamsteed, is described in the subsequent example (2.74) [24]. Flamsteed taught himself astronomy because he had only a small income (German original is:" *nur ein kleines Einkommen ")*.

The !H*L tone which marks the information as new, is on the semantic head "*Einkommen*" (income) [24].

(2.74) GE:
Als Prediger und Mathematiklehrer hatte er {**nur** *ein kleines* **Einkommen**}.
*H*L H*L !H*L %*
As preacher and mathematician had he only a small income.

EN: He as preacher and mathematician had only a small income.

[23] The L-suffix is identical with default boundary tone typical of statements.
[24] The L-suffix is identical with default boundary tone typical of statements.

Example (2.75) [24] is about Pluto which stood in opposition to the sun. However, it is so far away, that it is nearly impossible to observe it. 'Only through a very big telescope' (German original is:" *nur durch ein sehr großes Teleskop ")* Pluto can be observed.

The semantic head "*Teleskop*" (telescope) recieves a tone that marks the information as new. It can only be interpreted in a bigger context that there is a high tone also on the focus particle itself "*nur*" (only). This could be interpreted as a contrast accent. There is a small possibility to observe Pluto despite the fact that it is nearly impossible to do so.

(2.75) GE: [*Heute erreicht der ferne Planet Pluto seine Oppostion zur Sonne. Am Himmel der Erde steht er der Sonne dann direkt gegenüber. Damit geht Pluto bei Sonnenuntergang auf und bei Sonnenaufgang unter. Leider ist Pluto so klein und so weit von uns entfernt, daß es nahezu unmöglich ist, ihn zu finden.*]

{**Nur** *durch ein sehr großes* **Teleskop**} *erkennt man die ferne Welt.*
*H** *L*H* *H*L* *L%*
Only through a very big telescope see one the far world

EN: [Today the far off planet Pluto reaches its opposition to the sun. At the sky of the Earth it stands directly opposite to the sun. Thus Pluto rises when sun sets and it sets when sun rises. Unfortunately Pluto is so small and so far away from us that it is nearly impossible to find it.]

One can see this distant world only through a very big telescope.

(b) L*HL on Semantic Head

There are some sentences where the semantic head shows a **L*HL**-tone. In these cases the speaker puts over the 'normal' H*L tone that is usually assigned by the focus particles, a emotive L*HL-tone.

The Moon is subject of example (2.76) [24]. The Moon has been seen only as a thin crescent (German original is:" *nur als schmale Sichel ")* when "*Sternzeit*" was broadcast. Nevertheless, the rest of the Moon could be seen because of the light that is reflected by Earth.

The semantic head "*Sichel*" (crescent) recieves a L*HL. This tone overwrites the H*L-tone which should be assigned by the focus particle.

(2.76) GE: *Obwohl sich der Mond jetzt* **nur** *als schmale* **Sichel** *zeigt, <P> sollten*
*L*H L*!H H* ..L L*HL L*H % H**
Although the moon now only as thin crescent shows should
Sie doch aufgrund des Erdscheins die gesamte Mondscheibe erkennen
*H** *L*HL L*H - H*L*
you however on account of the earthlight the whole moon see
können.
L%
could

EN: Although the moon is now just a thin crescent you should see the whole moon because of the earthlight.

Werther [26] describes in example (2.77) his philosophy of life. He says that a lot of people think that life is only a dream (German original is:" *nur ein Traum ")* and he agrees to this opinion.

The semantic head "*Traum*" (dream) has a L*HL-tone. The perceptive impression is that it is a emotive pitch accent which overwrites the H*L-tone (see also example (2.76)) .

(2.77) GE: *Daß das Leben des Menschen* {**nur** *ein* **Traum** } *sei, <P> ist*
*L*H L*H L*HL %*
That the life of people only a dream would be is
manchem schon so vorgekommen und auch mit mir zieht diese Gefühl
*L*H H*L %*
many a person like happen
immer herum.

EN: That the life of Man is but a dream has been sensed by many a one, and I too am never free of the feeling.

2. **Tone on Modifier**

(a) **H*L on Modifier**

The moon is subject of example (2.78) [24]. In the context the dark side of the moon (German original is:" *dunkle Mondseite ")* is mentioned. Additionally, there are several myths "*mancher Mythos*" about this dark side. The description dark is only partly correct "*nur teilweise richtig*".

The modifier "*teilweise*" (partly) shows a new-information tone because the information was mentioned before in the context "the description dark is right". The item "*teilweise*" (partly) was chosen out of the alternatives 'totally, not at all, partly ...'.

(2.78) GE: [*Übermorgen erreicht der Mond sein letztes Viertel. Noch ist etwas mehr als die Hälfte der erdzugewandten Mondseite vom Sonnenlicht beleuchtet. Unser Trabant geht gegen Mitternacht auf und steht bei Sonnenaufgang hoch im Süden. Diese Mondphase ist günstig, einmal über die* **dunkle Mondseite** *zu sprechen, um die sich so* **mancher Mythos** *rankte.*]

Die	*Bezeichnung*	<*P*>	*dunkel*	<**P**>	*ist*	{**nur**	**teilweise**	*richtig*},	*denn*	*die*
H%			*?*	*%*	*H%*		*H*L*	-		
The	*description*		*dark*		*is*	*only*	*partly*	*correct*	*because*	*the*
Mondrückseite	*bekommt*	*ebensoviel*			*Sonnenlicht*	*wie*	*die*	*Vorderseite.*		
*L*H*		*L*H*						*H*L*	*%*	
back of the moon	*gets*	*exactly*	*as*	*much*	*sunlight*	*as*	*the*	*front*		

EN: [The day after tomorrow the moon will reach its last quarter. A little bit more than half of the side of the moon that looks to earth, is still lit by sunlight. Our trabant rises about midnight and stands highly in the south when sun rises. This provides a nice occasion to talk about the dark side of the moon around which several myths have grown up.]

The term dark is only partly correct because the back of the moon gets exactly as much sunlight as the front side.

The subject of the subsequent example (2.79) [24] is the rotation of our milky way. Scientists assume that the whole galaxy rotates in one direction around a center. There were only a small number of stars (German original is:“ *nur einige wenige Sterne ”)* which do not rotate this way. The information was given before in the context by ‘most of the stars rotate in one direction’. Thus this information is known. The new information is that just a little number (German original is:“ *einige wenige ”)* of stars do not move this way.

Therefore, not the semantic head gets a H*L but the modifier.

(2.79) GE: [*Beweise für die drehende Bewegung der Milchstraße. In den 20er Jahren äußerten Astronomen die Vermutung, daß* **die Sonne** *zusammen mit den* **meisten anderen Sternen** *der Galaxis in einer Richtung um deren Zentrum zieht.*]

Sie hatten {**nur** *einige* **wenige** *Sterne*} *bemerkt die sich dieser*
*H*L H*L* -
They had some small number of stars noticed that itselves it this
Bewegung nicht anschließen.
*H*L L%*
movement not follow

EN: [Proofs for the rotational movement of the milky way. During the 20s the astronoms supposed that **the sun together with mostly all other stars** of the galaxy are drawing around their center in one direction.]

They noticed only a small number of stars that did not follow this movement.

(b) **H*L as Contrast Focus**

Example (2.80) [24] is about the death of a star. An astronomer observed the Magellanic Cloud and compared it with photographs. Thus he discovered a very bright star that was only a normal star (German original is:" *nur ein ganz normaler Stern ")* before.

The modifier "*auffallend*" (conspicuous) is contrasted to the subsequent modifier "*normalen*" (normal). Both modifier recieves a H*L pitch accent. In the set of alternatives there are the alternatives { auffallend, normal }.

(2.80) GE: [*Supernove 1987 A. Vor Tagesanbruch des 24 Februar 1987 entdeckte der kanadische Astronom Ian Shelton den* **Tod eines Sterns**. *Er befaßte sich mit Fotografien der Großen Magellanschen Wolke, einer kleinen Galaxie, die unser Milchstraßensystem umkreist.*]

Dabei entdeckte er einen <P> auffallenden **Stern** *an einer Stelle,*
*L*H L*H - H*L L*H L*H %*
At the same time discovered he a conspicuous star at a place
<P> wo es wenige Stunden zuvor **nur** *einen ganz* **normalen** *Stern gegeben*
*L*H H*L*
where there few hours ago only a fully normal star been
hatte.
L%
had

EN: [Supernova 1987A. Before daybreak of 24th February 1987 the canadian astronom Ian Shelton discovered the **death of a star**. He was working with photos of the great Magellan Cloud of a small galaxy that circle around our milky way.]

He therby discovered a conspicuous **star** at a place where there was a few hours ago **only a normal star**.

(c) **L*H on Modifier**
The following example (2.81) [24] shows the phenomenon of deaccentuation too. The orbit of Arkturus is described. The information is given that the orbit of Arkturus around the galaxy is asymmetrical and that Arkturus is most of the time closer to the center of the galaxy. Thus the information that Arcturus only seldom (German original is:" *nur selten ")* goes so far away from the heart of the galaxy is known. Therefore, there is a L*H-tone on "*selten*" (seldom) to mark the information as old.

(2.81) GE: [*Der Flug des Arkturus. Es gibt nur wenige Sterne an unserem Nachthimmel, die es mit der Schönheit des Arkturus aufnehmen können. Dieser gelb-orange Stern ist der vierthellste am nächtlichen Firmament der Erde. Teilweise ist seine Helligkeit durch die Nähe bedingt. Nur 36 Lichtjahre trennen ihn von der Erde. Diese Nähe ist ein durch die Umlaufbahnen der Sterne bedingter Zufall. Die Sonne und Arkturus ziehen ihre Bahnen um das Zentrum der Galaxis. Normalerweise ist die Sonne jedoch weiter vom Zentrum entfernt als dies zur Zeit der Fall ist. Und Arkturus ist* **meistens näher am Zentrum als momentan**. *Die Bahn des Arkturus um die Mitte des Milchstraßensystems ist extrem asymmetrisch.*]

{**Nur selten**} *entfernt sich der Stern soweit vom Herzen der Galaxis.*
*L*H L*!H L*HL !H*L %*

EN: [ ) The flight path of Arkturus. There are only few stars in our night sky which can compete with the beauty of Arkturus. This yellow orange star is the fourth brightest star in the nightly heavens of the Earth. Its brightness is partly dependent on its closeness. Only 36 light-years separate Arkturus from Earth. This closeness is caused by chance by the orbit of the stars. The sun and Arkturus rotate around the center of the galaxy. However the sun normally is farther away from the center of the galaxy than it is now. And most of the time Arkturus is **closer to the center than now**. The path of Arkturus around the middle of the milky way system is highly asymmetrical.]

The star only seldom drifts so far away from the heart of the galaxy.

3. **Tone on Post-Modifier**
The Sternzeit-example (2.82) [24] is about Pluto. When Pluto was discovered, it was said that Pluto has a diameter of several thousand kilometers. Later in the 80s it was estimated that Pluto is less than 4000 kilometer diameter (German original is:" *nur einen Durchmesser von weniger als 4000 Kilometer ")*.

The subject in the context is the size of Pluto and its diameter. The semantic head "*Durchmesser*" (diameter) is deaccented but the information 'less than 4000' (German original is:" *weniger als 4000 ")* of the post-modifier is new thus the H*L-tone is assigned to the post-modifier.

(2.82) GE: [*Seit Clyde Tombaugh den Planeten 1930 entdeckt hatte, gab Pluto den Astronomen Rätsel auf. Jahrelang glaubte man, er hätte einen Durchmesser von vielen tausend Kilometern, auf alle Fälle mehr als Merkur; und vielleicht war er sogar so groß wie Mars.*]

In den frühen 80er Jahren gingen die Schätzungen dahin, <P> daß Pluto {**nur**
H% H L*H - H*L L*!H % H*L*
In the early 80s years went the estimations in that way that Pluto only
einen **Durchmesser** *von weniger als 4000 Kilometern*} *hat.*
*!H*L !H*L L%*
a diameter of less than 4000 kilometers has

EN: [Since Clyde Tombaugh discovered the planet in 1930, Pluto was a mystery for the astronomers. It was believed for years that Pluto had a diameter of several thousand kilometers, in any case more than Merkur and perhaps even as large as Mars.]

In the early 80s, it was estimated that Pluto was even less than 4000 kilometer diameter.

4. **Rising tone on "*nur*" plus a syntactic boundary**
Werther [26] writes to his friend Wilhelm in example (2.83) about painting and poetry. He thinks that the only thing is, to recognize the really important.

The focus of the particle is a whole subordinated clause. The last word before the syntactic boundary (in this example a comma) recieves a rising tone.

(2.83) GE: *Was ich dir neulich von der Malerei sagte, <P> gilt gewiß auch von*
What I to you recently about the painting told is valid surely too of
der Dichtkunst; <P> es ist **nur,** *<P> daß man das Vortreffliche erkenne und es*
*L*H % H*L L*H -*
the poetry it is only that one the excellent recognize and it
auszusprechen wage, und das ist freilich mit wenigem viel gesagt.
*H*L - H* L*HL !H*L %*
express take a chance and that is of course with less more said

EN: What I told you recently concerning painting is doubtless also true of poetry: what counts is that one perceives excellence and dares to give it expression, which sounds little but is in fact a great deal.

Example (2.84) [26] gives in the context the information about the arrest of a farmer lad who had commited a murder. He had killed his mistress, whom he deeply loved. Werther passed by when the farmer lad was brought into jail. Werther took sides for the farmer lad asking the senior clerk [Albert] to show leniency with the prisoner, when somebody helps him to flee.
The focus of "*nur*" is the subordinated clause that follows after "*nur*" and the comma. Thus the information is completed with the word "*Flucht*" (flight) which recieves a H*L-tone to mark the information as new.

(2.84) GE:

Werther	*ergab*	*sich*	*noch*	*nicht,*	<P>	*sondern*	*bat*	**nur,**	<P>	*der*				
H*L			!H*L	%				L*H	%					
Werther	*surrendered*	*himself*	*yet*	*yet*		*but*	*asked*	*only*		*the*				
Amtmann	*möchte*	*durch*	*die*	*Finger*	*sehn,*	*wenn*	*man*	*dem*	*Menschen*	*zur*	*Flucht*			
			L*H	%							H*L			
senior clerk	*would like to*	*through*	*the*	*finger*	*look*	*if*	*one*	*the*	*man*	*to*	*flight*			
behülflich	*wäre.*													
	%													
help	*would*													

EN: Werther did not give up but only asked the senior clerk to show leniency if one would help the man to flee.

The subsequent Werther-example (2.85) [26] describes the impression of Werther's friends about the mental condition of Werther. The friends noticed that Werther had changed the time before he commited suicide. Furthermore they became aware that there was a uncleared situation between Werther and Albert. Albert often left the room when Werther came to see his wife but not out of hatred but because he sensed (German original is:" *nur weil er gefühlt habe ")* that something was wrong.

The focus of "*nur*" is the whole sentence after "*weil*" (because). The falling tone on the end of the utterance points to the completion of the information.

(2.85) GE:

Sie	*gestehen*	*ein,*	<P>	*daß*	*Albert*	*oft*		*das*	*Zimmer*	*seiner*	*Frau*	*verlassen,*	*wenn*			
						L*H		H*L								
You	*confess*			*that*	*Albert*	*often*		*the*	*room*	*of his*	*wife*	*left*	*when*			
Werther	*bei*	*ihr*	*war,*	<P>	*aber*	*nicht*		*aus*		*Haß*	<P>	*noch*	*Abneigung*	*gegen*		
L*H		H*L	%		H*					L*H	%		H*L			
Werther	*with*	*her*	*was*		*but*	*neither*		*because of*		*hatred*		*nor*	*dislike*	*of*		
seinen	*Freund,*	*sondern*	**nur**	**weil**	*er*	*gefühlt*		*habe,*	*daß*	*dieser*	*von*	*seiner*	*Gegenwart*			
	%		L*H		L*!H	%				L*H						
his	*friend*	*but*	*only*	*because*	*he*	*felt*		*had*	*that*	*he*	*of*	*his*	*presence*			
gedrückt	*sei.*															
L*H	L%															
depressed	*was*															

EN: They concede that Albert often left his wife's room when Werther was in her company, but say that he did so not out of hatred or aversion towards his friend but because he sensed that Werther found his presence oppressive.

5. **Coordination**

Interesting cases are **coordination** and **enumeration**. The data could be explained by two different theories. The first one is that the tone that is used by the speaker depends on his/her own impression, when he/she thinks that the coordinated elements belong to one phrase or to two phrases.

A second explanation could be that the speaker puts a narrow focus on the first element (an H*L) that overwrites the L*H that normally would be assigned. In the following example (2.5) the first element gets a L*H and the

second element a H*L.
The speaker regards "*bedenklicher und verworrener*" (more dubious and bewildered) as one unit. The high suffix of L*H points to an incomplete information that is completed by H*L on "*verworrener*" (bewildered).

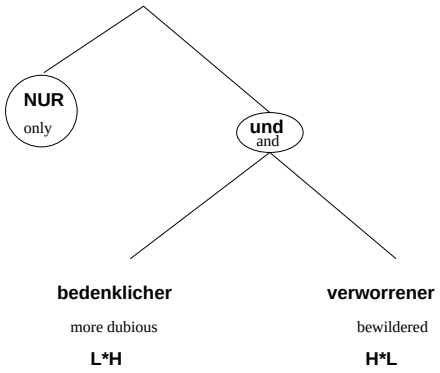


Figure 2.5: Coordination regarded as one Unit

The speaker may regard the two parts of figure 2.6 (example (2.88) as two units "{*nur wachen*} *und* {*nur aufpassen*}". S/he splits the focus particle as operator for both units. The second operator may be deleted as shown in figure 2.7 . Then the operator "*nur*" (only) opens two different alternative sets. (e.i. out of the set of alternatives { things that can be done with the eye} the only alternative 'watching' was chosen. Additionaly, from the set of alternatives { things that express a state }, 'waiting' was chosen.)

Another explanation is: the speaker regards "*wachen und aufpassen*" as one units but he/she assigns a narrow focus to the first element "*wachen*" (watching).

(a) **Rising Tone on the First Part, Falling Tone on the Second Part**
In the context of example (2.86) Werther's condition is described, that he felt very bad. He projected his problems into other people's relationships, as it seems to him that they are breaking apart. Werther got the impression that these relationships became only more dubious and bewildered (German original is:" *nur bedenklicher und verworrner ")*.
The speaker regards the two adjectives "*bedenklicher und verworrener*" as one unit. Therefore s/he puts a L*H-tone on "*bedenklicher*" (more dubious)

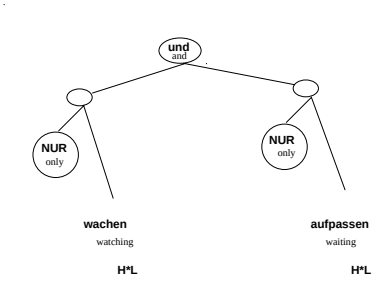


Figure 2.6: Coordination regarded as two Units. The underlying structure

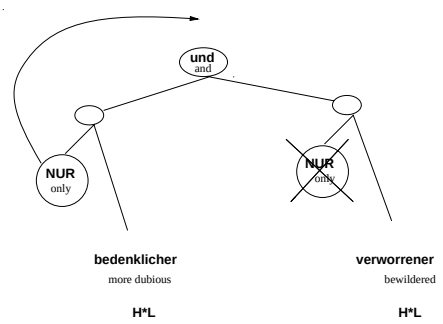


Figure 2.7: Coordination regarded as two Units. Deletion of the second focus particle

and a H*L-tone on "*verworrener*" (bewildered) to mark the information unit as new.

(2.86) GE: *Wie er mit sich in <P> ewigem <P> Unfrieden lebte,*
*L*H H*L !H*L %*
How he with himself in eternal discord lived
<P> schien ihm auch der Zustand andrer **{nur bedenklicher und**
*H*L L*H L*H*
seemed to him too the situation of other people only more dubious and
verworrner}.
*H*L %*
bewildered.

EN: How he lived with himself in an eternal discord, the situation of other people seemed to him just more dubious and bewildered.

Example (2.87) is about Werther who was invited by a prince to come to the prince's hunting lodge. Werther went there and then he wrote his friend Wilhelm about his impressions of the prince who talks about things of which he had only heard and read (German original is:" *nur gehört und gelesen* ").

The first element of the coordination gets a rising tone to mark the information as not completed and the second element gets a H*L to mark both elements as one new information unit.

(2.87) GE: *Was mir noch leid tut ist, <P> daß er oft von Sachen redet, <P>*
*L*H L*H %*
What me too regret does is that he often about things talk
die er {**nur gehört und gelesen hat** }.
*L*H L*H - H*L %*
which he only heard and read had

EN: I am sorry to hear the prince often speaking of things he has **merely heard tell of, or read about**;

(b) **Falling Tones on Both Parts**
The Werther-example (2.88) [26] shows that the speaker either regards the following two heads as **two units** which should get two **H*Ls** or s/he puts a narrow focus on every unit.

Werther describes a conflict between the Count C's ambassador and himself. The ambassador dislikes the Count C. whilst Werther likes him. Werther sees the ambassador as a person who want to be better than other people.

(2.88) GE: *Und das glänzende Elend, <P> die Langeweile unter dem garstigen Volke,*
And the sparkling misery, the boredom among the nasty people
<P> das sich hier neben einander sieht, <P> die Rangsucht unter
*H*L !H*L*
who eachother here side by side see the rivalry among
ihnen, <P> wie sie **nur wachen** *und* **aufpassen,** *<P> einander ein*
*% L*HL H*L H*M % L*H*
them how they only watching and waiting each other a
Schrittchen abzugewinnen.
*H*L !H*L %*
little bit to take away

EN: And this glittering misery, the tedium of these awful people cooped up together here! and their greed for rank, and the way they are forever watchful and alert for gain or precedence: the most wretched and abominable of passions, quite nakedly displayed.

6. **Enumeration**

(a) **Falling Tones on Both Enumerated Parts**
In Werther-example (2.89) the speaker either regards the following two enumerated elements as **two units** which should get **two H*L pitch accents** or s/he puts a narrow focus on both units.

Werther [26] describes his self-image as a wanderer, a pilgrim (German original is:" *ein Wandrer, ein Waller ").*

(2.89) GE: *Ja, <P> wohl bin ich* {**nur** *ein* **Wandrer,** *<P> ein* **Waller**} *auf der Erde!*
L*H only !H*L % H*L !H*L %
Indeed, maybe am I a wayfarer a pilgrim on the earth

EN: Indeed, I am nothing but a wanderer and a pilgrim on this earth!

2.6.2 "*Nur*" (Just)

25

Description: Modal particles are used to modify a statement and are mainly used in colloquial language. The speaker (or writer) expresses his/her amazement, doubt, resignation or annoyance.

Unfortunately, the small number of examples does not allow a detailed analysis of "*nur*" in the function as modal particle. However, some remarks are in order.

Example (2.90) is about a conversation between Werther, Lotte, a vicar and his wife. The subject is ill-humour. Lotte is of the opinion that how one deals with ill-humour depends on oneself. In her case, she sings a song to get a better mood. Werther agrees and mentions if one pull oneself together, then work gets easy. It is a kind of wish.
There are two arguments to assign the example (2.90) to the modal use: firstly, there is no pitch accent on the next semantic head "*einmal*" (once) and secondly, it is no case of deaccenting. Thus the particle may be replaced by "*doch bloß*" which is not translatable. This expresses a wish of somebody[26].

(2.90) GE: *Unsere Natur hängt sehr dahin <P> und doch <P> wenn wir* **nur einmal** *die Kraft haben uns zu ermannen, <P> geht uns die Arbeit frisch von der Hand und wir finden in der Tätigkeit ein wahres Vergnügen.*
L*H L*H !H*L % H*L % L*H L*H H*L H*L %
Our own nature very much and however if we just once the power have oneselves pull up goes us the work easily from the hand and we will find in this work a real enjoyment

EN: We are inclined that way by nature, but if we only have the strength to pull ourselves together our work goes wonderfully and we take real pleasure in what we are doing.

[25] Also described as "*Abtönungspartikel*" (toning particle) as Modal Particle

[26] The official translation of the text [27] does not fit to the intonation of the speaker who read 'The Sorrows of Young Werther'.

2.6.3 "*Nur*" (But) as Restrictive Conjunction

Description: The addressee understands the whole event (the sentence) as a restriction of another event that was mentioned before in the context.

If "*nur*" (just) occurs at the beginning of a phrase followed by a finite verb, then "*nur*" is used as a conjunction. If "*nur*" is followed by an infinite verb and a comma, then it is about a topicalized focus particle[27].

1. **Syntactic Boundary before "*nur*"**

   (a) **Initial "*nur*" plus Infinite Verb**
   The following example (2.91) [28] will show the topicalization. As mentioned before topicalization means, that "*nur*" is used as a **focus particle** which should assign a **H*L** pitch accent to its focus (the infinite verb), or in some cases a **L*HL**.

   (2.91) GE: *Nur funktionieren, tut das Auto nicht.*

   EN: Only working, does the car not. (The car does not only work.)

   (b) **Initial "*nur*" plus Finite Verb**
   The Sternzeit-example (2.92) [24] is about the rotation of a whole galaxy in comparison to the rotation of the Earth. Both are rotating but in contrast to the galaxy, the Earth is a solid body.

   "*Nur*" (but) as a conjunction recieved a H* in order to contrast the information that is subsequently given.

   (2.92) GE: [*Wie die Erde <P> dreht sich auch das Milchstraßensystem.*]

<P>	**Nur**	*ist die*	*Galaxis*	*<P>*	*im*	*Vergleich*	*zur Erde*	*kein fester*	*Körper.*
	H?*		*H*L*			*L*H*			*H*L %*
	But	*is the*	*galaxy*		*in*	*comparison to*	*the Earth*	*no solid*	*body*

   EN: [The milky way system rotates like the Earth.]

   But the galaxy is, in contrast to the Earth, not a solid body.

2.6.4 "*Nicht Nur*" (Not Only) as Multipartite Conjunction

In the construction "*nicht nur [...] sondern*" (not only [...] but) there is a particular intonation pattern. "*Sondern*" (but) recieves a high tone (a **H*** or a **H*L**) to

[27] It is put into the "*Vorfeld*" (front field).
[28] There was no example in the spoken corpus

contrast to the facts mentioned before. There was found only one example in the data.

The context in example (2.93) [24] is about Regulus which is a star of the constellation Lion. Regulus played an important role in former times in the effort of Man at imposing an order on the cosmic constellations. Regulus was regarded not only as the heart of the Lion but as the heart of the sky (German original is:" *nicht nur als Herz des Löwen, sondern als Herz des Himmels ").*

In the context Regulus was mentioned before as 'heart of Lion' thus the semantic head of "*Herz des Himmels*" (heart of the sky) receives a pitch accent to mark the information as new.

(2.93) GE: [*Sie finden Regulus weit links vom abnehmenden Mond. Vor Tagesanbruch stehen beide hoch am Südwesthimmel. Regulus ist* **das Herz des Löwen**. *Er spielte eine wichtige Rolle in den nie endenden Bemühungen der Menschen, eine gewisse Ordnung in den Kosmos zu bringen.*]

Im Zeitraum von vor 3000 Jahren bis zur Renaissance <P> sahen einige Kulturen
*H*M !H*L L*H - L*H % L*H H*M*
At the period of before 3000 years until to Renaissance regarded some cultures
in Regulus **nicht nur** *das Herz des Löwen <P>* **sondern** *das Herz des Himmels.*
L!H - L*H L*H % H% H* H*L %*
in Regulus not only the heart of the lion but the heart of sky

EN: [You will find Regulus far left from the declining moon. Before sunrise both can be found highly in the South Western sky. Regulus is **the heart of the Lion**. It plays an important role in the never ending efforts of man to put a certain order into the universe.]

Between 3000 years ago and the Renaissance some cultures regarded Regulus not only as the heart of the Lion but as the heart of the sky.

In example (2.94) [24] the word "*sondern*" (but) is missing but is thought implicitly. The subject is a small observatory that observes the interaction between tree growing, climate and sun activity. For this reason, the specialists observe the annual rings of tree. They are not only studying trees of their own region [but] from various climatic zones of Earth (German original is:" *[sie] erforschen nicht nur Hölzer ihrer Region, [sondern ...] ").*

The expected "*sondern*"-clause is replaced by two sentences.

(2.94) GE: *Die Baumringspezialisten <P> erforschen* **nicht nur** *Hölzer ihrer Region. <P> Bäume*
*L*H % H* ..L H*L L*HL % L*H*
The annual ring specialists study not only trees of their region trees
aus den verschiedensten Klimaregionen der Erde kommen zur Analyse nach Arizona.
*L*HL !H*L - H*L %*
of the varios climatic zones of the earth come for analyses to Arizona

EN: The annual ring specialists are not only studying trees of their own region. In Arizona they also analyze trees from various climatic zones of the Earth .

2.6.5 Particle Accumulation

The following particle combinations were found in the written corpus:

- nur noch
- nur sehr
- auch nur
  The subsequent example (2.95) [24] is about the possiblity in science-fiction movies to travel from one star to another. However, the state-of-the-art is that it is impossible to reach even approximately (German original is:" *auch nur annähernd ")* the speed of light.

(2.95) GE:
Mit dem derzeitigen Stand der technologischen Entwicklung <P> ist es unmöglich,
*? H*L % H*L %*
with the latest stand of the technological development is it impossible
<P> die Lichtgeschwindigkeit **auch nur annähernd** *zu erreichen.*
*H*L H*L !H*L %*
the speed of light too even approximately to reach

EN: With the latest developments it is impossible to reach only approximately the speed of light.

- nur nicht
  In example (2.96) Werther [26] writes his friend about the difference between nature and rules. He prefers nature because it can not disform a person. Werther compared this difference with a lover who is enraptured between his love (representing the nature) and the advice of a philistine (representing the rules). The philistine advises him to calculate his love logically and unemotionally. If the lover wants to give a gift to his girlfriend the philistine thinks that it is better to give presentsnot too often (German original is:" *nur nicht zu oft ").*

  Both particles have the same focus "*oft*" (often). The focus exibits a new-information tone: a H*L.

(2.96) GE:
Berechnet Euer Vermögen und was Euch von Eurer Notdurft übrig
*L*H L*H !H*L L*HL*
Calculate your property and what you of your bare necessity of life left over
bleibt; <P> davon verwehr' ich Euch nicht, ihr ein Geschenk <P> **nur nicht zu**
*% L*H !H*L*
remain from that forbid I you not her a gift only not too
<P> **oft** *zu machen; <P> etwa zu ihrem Geburts- <P> und Namenstage,*
*H*L % %H ? H*L*
often to make for example for her birthdays and name days
etc.
*!H*L %*
and so on

EN: 'Calculate your income and, once your necessities are seen to, I shall be the last to urge against giving her a present with what remains, though not too often: on her birthday, say, or her saint's day.' Calculate your property and what will remain for the bare necessity of life from that I would not forbid you to buy a gift for her only not too often; eg to her birthday or name day and so on.

- nur erst
  Example (2.97) is about a conversation between Werther, Lotte, a vicar and his wife with their daughter. Werther [26] talks about young people who spoil each others lives with unimportant things. He is annoyed because they [the young people] only until too late (German original is:" *nur erst zu spät ")* recognize their mistakes.
  The focus of the two particles should be "*spät*" (late) but the new information tone is on "*zu*" (too). It is a narrow focus on a function word. It seems to be the particular way of the speaker[29] to put a narrow focus instead of the semantic head on the superlative particle so the semantic head loses its' tone.

(2.97) GE: [*Nur verdrießt mich nichts mehr, als wenn die Menschen einander plagen, am meisten, wenn junge Leute in der Blüte des Lebens, da sie am offensten für alle Freuden sein könnten, einander die paar guten Tage mit Fratzen verderben,*]

und	**nur**	**erst**	**zu**	**spät**	*das*	*<P>*	*Unersetzliche ihrer*	*Verschwendung einsehen.*	
	*L*H*		*H**				*H*L*	*!H*L*	*%*
and	*only*	*until*	*too*	*late*	*the*		*irrecoverable of their waste*	*recognize*	

EN: [Now there is nothing I find more irritating than when people torment each other, and it is worst of all when young people in their prime, who might be enjoying all the pleasures life offers, ruin the few sunny days they have by pulling miserable faces, and never realize the error of their ways till it is too late to do anything about it.]

and recognize the irrecoverable waste only until too late.

30

- nur gerade
  The subsequent example (2.98) [26] is a diary entry of Werther who wrote about his complexes when he compares his abilities with those of other people. Werther thinks, if he only just "*nur gerade*" goes on with his simple means, he got farther than the people with more abilities.

  In this context "*gerade*" (just) seems to be unnecessary. The focus of

[29] The tone shift from the semantic head to the superlative particle could be done because of rhythmic reasons.

[30] This particle accumulation is used also in an newspaper corpus e.i. "*Das muß den Leuten nur erst ins Unterbewußtsein sinken.*" (The people only first have to be aware of this.)

'"*nur*" (only) is "*fortarbeiten*" (go on). The focus recieved a H*L-tone to mark the information as new.

(2.98) GE: *Dagegen wenn wir mit all unserer Schwachheit und Mühseligkeit* **nur gerade**
? - H !H*L - L*HL L*H*
fortarbeiten, *<P> so finden wir gar oft daß wir mit unserem Schlendern und*
*H*L % H* L*H % L*HL*
Lavieren es weiter bringen, <P> als andere <P> mit ihrem Segeln und Rudern [...]
*L*HL L*H - L*H - H*L !H*L %*

EN: On the other hand, once we set to work diligently, in spite of all our shortcomings and the toilsomeness of it, we quite often find that in our leisurely, tacking style we make better headway than others who sail and row [...]

- nur auch
  Example (2.99) is about everybody's attempts to judge others in respect to their own personality. Werther tries to stop this and to leave everybody's freedom because he is so much occupied with his own feelings. Furthermore he wishes that they leave him only too "*nur auch*" his freedom.

  The particle "*auch*" (too) is the focus of "*nur*" (only). It got a falling tone to mark the information as new.

(2.99) GE: *[...] ach, <P> ich lasse gern die andern ihres Pfades gehen, <P> wenn sie mich*
*? H*L H*L H*L % L*H*
Oh I let likely the others their path go if they me
nur auch *könnten gehen lassen.*
*!H*L %*
only too could go let

EN: [...] ah, I am glad to let others go their own ways. If only they would allow me to do the same.

2.6.6 Frequencies

The particle "*nur*" appeared 165 times in the data.

- 135 times "*nur*" was used as a focus particle.
  - Tone on the **semantic head**
    - 89 times got a **H*L** tone on the semantic head of the phrase. (17 out of this set stood behind multipartite focus particle)
    - 8 times a **L*HL** on the semantic head.
  - Tone on the **modifier of the semantic head**
    - 21 times the modifier got a **H*L** (3 of them were focus particle accumulation).

    - 1 **L*****HL**-tone on the modifier.
  - No tone on the semantic head or its modifier because the **facts are known**. 16 times got no tone.

- 2 modal particle
- 14 times conjunction
- 4 times nur plus comma
- 4 times multipartite conjunction
- 6 items with no explanation.

Chapter 3

Summary

It seems that all focus particles share particular intonation patterns and underlie similar phenomena. Generally, the focus particles assign a H*L-tone to their focus if the information is new. When the information is not new, the modifier receives this H*L-tone or the chunk has been totally given in the previous context, then the whole chunk is deaccented.

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Appendix A

The Sufferings of Young Werther

[1] *In 1774 Johann Wolfgang von Goethe wrote his famous letters novella The Suffering of Young Werther which excited multitudes of young damsels and pushed many young men suffering from unrequited love to kill themselves, just like the protagonist of the novella. Werther, the protagonist, falls in love with Charlotte who had promised her mother that she will marry Albert which she does. Only then does she discover that her real love is actually Werther. At the tragic conclusion of the opera, Werther commits suicide as Charlotte comes to comfort him but alas too late.*

[1] see http://www.israel-opera.co.il/werther.htm

Appendix B

Zusammenfassung von Die Leiden des jungen Werther

[1] Werther, ein junger geistvoller, empfindsamer Mann, über dessen Herkunft und Beruf der Text keine näheren Angaben macht, weilt in einer kleinen Stadt, um eine Erbschaft für seine Mutter zu ordnen. Er will sich zugleich befreien von der Erinnerung an ein Mädchen, dessen Empfindungen er halb unbewut genährt hatte, ohne sie zu erwidern, und er gibt sich nun mit ganzer Seele der unaussprechlichen Schönheit der Natur hin, die er in einsamen Wanderungen durch die Wälder, Wiesen und Dörfer der Umgebung erlebt. In Begegnungen mit dem einfachen Volk erschliet sich ihm der Reiz dieser kleinen Welt mit ihren naturhaften Verhältnissen und Sitten, und besonders die Kinder sind bald seine Freunde. Sein ständiger Begleiter ist ein Band Homer, und in seinem Skizzenbuch hält er Bilder dieses stillen, idyllischen Lebens fest. All dies erfährt der Leser durch die Berichte, die er in seinen z.T. schwärmerischen Briefen an seinen Freund Wilhelm in der Zeit vom 4.5.1771 bis 23.12.1772 schildert. Auf einem ländlichen Ball lernt er Lotte, die Tochter des Amtmannes, kennen und ist sogleich von ihrem Wesen gefangengenommen. In der folgenden Zeit benutzt er jede Gelegenheit, sie aufzusuchen und ihr kleine Liebesdienste zu erweisen; er sieht sie im Kreise ihrer sechs jüngeren Geschwister, denen sie liebevoll die tote Mutter ersetzt. Sie gestattet ihm, sie auf ihren Spaziergängen und Besuchen zu begleiten. Bei dem kranken Pfarrer und der sterbenden Freundin fühlt er besonders stark die Liebe, die sie auf ihre Umgebung ausstrahlt. Obwohl Lotte mit Albert so gut wie verlobt ist, empfindet sie doch Zuneigung zu Werther, und dieser glaubt beglückt, nur die Stunden zu leben, die er bei ihr verbringen kann. Bald kehrt Albert von seiner Reise zurück, und Werther findet in ihm einen gelassenen und strebsamen Menschen, der ihm in Freundschaft zugetan wird. Werther leidet sehr unter seiner Liebe und wird sich immer mehr bewut, da er Lotte nie für sich gewinnen kann. Daher gibt er dem Drängen seines Freundes Wilhelm nach und verläßt die Geliebte, um eine Stelle bei

[1] see http://www.leipzig.ihk.de/Multimedia-Verlag/Goethew.htm

dem Minister anzutreten. Er hat mit einem Gesandten zusammenzuarbeiten, dessen bürokratisches Wesen ihn sehr bedrückt. In einer adligen Gesellschaft mu Werther eine ihn sehr demütigende Zurücksetzung erfahren, die ihn aufs tiefste erregt. Er bittet um seine Entlassung vom Hofe und nimmt die Einladung eines Grafen an. Auf dem Wege zu dessen Gütern reist er durch die Gegenden, wo er seine Kindheit verbrachte, und lebt in Erinnerungen an vergangene Tage. Der Graf schätzt seinen Gast sehr, aber Reichtum an Gefühlen bedeutet ihm nichts. Werther ist deshalb auch hier nicht glücklich und verläßt bald das gastliche Haus, um wieder in die Nähe seiner Lotte zurückzukehren. Diese hat sich inzwischen mit Albert verheiratet. Werthers Liebe wächst zu verzehrender Leidenschaft und gleicht einer unheilbaren Krankheit (Krankheit zum Tode). Er argwöhnt, da Albert Lotte gar nicht von ganzem Herzen liebt, und so verschlechtert sich das Verhältnis zwischen den beiden Männern immer mehr. Schlielich - all dies erfährt der Leser durch den zusammenfassenden Bericht eines Herausgebers - sieht Werther keinen Ausweg mehr aus dem Chaos, in dem er sich befindet. Daß sie alle drei glücklich zusammenleben könnten, erscheint ihm unmöglich, und er beschließt, sein Leben zu beenden. So eilt er zu Lotte, um Abschied zu nehmen. Durch die Lektüre Ossians sind beide sehr erregt, und Werther schließt die Geliebte in die Arme. Am anderen Tage schickt er seinen Bedienten, um sich Alberts Pistolen zu einer Reise auszubitten. Lotte händigt ihm die Waffen mit zitternder Hand aus. Bange Ahnungen quälen sie. Aber sie findet nicht die Kraft, Albert zu berichten, was vorgefallen ist. Am Abend zieht er sich mit einer Flasche Wein in sein Zimmer zurück. Sein Bedienter findet ihn am Morgen sterbend. Von dem Weine hatte er nur ein Glas getrunken. Emilia Galotti lag auf dem Pulte aufgeschlagen. Handwerker tragen den Sarg zu Grabe, kein Geistlicher hat ihn begleitet.