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How to talk about the future

**A study of future time reference
with particular focus on the Hocak language**

Juliane Lindenlaub

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**A study of future time reference
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Juliane Lindenlaub

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Abstract

This paper is a revised version of my Master's thesis which I submitted to the University of Erfurt in 2005.

The goal of this study is twofold. First, the structures most commonly used in languages to express future time reference will be discussed. In order to accomplish this I will revert to the relevant literature and discuss papers which focus on future and future marking.

Second, this study aims to contribute to the grammatical description of Hocak, an endangered North American Indian language spoken in Wisconsin and Nebraska, U.S.A. The discussion will be on the structural means used in this language to refer to future time. In regard to this object of investigation, my conclusions are drawn from data based on (i) recently recorded narrative Hocak texts, (ii) (mythological) Hocak texts that were elicited by the anthropologist Paul Radin during his numerous field trips to the Hocak tribe at the beginning of the last century and (iii) sentences in English that consultants were asked to translate into Hocak.

The semantic difference between futurity on the one hand and past and present on the other hand, is often mirrored in structurally different expressions. The future is different from the past and the present in that it usually involves the notion of uncertainty. Most future markers evolve from modal elements (notably from so-called *agent-oriented modalities*). Until such future formatives (or future grams) develop a purely temporal meaning, the original meaning of the gram is retained and exists parallel to the new-developing future meaning. Consequently, future grams are often polysemous and used for both modal expressions and future time reference. Future grams, however, may also evolve from aspectual forms, motion verbs or time adverbials. The semantic evolution of grams developing from these sources is analogous to the (above described) development of grams from modal elements.

The phenomenon that future and modal meanings often blend into one another can also be observed in Hocak. This language has a binary tense system in which future is opposed to non-future. While futurity is obligatorily and explicitly marked on the verb, past and present show zero marking. Future is indicated by three phonologically related future markers that are also used to convey modal meanings. Instead of analyzing these future grams as either modal or temporal elements, I argue that (i) the future meaning component of the grams developed from a modal source and (ii) the grams are located on an evolutionary time line ranging between a modal and a temporal endpoint.

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Preface

In 2003, the Volkswagen Foundation confirmed financial support for the documentation of the Hocak language. This project is conducted at the University of Erfurt and will run until December 2006. It focusses on the collection of primary data (with particular interest in text types other than narrations) and continues to work on the grammar and the dictionary. Other goals of the project are to provide the Hocak language instructors with linguistic training and to help developing teaching materials. All this requires a close cooperation between the Hocak documentation team and the language center in Mauston.

As a member of the Hocak documentation team it was a pleasure for me to meet and work with members of the Hocak tribe and the staff of the Hocak Language Division in Mauston, Wisconsin in 2004 and 2005. During my first field trip in September 2004 I collected much of the data used in this study.

Here, I take the opportunity to express my thanks to my consultants, particularly to Bill O'Brien, and to the staff of the Hocak language center. Their warm reception, their kindness and patience made work easy and enjoyable for me.

For the preparation of this study I am indebted to Prof. Dr. Christian Lehmann and PD Dr. Johannes Helmbrecht. Great debt also goes to PD Dr. Helmbrecht for sharing his language data with me. Many thanks, as well, to Michael Weissman and Dori Weintraub for proofreading parts of this study.

Paul Black and Derek Cheseemann deserve my special gratitude for sharing their ideas on future time reference with me and, simultaneously doing a great deal of proofreading.

Thanks also to Iren Hartmann. She collected additional data in one of her 2005 fieldwork trips that helped in resolving some open questions.

Abbreviations

A	agent
ACC	accusative
ANT	anterior
ANT _{FIN}	final anteriority
ANT _{IN}	initial anteriority
AUX	auxiliary
BEN	benefactive (introduces a benefactive argument)
CAUS	causative
CAUSAL	causality
COLL	collective
CONT	continuator ('and')
DECL	declarative
DEF	definite article
DIST	distal
E	exclusive
E	event (time)
FOC	focus
FUT	future
FUT _{IND}	indefinite future
FUT _{IM}	immediate future
I	inclusive
IMP	imperative
IMPF	imperfective
IMPF _{DEF}	definite imperfective
IMPF _{INDEF}	indefinite imperfective
IMPOST	delayed imperative
IND	indicative
INGR	ingressive
INTS	intensifier
IRR	irrealis
NEG _{FIN}	final negator
NEG _{IN}	initial negator
NFUT	non-future
NPST	non-past
OBL _{IN}	initial obligation
OBL _{FIN}	final obligation
p	proposition
PL	plural
POSNTL	being in a neutral position (sitting)
POSVERT	being in a vertical position (standing)
POSS	possession (actor possesses undergoer)
PROG	progressive
PROP	proper name (person reference)

Abbreviations

PRS	present
PST	past
QUOT	quotative
R	reference time/point
RCP	reciprocal
REAL	realis
RFL	reflexive
RCM	relative clause
S	moment of speech
SEQ	sequential
SG	singular
SIM	simultaneous
U	undergoer
0	marks phonological substance which is morphologically irrelevant
1	first person
2	second person
3	third person
1&2	the first person (A) acts on the second person (U)
()	the content gives additional grammatical information
∅	absence of overt marking
-	morpheme separator
.	separates meaning components of a morpheme
/	indicates alternative meanings of a morpheme
\	the entities separated by this symbol are blended
:	an existing morpheme boundary is not drawn
—	the two morphemes in L1 (object language) connected by this symbol are represented by one morpheme in L2 (meta language)

1 Introduction

1.1 Subject of research

The goal of this study is twofold. In the first step (sections 2 and 3) I will discuss the relevant literature with regard to the strategies languages use to refer to future time, i.e. how future meaning is expressed in language. In a second step (section 5) I will concentrate on future time marking in the Hocąk language. This section is a descriptive contribution to a comprehensive grammar of this language.

1.2 The Hocąk nation and their language

Hocąk is an endangered Siouan language spoken in Wisconsin and Nebraska, USA. Genetically, it is grouped together with Chiwere as a subgroup of the Mississippi-Valley group of Siouan languages¹.

Of approximately 5000 tribal members there are only about 230 speakers left, all of whom are 50 years and older. They acquired Hocąk as their mother tongue and were forced to learn English when they started school. However, semi-speakers (speakers with some limited command of the language with regard to speech production and comprehension) can also be found in younger age groups whose first language is English. Nowadays, Hocąk is only rarely used in either public or everyday communication. However, it is used in ceremonies (ritual speeches), in families among older couples and in conversations of fluent speakers. They usually switch to English when non-speakers or semi-speakers participate in the conversation.

At the time of the first European contact, the Hocąk tribe was geographically distributed in a vast area close to Lake Michigan in what is now Wisconsin².

Today, there are two populations of Hocąk Indians, one group lives in Wisconsin, and another one on a reservation in Nebraska. The Hocąk tribe was split in the last century by US American federal policy which forced them (and other tribes) to leave Wisconsin to eventually live on a reservation in Nebraska. A lot of Hocąks, however, resisted the deportation into this reservation and remained in the woods of Wisconsin. By way of a legal act in the 20th century they were allowed to stay in Wisconsin and to buy land like any white settler. Between the Wisconsin and the Nebraska Hocąks, dialectal differences can be observed³.

By the account of some Wisconsin Hocąks who are still in touch with members of the Nebraska group, there are, at the most, only 12 fluent speakers living on the reservation in Nebraska. Areas with a relatively high population of Hocąk Indians are Wisconsin Dells, Tomah and Black River Falls in Central Wisconsin, Wittenberg in the North of Wisconsin and Madison, Milwaukee, Chicago (Illinois), and St. Paul (Minnesota)⁴.

¹ see for instance http://www.uni-erfurt.de/sprachwissenschaft/Vgl_SW/Hocank/cult_frames.html

² see for instance http://www.uni-erfurt.de/sprachwissenschaft/Vgl_SW/Hocank/geography_frames.html

³ see for instance http://www.uni-erfurt.de/sprachwissenschaft/Vgl_SW/Hocank/cult_frames.html

⁴ see for instance http://www.uni-erfurt.de/sprachwissenschaft/Vgl_SW/Hocank/geography_frames.html

Both the tribe and the language are often referred to by the name *Winnebago*. By way of an official declaration in 1994, the Wisconsin Hocąks switched to their traditional name, whereas the Nebraska group still uses the name *Winnebago*. This designation is of Algonquian origin and was used by the neighboring tribes. It also became the standard term in the anthropological and linguistic literature⁵.

1.3 Previous linguistic research on Hocąk

Linguistically, Hocąk is a poorly described language and has received only a rudimentary scientific treatment. Apart from Amelia Susman's dissertation (1943), a few articles by K. Miner (1979, 1981, 1990) and by Hale and White-Eagle (1980) on the accent system (1943), and a brief grammatical sketch by W. Lipkind (1945), researchers mainly focussed on lexicographical studies. During the 20th century word lists were collected mainly for the reconstruction of the genetic affiliation of this language. The most important of these projects are Kenneth Miner's (1992) unpublished *Winnebago Field Lexicon*, Josephine White Eagle's (1988) *Lexical Study of Winnebago* and Chuck Kingswan's (1993) unpublished *Winnebago Lexicon Starting Kit*. In 1996, Valdis Zeps (University of Wisconsin, Madison) merged the entries of these studies in one lexical file. Various areas of study, such as the dialectal differences between the Wisconsin and the Nebraska group, phonetics, intonation and pragmatics have, however, totally been neglected and need systematic treatment.

At the beginning of the 20th century, the Hocąk tribe has received significant anthropological attention. Paul Radin (1883-1959) was the most outstanding anthropological researcher whose account and description of the culture and history of the tribe is reflected in a number of publications. There are about 100 pages of mythological texts recorded by him.

In order to preserve and revitalize the language, a tribal institution, the Hocąk language center was founded in 1993 in Mauston, Wisconsin. However, the efforts made by the tribe (e.g. language immersion programs at Head Start Centers) seem to fail. A major reason for this is the lack of linguistic knowledge on the part of the language instructors.

Since 1996, PD Dr. Johannes Helmbrecht (currently employed by the University of Erfurt, Germany) has begun to study the Hocąk language in order to fill the gaps in the lexical and grammatical description of this language. He has done research on several grammatical phenomena such as the argument structure of sentences, relative clauses, word classes, sentence coordination and possession⁶.

1.4 Research on future time reference

The notion of future time reference has received particular attention since the 1970s. Researchers who have made considerable contributions to the exploration of this issue are, for instance, Ultan (1978), Fleischman (1982a), Bybee, Perkins and Pagliuca (1991 and 1994) and Dahl (2000b).

An early work on the notion of future is the paper by Ultan (1978). His article discusses numerous (genetically non-related) languages with respect to how they mark

⁵ see for instance http://www.uni-erfurt.de/sprachwissenschaft/Vgl_SW/Hocank/cult_frames.html

⁶ Some of these papers are available under <http://www.bibliothek.uni-erfurt.de/target/assiduelink.html>.

future tense. He offers an in-depth analysis concerning the structural and semantic differences between future tense on the one hand and present and past tense on the other.

Another study on future time reference has been presented by Bybee, Perkins and Pagliuca (1994). Their book discusses in particular the evolution of what the authors refer to as *future grams* (i.e. grammatical formatives used to refer to future time). Their findings result from research carried out on a language sample of 76 randomly selected languages from unrelated genetic groups. This study is a refinement of an earlier work (Bybee, Perkins and Pagliuca 1991) which primarily focussed on the issue of grammaticalization of future grams, i.e. their sources and uses. For this, they surveyed 75 genetically non-related languages. With respect to the analysis of the future markers in Hocak, I found this paper particularly useful.

The most recent work is the article by Dahl (2000b). He approaches the marking of future time in European languages from a typological point of view. Dahl distinguishes predicted, intended and scheduled events as being the three major concepts conveyed with future time reference.

In contrast to the representative samples of the world's languages studied in these papers, Fleischman (1982a) largely limited her investigations to Romance languages. Her work concentrates particularly on the exploration of the development of future grams in these languages.

All of these papers share the argument that the connection between future time reference and the notion of modality is mirrored in the structures that are used to express these concepts: modal elements appear to be the most frequent sources of future grams which in turn give rise to new modal meanings. I found a similar argumentation in the work of Lyons (1977). He, however, goes further by saying that future markers are better analyzed as modal elements than as temporal ones. This analysis then leads him to the conclusion that tense is a kind of modality. I do not agree with his claim and will therefore not follow his analysis.

Further important works considered here are the books from Comrie 1976, Comrie 1985 and Klein 1994. They give a general introduction to how time or temporal concepts can be displayed in language and offer analyses as to how the notions of tense, aspect and mood are related to one another. Similarly, a clear characterization of the correlations between these three grammatical categories can be found in the article by Chung and Timberlake (1990).

1.5 The theoretical background

The function of language is to communicate meanings by using interpersonally available signs. The choice of signs may depend on the language user and/or on the conventions laid down in a language. Language is an activity and therefore a dynamic means of communication which changes over time. This process does not only concern the lexicon but also the grammar of a language.

This study is not based upon a formal model. Instead, the **onomasiological** (or functional) and the **semasiological** (or structural) **strategy** will be used to approach the issue of how languages, in particular Hocak, refer to future time. The former is a method that identifies the structures fulfilling a certain communicative function (e.g.

future time reference), whereas the latter strategy is the approach that is looking for the function(s) of a particular form (e.g. future markers).

In this study I follow the relevant literature and agree that the future is different from both the past and the present in that it usually involves the notion of uncertainty. The close relationship between the two notions of futurity and modality is widely acknowledged. This issue will be discussed at several points below. With respect to this problem, the aim of this study is to explore the linkage between futurity and the notion of modality in the Hocak language.

The works of Bybee, Perkins and Pagliuca (1991 and 1994) are central to this study. In their studies, the notions of tense, aspect and mood are not treated according to the usual categories of tense, aspect and mood. Instead, the authors introduce the notion of *gram* as the basic unit of description. Grams are defined as being grammatical means of a language used to express a certain concept. Tense, aspect and mood are seen as features that characterize the semantic content of a gram (cf. Dahl 2000a:7). As most future forms contain meaning components from more than one semantic domain, they are often polysemous. Since all structural devices used for future time reference (i.e. affixes, stem changes, reduplication, auxiliaries, particles and complex constructions) are subsumed under the notion of gram, I will not be able to make statements about the behavior of one particular form used as future gram. Instead, I will be using this term. With respect to the analysis of Hocak, this term will only be used for the three phonologically related future forms which I sometimes will also refer to as *future markers* or *future morphemes*.

Also, the category of tense is crucial to this study. Tense is one means to express temporal relations, i.e. it relates two time points or intervals to one another. Further structural devices used for temporal reference are time adverbials. In the case of future time reference the temporal relation is established between two events where one of them is located in the future relative to the other event which functions as reference point. Situations that are temporally related to the moment of speech (reference point) are commonly referred to as expressing absolute tense, while situations related to some other reference point are referred to as expressing relative tense. These notions, however, merit a more detailed discussion and receive attention in 2.3.

With respect to Hocak, this study contains some open questions which require further research. A major question that remains unanswered is the conditioning of the distribution of the three future grams.

1.6 Data and method of research

The subject will be approached in two steps. In the first I will be discussing (i) the devices languages use to talk about the future and (ii) the functions of these future grams. This will be approached by means of the onomasiological and the semasiological strategy. In order to illustrate the devices languages use for future time reference, examples from different languages will be used. Most data is taken from the literature. For the analysis of the example sentences (i.e. the assignment of intermorphemic glosses) I used the relevant reference grammars and/or dictionaries⁷. With respect to

⁷ They are marked with * in the reference list.

examples from Russian and Lithuanian, I additionally consulted speakers⁸ of these languages to give a more detailed analysis of the sentences I found in the literature.

The second step will be to present how future time reference is expressed in the Hocak language. The conclusions reached from my research are based on the analysis of sentences from (i) narrative Hocak texts that were recorded during three field trips in 2003 and 2004 by Nils Jahn, Iren Hartman (both Hocak project members) and myself, (ii) (mythological) Hocak texts⁹ that were elicited by Paul Radin during his field trips to the Hocak tribe during 1908-1913, and (iii) sentences in English that consultants were asked to translate into Hocak. For the latter procedure I mainly used the future time reference questionnaire by Dahl (2000d). In order not to influence the speakers with respect to tense marking (in Hocak), the verbs in these (English) sentences are given in the infinitive. As my main consultant, Bill O'Brien, is literate, this elicitation procedure could be applied without any problem. Additional material was provided by data collected by PD Dr. Johannes Helmbrecht during his numerous field trips. This study solely considers the Wisconsin dialect.

The analysis of each sample sentence given here involves at least three representation lines. They give the segmented language data, the intermorphemic gloss and the English translation of the sentence. For Hocak sentences, an additional (orthographic) representation line is used to show the complex morphological changes on the verb.

1.7 Outline

In section 2, I will first take up the general considerations about the conceptualization of time (cf. 2.1) and how it is expressed in language (cf. 2.2, 2.3). I will then discuss the connections between tense and the notions of aspect (cf. 2.4) and modality (cf. 2.5). The relationship between tense and the latter category will receive more attention. Subsequently, the concept of future will be integrated into the framework of time and tense (cf. 2.6). In 2.6, I will return to the issue of the semantic and structural differences between the future and the past which will already have been touched on in 2.2.

In section 3, I will expand the investigation concerning the notion of future with respect to possible sources and uses of future grams (cf. 3.1). Given the fact that modal elements are frequently used to express futurity they receive particular attention: referring to Bybee, Perkins and Pagliuca (1991), I will demonstrate the evolution of modal forms evolving into and developing from future meaning. Finally, I will debate the most frequently expressed future meanings or future types (cf. 3.2).

Section 4 offers a grammatical sketch of Hocak. This is to allow the reader to follow the subsequent discussion on how future time reference is accomplished in this language. I will briefly discuss the phonology (cf. 4.1), some major morphological processes (cf. 4.2), the basic syntactic structure (cf. 4.3), the verbal morphology (cf. 4.4), and the tense system of this language (cf. 4.5).

In section 5, I will first apply the onomasiological approach and discuss the structures used in Hocak to talk about future events (cf. 5.1). Then, the semasiological

⁸ Every elicited sentence cited in the paper is followed by the initials of the speaker in brackets. These speakers are listed in the appendix.

⁹ The text corpus I used is given in the appendix.

strategy will be used in the subsequent sub-section (cf. 5.2) to investigate the distribution (cf. 5.3) and functions of the future markers (cf. 5.4). With respect to the evolution of these future grams (cf. 5.5) I will argue that they undergo an evolutionary process analogous to the development which Bybee, Perkins and Pagliuca (1991) suggest for grams with modal sources.

The last section (cf. 6) summarizes the main arguments of this study.

Except for section 4, each section is followed by a summary.

boundaries of such a macroscopic cycle (cf. Comrie 1985:5). Consequently, single events can be viewed as being on a time line as given in FIGURE 1.

Given the linear concept of time as the more basic one, there are two questions to arise: first, are events fixed points on the time line and second, does time drift past the world or is it the other way around? With respect to the former problem, Prior (1967) answers with *no*. An event *E* is neither intrinsic nor permanent past, present or future but is always located in the past, present or future relative to some other event. Consequently, the temporal location of an event *E_i* may be in the past relative to an event *E_j* but in the future relative to an event *E_k*. Furthermore, an event that now is present, was future at some earlier point and will be past at some later point (cf. Prior 1967:2, 4). In regard to the second issue, the literature discusses the *moving-time* or *moving-event* model and the *moving-ego* or *moving-world* model (see for instance Koschmieder 1929:4ff.; Anderson and Keenan 1990:296 or Fleischman 1982b:324f.) as two possible ways of conceiving time. The former views the world (including the speaker) as a constant unit and the “time as flowing past it from the future into the past” (Anderson and Keenan 1990:296) whereas for the latter, time is constant and the world (and the speaker) is passing through it: the world/speaker comes from the past and goes toward the future. The following FIGURE 2 and FIGURE 3 illustrate these two conceptual perspectives:

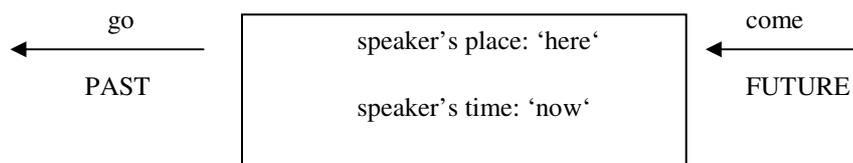


FIGURE 2 The *moving-time* model

(Fleischman 1982b:324)

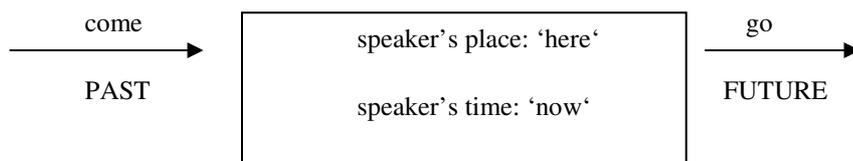


FIGURE 3 The *moving-ego* model

(Fleischman 1982b:323)

In the *moving-time* model the future event comes toward the speaker. Languages using this concept favor expressions such as ‘the coming week’. The *moving-ego* metaphor, however, results in forms like ‘the week ahead’ (cf. Anderson and Keenan 1990:296; Fleischman 1982b:325). In this case the speaker goes toward the future.

The verb meanings ‘come’ and ‘go’ are associated with these two models. Depending on whether time is conceived as a moving or a constant entity, the verb used to refer to future time varies. The use of these verbs will be discussed in more detail in 3.1.3.

Languages vary with respect to (i) the temporal precision (i.e. remoteness distinctions and the capacity for accurate time reference such as the English expression

this morning at three o'clock) and (ii) the relative weight they assign to the lexicon or to the grammar to locate an event in time (cf. Comrie 1985:7).

2.2 Tense and tense systems

To locate an event in time this event must be related to some reference point. Since we do not know where the beginning or ending of time is, we cannot relate an event to either one of these temporal points. Instead, some other reference or orientation point needs to be established. As FIGURE 1 suggests, this reference point is commonly the moment of speech (cf. Comrie 1985:13f.). Bühler (1934:102) refers to this temporal zero point as the *hier-jetzt-ich-Origo*. For the sake of simplicity it is here assumed that the temporal and spatial location of speaker and hearer are identical (i.e. the participant roles of writers and readers are not taken into account).

An event cannot only be located in time but can also be analyzed in terms of its internal temporal structure. Following Bull (1968), I assume all events to be time intervals: “All events take place in time and take time to take place” (Bull 1968:12). However, this is not to say that all events are generally conceived as intervals, consider, for instance, the temporal stretch of the slam of a door (as compared to having dinner, writing a book etc.)¹⁰. FIGURE 4 illustrates this by adopting the structure of FIGURE 1:

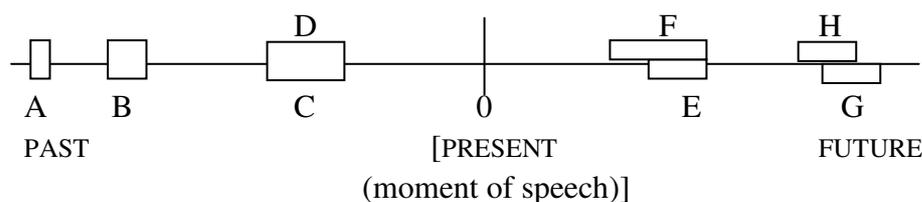


FIGURE 4 Representations of situations relative to the moment of speech (Comrie 1985:6)

In FIGURE 4, the situations *A*, *B*, *C* and *D* are located prior to the moment of speech, i.e. in the past, whereas *E*, *F*, *G* and *H* are placed in the future. Situation *A* precedes situation *B* which is longer in duration than *A*. The situations *C* and *D* cover the same time stretch, while situation *E* overlaps only partly with situation *F*. A part of the time stretch occupied by the situation *H* is also occupied by situation *G*. However, there is also a part of the time stretch of *H* that is not part of *G* and *vice versa*. The temporal extension of an event, its frequency or degree of completion, is subject to what is commonly referred to as *aspect* and will be discussed briefly in 2.4.

Given the moment of speech as the orientation point (hereafter *S*), three basic temporal concepts arise: present, past and future. The notion of present expresses that the event happens simultaneously with the moment of speech, while ‘past’ and ‘future’ indicate that the event happened prior to the moment of speech and subsequent to this reference point respectively. These three temporal relations between *S* and *E* can be represented as follows:

¹⁰ In contrast to the more common notion of *time point*, the term *time interval* is marked. Its use may distract the reader from the actual statement made in the utterance where this term occurs. Therefore, I will be using this term only when the distinction between a time point and a time interval makes a significant difference to the statement being made. Otherwise, the term *time point* will be used.

present	E simul S	
past	E before S	
future	E after S	(cf. Comrie 1985:122f.)

Given the distinct concepts of past, present and future, it seems natural for languages to distinguish past, present and future tense respectively. Languages, however, vary in regard to the tenses they distinguish. They also vary with respect to the devices they use to mark the distinct tenses. They may use inflection forms, periphrastic constructions, suppletive forms or stem changes (cf. Klein 1994:121). With respect to morphological devices, languages can be classified as having a tripartite tense system (past vs. present vs. future), a binary tense system (past vs. non-past or future vs. non-future) or no tense system. (The following remarks will not attend to the latter case.) The vast majority of languages show a binary rather than a tripartite tense system. Before I discuss these different tense systems, the notion of tense should be defined first. **Tense** is here understood as

[...] part of the deictic frame of temporal reference: it grammaticalizes the relationship which holds between the time of the situation that is being described [hereafter *event time*] and the temporal zero-point of the deictic context [hereafter *reference time*] [...]. (Lyons 1977:678) [brackets JL]

Klein (1994:6) uses the terms *time of utterance* and *topic time* to denote what has just been introduced as (deictic) reference time and event time respectively.

The major function of tense, as Fleischman (1982a) argues, is the linear sequencing of events in an utterance. It should be noted, however, that tense does not always mirror real-time sequences. For grammatical or expressive purposes real-time sequences are sometimes ‘dislocated’ (cf. Fleischman 1982a:8). In the English sentence *I wish it wasn’t raining*. (Fleischman 1982a:9) the actual time of the event is present, while the tense is past.

In modern logic, tense is not (viewed as) a feature of the proposition of an utterance. Logicians claim that a truth-value can only be assigned to the proposition of a sentence if a time operator is connected with this sentence (cf. Vater 1994:17). They use a set of tense-operators that put the proposition in either past, present or future time. Along these lines, the proposition (p) ‘it BE raining’ may have been true for some time interval in the past (PST(p)), may be true in the moment of speech (PRS(p)) or will be true at some future time (FUT(p)). Utterances containing this proposition may be *It was raining*, *It is raining* or *It will be raining*, respectively (cf. Lyons 1977:810).

While the definitions of past (E before S) and future tense (E after S) seem to be unproblematic, the notion of present tense is not so clear. The use of present tense actually requires literal coincidence with the moment of speech. This condition is fulfilled with performative utterances such as *I name this ship the ‘Titanic’* and with comments on the current situation such as *Red Rover crosses the finishing line*. Mostly, however, present tense is used to refer to situations that last longer than the present moment but which nonetheless include it. An example for this is *The author is working on chapter two* (cf. Comrie 1985:37).

I will now turn to the different **tense systems**. A language with a **tripartite tense system** is Lithuanian, as illustrated by E1 to E3:

E1 **dirb-a-u**
LIT work-PST-1.SG
'I worked/I was working.'

E2 **dirb-u**
LIT work-1.SG
'I work/I am working.'

E3 **dirb-si-u**¹¹.
LIT work-FUT-1.SG
'I will work/I will be working.' (cf. Chung and Timberlake, 1990:204)

(Morphologically marked) **binary tense systems**, however, occur more frequently. The most basic distinction is between past and non-past: Most "tensed" languages (i.e. languages that have tense) treat future vs. non-future and present vs. non-present¹² distinctions with less importance than past vs. non-past distinctions (cf. Lyons 1977:809). Binary tense systems can be represented by the following formulae:

non-past E simul S or E after S
non-future E before S or E simul S,

or, in other words:

non-past E not-before S
non-future E not-after S (cf. Comrie 1985:124)

A tense system that shows a distinction between past and non-past may be observed in Yidiñ (a Pama-Nyungan language, Australia). For examples, compare E4 and E5:

E4 **ŋayu gundi-ŋ**
YID I return-PST
'I have returned.'

E5 **ŋayu gundi-ŋ-ala**
YID I return-NPST-now
'I'm returning now/I'm about to return now.'
(cf. Chung and Timberlake 1990:205)

Such a two-way tense distinction, however, is not only made in what one might call an exotic language. English and German, for instance, also show such a division. In English, past and non-past are morphologically marked (e.g. *I go home* vs. *I went home*,

¹¹ Chung and Timberlake (1990) give *dirbsau* instead of *dirbsiu*. According to TD, there is no future marker *-sa* in Lithuanian.

¹² I have not come across a language that shows a split tense system opposing the present to a non-present category covering temporal reference to the past and the future.

or *I bake a cake* vs. *I baked a cake*), while future reference is expressed by other devices (i.e. by the temporally used modal auxiliary *will*).

Similarly, in German, present (cf. E6) and past (cf. E7) are marked on the verb, whereas future does not require specific morphological marking but only a temporal adverbial that locates the event in the future (cf. E8).

E6 Ich **gehe** in die Stadt.
GER ‘I go to town.’

E7 Ich **ging** in die Stadt.
GER ‘I went to town.’

E8 Ich **gehe morgen** in die Stadt.
GER ‘I go to town tomorrow.’

To express future time reference in German, one can also use the auxiliary *werden* (cf. E9) which Vater (1975) analyzes as a modal auxiliary with limited temporal meaning.

E9 Ich **werde** (morgen) in die Stadt gehen.
GER ‘I will go to town (tomorrow).’

In contrast to past and present, future states of affairs can neither be remembered (like past events) nor can they be experienced (like present events) (cf. Dahl 2000b:309; Fleischman 1982a:29). In other words, future events have no material existence. Therefore, the reference to future time usually implies the notion of uncertainty and must therefore not be regarded separately from mood. (I will return to this issue in 2.5.) Only a few languages, however, grammatically mirror this conceptual difference between past and present on the one hand and future on the other. Example languages are Lakota, a Siouan language (cf. E10 and E11), Dyirbal, a Pama-Nyungan language (Australia) (cf. TABLE 1) and Takelma, a Penutian language (cf. E12 and E13):

E10 ma-khúžj
LAK 1.SG-sick(NFUT)
‘I was sick/I am sick.’

E11 ma-khúžj **kte**
LAK 1.SG-sick FUT
‘I will be sick.’

(cf. Chung and Timberlake 1990:206)

In Lakota non-future is not overtly marked but indicated by the absence of the future marker. In contrast to this language, Dyirbal overtly marks both future and non-future, cf. TABLE 1:

stem ¹³	future	non-future
balgal ‘hit’	balgaŋ ‘will hit’	balgan ‘hits/hit’
baniy ‘come’	baniŋ ‘will come’	baniŋu ‘come/came’

TABLE 1 Future and non-future inflection in Dyirbal

(Dixon 1972:55)

Takelma behaves differently than both Lakota and Dyirbal in that future reference additionally requires the use of a verbal stem indicating the speaker’s uncertainty as to whether the event stated will take place (marked with a so-called “irrealis” marker). Contrary to future time reference, non-future reference requires the use of a verbal stem with “realis” meaning, cf. E12 and E13 respectively:

E12 **yaná- t’ē**
 TAK go.IRR-1.SG.FUT
 ‘I will go.’

E13 **yān-t’ē’**
 TAK go.REAL-1.SG.NFUT
 ‘I went/am going/am about to go.’ (cf. Chung and Timberlake, 1990:204f.)

In Takelma, the future is used for non-immediate events in the future, whereas events in the past, on-going events in the present, and future events that are imminent in the present are expressed by non-future (cf. Chung and Timberlake 1990:205).

As far as tensed languages are concerned, two phenomena merit a note. First, they may have tenseless constructions as in *Paul promised to give me ten pounds*. There is no tense marker that locates the second event, Paul’s giving, in time. Our knowledge of promises, however, allows us to deduce that this event (if it happens) happens after Paul’s promise (cf. Comrie 1990:52). Second, they allow timeless statements. Evident examples can be found in mathematics (e.g. *Two and two equals four.*) and theology (e.g. *God is just.*). Sentences with generic meanings (e.g. *Pigs are mammals.*) are also considered to be timeless expressions (cf. Lyons 1977:680).

2.3 Absolute and relative time reference

Temporal relations hold between two temporal points which Klein (1994) refers to as *relata*. Usually, one relatum functions as the reference or orientation time/point¹⁴ for the second relatum. The reference time is given either deictically (i.e. the moment of speech) or through the context (i.e. not the moment of speech). The second relatum is then placed in time relative to this orientation time, i.e. before, after or simultaneous. Klein calls this second relatum *theme*. In the literature this notion is also referred to as *event time* or *topic time* (cf. Klein 1994:65f.). Depending on whether the reference time

¹³ The difference in conjugation is phonologically conditioned. The inflection of a verb depends on whether it ends with /l/ or /y/ (cf. Dixon 1972:55).

¹⁴ Reichenbach (1947:288) introduced the “point of reference” for the analysis of complex tenses such as pluperfect and future perfect.

is the moment of speech (*S*) or some other reference point (hereafter *R*), the literature refers to it either as *absolute tense* or *relative tense* respectively. These notions are used to denote what I will refer to as *absolute* and *relative time reference*. I find the term *tense* inappropriate since temporal reference cannot only be expressed in languages which have tense but also in languages lacking this grammatical category. Whereas many languages do not have tense, all natural languages can be assumed to have time adverbials which allow absolute (cf. E8) and relative time reference (cf. E16). In addition, the terms *absolute* and *relative* are misleading since all temporal relations are relative, no matter whether or not the reference point is the moment of speech. However, in the interest of simplifying discussion, these terms will be used.

In the case of absolute time reference (sometimes also referred to as *primary tense*), *E* is viewed in relation to *S* (cf. Comrie 1990:126). This relation *E relative S* can be expressed by past, present and future tense. In a sentence like *Anna left her apartment*, for instance, the verb is in past tense and relates this event to the moment of speech, i.e. *E* before *S*. Time adverbials such as *yesterday* or *last Sunday* can specify the temporal location in the past. In languages which lack tense, absolute time reference can be expressed solely through the use of time adverbials.

In the case of relative time reference (sometimes also referred to as *secondary tense*), *E* is related to some intervening reference time *R*. E14 illustrates relative past time reference:

E14 When Anna came to the party, Paul had left. (cf. Klein 1994:25)

The event expressed in the main clause, Paul's leaving (*E*), is located in time prior to the moment of speech (*S*), but it is also placed prior to some other reference point, Anna's coming to the party (*R*). Time adverbials such as English *on the weekend* can also function as reference points.

Possible relations between *E* and *R* can be expressed through the following formulae:

relative present *E* simul *R*
relative past *E* before *R*
relative future *E* after *R*,

or,

relative non-past *E* not-before *R*
relative non-future *E* not-after *R* (cf. Comrie 1985:125).

E14 also illustrates absolute time reference in that the event in the subordinate clause (Anna's coming to the party) is related to the moment of speech. Since the verb is in past tense this event is located in time prior to *S*. The two relations expressed in this sentence can be summarized as follows: *E relative R relative S* (cf. Comrie 1990:126). Systems with such a combination of absolute and relative time reference are very common across languages (cf. Comrie 1985:65): an event *E_i* is related to the moment of speech and is in turn the reference point *R* for an event *E_j*.

Some languages, including English, express this combination with what is commonly referred to as *pluperfect* and *future perfect* (cf. Comrie 1985:125f.). The pluperfect ('past in the past') is illustrated in E15 (and E14). The reference time is in the past, and the event (E_j) is located prior to this reference point:

E15 [He said]_{Ei/R} [that he had seen her]_{Ej}. (cf. Ultan 1978:85)

In the case of future perfect, the reference time and the event time are located in the future. The event is completed and precedes R . E16 gives an example of future perfect:

E16 [I will have finished the manuscript]_E [by the end of this month]_R.
(Comrie 1990:69)

The event E , my finishing, is located prior to R which is given by the time adverbial *by the end of this month*. Using formulae, pluperfect and future perfect can be represented as follows:

pluperfect E before R before S or S after R after E
future perfect E before R after S or S before R after E (cf. Comrie 1985:125ff.)

In sum, tense is a deictic category and expresses the relationship between two temporal points or intervals, i.e. it represents one possible means to relate events directly (absolute time reference) or indirectly (relative time reference) to the moment of speech (cf. Fleischman 1982a:10).

In addition to the notions of absolute and relative time reference, two other phenomena are often found in the literature and therefore deserve a note: the **future in the future** and the **future in the past**. The former term denotes a situation where an event "is located in the future relative to some reference point that is itself in the future" (Comrie 1985:74). An example sentence from English shall illustrate this case: *When you come back, I will eat up*.

The sentence *Paul left for the front; he would never return* (cf. Comrie 1985:75) is an example to illustrate the notion of future in the past. While the event in the first clause establishes a reference point in the past, the event in the second clause is located in the future relative to this reference point. Both phenomena the future in the future and the future in the past can be represented respectively through the following two formulae:

future in the future E after R after S
future in the past E after R before S (cf. Comrie 1985:128).

With respect to Hocak, devices used for absolute and relative time reference will be discussed in 5.1.1 and 5.1.2 respectively.

The following two sections will be dealing with two other grammatical categories involved in the linguistic representation of time, viz. aspect and mood. Languages differ in regard to the semantic oppositions that are grammaticalized under tense, aspect and mood. All three categories have a range of functions of which some

may not be within the scope of the definition of the category concerned. The boundaries of these categories are often blurred (cf. Fleischman 1982a:11).

2.4 Tense and aspect

While tense expresses the relationship between the event time (or topic time) and the reference time, “aspect concerns the relation between TT [topic time] and TSit [time of the situation]” (Klein 1994:6). The topic time is the time at which the event happens, whereas the time of the situation is the time for which a claim is made, i.e. the internal temporal structure of the event (cf. 2.2).

Before I attend to the connection of tense and aspect in more detail, it should be noted that the traditional grammatical terminology does not always distinguish between these terms but often subsumes aspect under the notion of tense. In some cases it is difficult to separate these concepts: past tense is connected to the notion of perfectivity as past events are usually referred to after being completed (cf. Dahl 2000a:16), while the notion of present is often linked to the imperfect, progressive and/or habitual aspect (cf. Comrie 1985:38f.; Chung and Timberlake 1990:207).

The present tense in German, for example, does not only mark simultaneity but also allows habitual reading as in *Er arbeitet schwer*. ‘He is working hard.’ or ‘He works hard.’. This example from German also demonstrates that tense grams may have more than one use, or, in other words, may receive different interpretations in different contexts. (This issue will be discussed in detail for what is commonly called *future tense* in 3, and, with reference to the Hocak language in 5.)

Aspect differs from tense in that it is nondeictic. It grammatically expresses the internal temporal structure of an event and conveys information concerning the event’s duration, frequency, completion etc. The example E17 from Russian illustrates the use of the perfective aspect along with the past tense marker:

E17 on **pro-čital** knigu
RUS he PERF-read.3.SG.PST book.ACC
’He finished reading the book.’ (EJ)

Compared to tense, aspect is more frequently expressed in the languages of the world. Its forms often evolve into tense markers (cf. Fleischman 1982a:11f.). The converse, however, is not true. Aspectual meaning may also be expressed lexically through the verb. In such cases ‘aspect’ is referred to as *Aktionsart*. In English, for example, the verb *sleep* conveys durative meaning while *warm up* expresses inchoativity.

2.5 Tense and modality

The notion of modality is closely connected to tense. This linkage is especially obvious in the case of future time reference. While past and present events are definite as they have already taken place, future events have not yet occurred and therefore are uncertain. Comrie (1985) summarizes this as follows:

[...] one might argue that while the difference between past and present is indeed one of tense, that between future on the one hand and past and present on the other should be treated as a difference of mood rather than one of tense. (Comrie 1985:44)

In most cases, future is not a purely temporal concept but involves modal elements of meaning (cf. Lyons 1977:677f.). In some languages, this relationship is represented by an identical marker for future and potentialis (e.g. Lakota) (cf. Chung and Timberlake 1990:206) or for future and intentional (e.g. Hocak). Therefore, it is often argued that future is more a modal category “with important temporal implications” (Bybee, Perkins and Pagliuca 1994:280) and less a temporal category.

In the literature, the notions of **mood** and **modality** are often confused. Following Fleischman (1982a), I distinguish these notions. *Modality* is a semantic category dealing with the speaker’s attitude toward what s/he uttered. Halliday (1994) puts this as follows:

The Finite element is inherently either positive or negative; its polarity does not figure as a separate constituent. [...] However, the possibilities are not limited to a choice between *yes* and *no*. There are intermediate degrees: various kinds of indeterminacy that fall in between, like ‘sometimes’ or ‘maybe’. These intermediate degrees [...] are known collectively as MODALITY. (Halliday 1994:88) [italics JL]

Mood, in contrast, is a grammatical category. It subsumes the notions of indicative, conjunctive, subjunctive, imperative and other subtypes such as

[...] the conditional in French for expressing a possible reality, the optative in Greek, Turkish, and Finnish for expressing fulfillable wishes, the dubitative in Turkish for expressing a suspicion, the energetic in Arabic for expressing an emphatic assertion. (Bußmann 1996:312f.)

Modality is not exclusively expressed through mood (i.e. morphologically). It can also be expressed by syntactic (e.g. English *would*, *can* or *want*) or lexical means (e.g. by sentential adverbials such as in English *maybe* or *probably* (cf. Bußmann 1996:307f., 313). A set of verbs with modal uses is given in E18 and E19 from English and French respectively:

E18 can/could; will/would; shall/should; may/might; ought; must;
dare; need

E19 pouvoir; devoir; falloir; savoir; vouloir (cf. Fleischman 1982a:15)
FRE

In general, two types of modality are distinguished, **epistemic modality** and **deontic modality**. The term *epistemic* refers to the degree the speaker thinks the event s/he utters is likely to happen. In other words, epistemic modality concerns the speaker’s commitment to the likelihood (i.e. the possibility or probability) of the proposition of her/his utterance. The notion of deontic modality subsumes the notions of obligation, volition (cf. Fleischman 1982a:14f.), permission, prohibition and exemption (cf. Lyons 1977:823, 832).

Contrary to this two-way distinction of modality in epistemic modality and deontic modality (or agent-oriented modality)¹⁵, Bybee, Perkins and Pagliuca (1994)

¹⁵ The term *deontic modality* is not used by Bybee, Perkins and Pagliuca (1991). They refer to this notion as *agent-oriented modality*, “denoting agent-oriented constructions such as desire or obligation” (Bybee, Perkins and Pagliuca 1991:19).

introduce a third domain of modality, viz. **speaker-oriented modality**. Speaker-oriented modality “relate[s] the utterance to the speech situation by signalling what the speaker wants to accomplish with the utterance“ (Bybee, Perkins and Pagliuca 1991:24). Such utterances are usually directives or commands. Grams with this function are commonly inflectional, while agent-oriented modalities are usually expressed lexically or through particles or auxiliaries and in only a very few cases through inflection (cf. Bybee, Perkins and Pagliuca 1991:24; Bybee, Perkins and Pagliuca 1994:262). This can be considered as an indication that grams expressing speaker-oriented modalities show a higher degree of grammaticalization. I will return to the notions of epistemic, agent-oriented and speaker-oriented modality in 3.1.1.

In accordance with Lyon’s analysis of tense as a feature added to the proposition of an utterance (cf. 2.2), I view modality in the same way in that there is a set of modal operators that attribute modal concepts to propositions. The proposition ‘it BE raining’ may then be expressed in utterances such as *It may be raining*.

2.6 Future in the framework of time

The distinction of past, present and future has been the traditional conceptualization of time. In traditional grammars, in particular in those based upon Greek or Latin, this tripartition has been assumed to be reflected in tense systems (cf. Fleischman 1982a:22). As it has been discussed in 2.2, not many languages distinguish past, present and future tense. Whereas past vs. non-past systems occur frequently in languages, future vs. non-future distinctions are rare. European languages, for instance, often show either a weak future tense or lack this category¹⁶ (cf. Comrie 1985:48).

With respect to the illustration in FIGURE 1, future time is the time located to the right of the present moment, i.e. it follows the moment of speech. However, there are no similarities between the future and the past. They differ with respect to both their conceptual and structural representation.

Following Lyons (1977), statements about the past are either true or false at the moment of their utterance whereas statements about the future are “neuter”¹⁷, that is they are neither true nor false but “indeterminate in truth-value” (Lyons 1977:820) at the time of utterance. This argument leads Lyons to the conclusion that the selection of tense depends more on the epistemic status the speaker wants to convey with the utterance than on the temporal location of the statement. Thus tense, as Lyons (1977:820) suggests, is better referred to as the “grammaticalization of epistemic modality” (i.e. as mood). As I indicated in the introductory section I do not agree with this thesis. The major reason for this is the fact that not every instance of future time reference implies a modal meaning (consider predetermined or scheduled future events such as *Tomorrow is Tuesday*. or *The train will leave at eight o’clock*. respectively).

However, there are also a number of structural differences that indicate the secondary status of future time: (i) most languages do not use an explicit future paradigm, (ii) languages that have future tense do not show a finer grading in future than they do in the past, (iii) future time reference is more overtly marked than present

¹⁶ In European languages, devices used for future time reference are seldom fully grammaticalized (cf. Dahl 2000b:315:325).

¹⁷ This term is used by Prior (1967:135).

and past (cf. Fleischman 1982a:22f.), and (v) future forms also show little stability which is primarily due to the continual rise and fall regarding the salience of the different meaning components of the gram. Regarding the latter aspect, the more salient a gram's modal or aspectual meaning, the less temporal it is and *vice versa*. A form may, for instance, increase in its temporal meaning and thus decrease in its modal meaning. In consequence, another form will become more temporal and less modal or aspectual. Such a fluctuation may to some extent cause a re-organization of the system of future reference (cf. Fleischman 1982a:153). In addition to these differences, the distinction of future vs. non-future is frequently neutralized in subordinate or negative clauses, in participles and nominalizations, in association with all moods other than indicative, and in various other constructions (cf. Lyons 1977:816; Ultan 1978:94-101).

Studies in language acquisition support the thesis of future being less fundamental in that children appear to acquire present or past earlier than future (cf. Fleischman 1982a:22f.).

The literature frequently refers to future time reference as being reference to non-factive or irrealis events: future events are often defined as events that have not yet occurred but that are "still within the realm of thought" (Mithun 1995:385).

Although the term *irrealis* is frequently used by many linguists, its usefulness is doubtful as it comprises more than one notion: it may denote prohibition, obligation, conditional, counterfactual, volition, desire, intention, imperative and future (cf. Bybee 1998:164; Mithun 1995:384). It also involves the notions of likelihood and the lack of knowledge (cf. Fleischman 1982a:129). Bybee (1998) has not found widespread crosslinguistic evidence for grams corresponding directly to the distinction between real and unreal situations.

Also, languages seldom distinguish between (factive) statements about the future and subjectively modalized predictions (cf. Lyons 1977:816f). Fleischman (1982a:ch. 6) gives a detailed discussion about the connection between future and subjunctive with respect to Romance languages. Many languages, including Spanish and French, use the subjunctive besides future tense forms to express future time reference (cf. Fleischman 1982a:134). For an example, see E20 from French:

E20 Je souhaite que tu viennes à l'heure.

FRE 'I want you to come in time.'

(AB)

2.7 Summary

The starting point of this section was the discussion on the conceptualization of time. Cultures have been observed to have either a linear or a cyclic time concept. In contrast to the latter, the former has been found to be grammatically expressed in language. Given a linear conceptualization of time, three basic temporal notions arise: present, past and future. These concepts may be expressed by present, past and future tense respectively. However, it has been shown that binary tense systems distinguishing past and non-past or future and non-future outnumber such tripartite tense distinctions by far. Systems opposing past to a non-past category are the most frequently occurring tense distinctions.

At first sight, past and future seem to behave similarly except for the temporal concepts they refer to. They have very little in common, however, and are both

conceptually and structurally distinct from one another. As far as the conceptual status is concerned, while past time reference expresses a temporal concept, the reference to future time is more associated with the notion of modality. With respect to the framework of time, future has a secondary status. This is indicated by a number of structural aspects (e.g. the instability of future grams and their relatively low degree of grammaticalization). These findings are in accord with what has been found in studies dealing with language acquisition, i.e. future time reference is acquired last by children.

Tense, as a central term of this study, has been defined as a deictic category that is used to relate two events to one another. One of these two events functions as the reference point to which the second event is related. Depending on whether or not this reference point is the moment of speech, these relations are referred to as expressing either absolute or relative time reference.

The connections of tense, the grammatical category of aspect and the semantic category of modality have also been subject to discussion. The focus was on the relationship between tense and modality, and particularly on the linkage between modality and future time reference. The strong logical connections between the future concept and the various modal notions often subsumed under *irrealis* give rise to the question whether future is better analyzed as a temporal or as a modal category (cf. Ultan 1987:106). I will take up this issue in the following sections.

3 Future time reference

3.1 Sources and uses of future grams

Since future grams have different sources, they often vary with respect to their uses. Their sources usually do not have a temporal meaning. During the course of grammaticalization, however, the temporal elements grow stronger. The original meaning of a gram does not immediately get lost when new meanings arise but is often retained for some time and exists parallel to the new-developed meaning. Therefore, future grams are commonly polysemous. Grams may take on new meanings in a number of ways: (i) meanings that have originally been pragmatically inferred may become part of the meaning of a gram (cf. Bybee 1998:269), (ii) grams may be used in more and more contexts and consequently undergo a semantic generalization, or (iii) grams may absorb meaning from the context (cf. Bybee 1998:261). The meaning of one such meaning component may be more highlighted than another in a given context.

Bybee, Perkins and Pagliuca (1994) mention the following structures to be the main sources of future grams: **modal forms** (notably agent-oriented modalities), **aspectual forms** (notably elements marking present tense, continuous, habituality and imperfective), constructions involving **motion verbs** and **time adverbials**.

It is not uncommon for a language to have more than one gram with a future use. This is supported by Bybee, Perkins and Pagliuca (1994). In their sample, they found 129 future grams distributed in 63 languages. This can be put down to the independent development of grams from different sources and/or at different stages (cf. Bybee, Perkins and Pagliuca 1994:243). These grams are not in competition as long as they are used in different ways. Two grams with similar future uses may differ in their retained non-future uses or in their late-developing non-future uses (cf. Bybee, Perkins and Pagliuca 1994:244).

Futures are expressed by both inflexional and periphrastic expressions. As far as the grammaticalization of future grams is concerned, it has been demonstrated by Bybee, Perkins and Pagliuca (1991) that there is “a dynamic correlation of generalization of meaning¹⁸ with concomitant reduction in the formal expression of future grams” (Bybee, Perkins and Pagliuca 1991:47). With respect to the degree of grammaticalization, one needs to bear in mind, however, that, depending on the morphological type of a language, grams may be more or less grammaticalized in both form and meaning (cf. Bybee, Perkins and Pagliuca 1991:41). Grams in isolating languages tend to show a lower degree of grammaticalization than grams in agglutinating languages which in turn are less grammaticalized than grams in inflectional languages (cf. Bybee, Perkins and Pagliuca 1991:44f.).

¹⁸ i.e. the development from a more concrete (lexical) meaning to a more abstract or grammatical meaning

3.1.1 Modal forms

Future forms are more likely to have modal uses than aspectual or goal-oriented uses (expressed by the motion verbs ‘come’ and ‘go’). Agent-oriented modalities (expressing desire, obligation or ability) are the most common (modal) sources for future grams that were found in the language sample of Bybee, Perkins and Pagliuca (1991). The modal category is the only source category that may in turn evolve from futures (cf. Ultan 1978:118).

The following list, in descending order of probability, contains the modalities (agent-oriented and speaker-oriented modalities) most frequently used to refer to future time:

- obligation¹⁹ (‘must’, ‘have to’)
- imperative
- polite request
- optative
- volitive and desiderative (‘want’) (cf. Ultan 1978:116)
- Forms expressing ability (‘able to’) and attempt (‘try’) are less common future devices.

Some of these modalities will be discussed in more detail below. E21 and E22 from Danish illustrate **obligation-derived future** meanings:

E21 du **skal** ga nu
DAN 2.SG AUX go now
‘You must go now.’

E22 jeg **skal** komme i_morgen
DAN 1.SG AUX come tomorrow
‘I will come tomorrow.’ (cf. Bybee, Perkins and Pagliuca 1994:259)

In Danish, the obligation meaning is commonly expressed by the co-occurrence of *skal* and the infinitive (cf. Diderichsen 1979:58).

Other lexical sources used to express future and obligation meaning are ‘owe’, ‘have’ (e.g. Danish), ‘get’, ‘obtain’, ‘catch’ (Lahu, a Tibeto-Burman language²⁰), ‘be’, ‘become’ (e.g. Slave), ‘need’ (e.g. Modern Greek) or ‘fall’, ‘befall’ (Baluchi, an Iranian language²¹).

Most Germanic languages also use de-obligative constructions employing the meaning of ‘shall’ (cf. Dahl 2000b:319f.). Some Balkan languages behave similarly in

¹⁹ Bybee, Perkins and Pagliuca (1994) distinguish between strong and weak obligations in which the former is defined as compelling “one to follow the social or moral course set by a belief system or social norms”. A weak obligation, in contrast, “merely counsels or recommends following the course” (Bybee, Perkins and Pagliuca 1994:264).

²⁰ cf. Moseley and Asher 1994, map 48

²¹ cf. Moseley and Asher 1994, map 56

that they employ future constructions based on the verb ‘have’ of which is said that it probably originates from obligational constructions (cf. Dahl 2000b:323).

Apart from obligation-derived futures, the employment of “**desire future**” grams is another common (agent-oriented) pathway to future. Tok Pisin is one of the languages that uses forms with the meaning ‘desire’ to refer to future time, cf. E23 and E24:

E23 ju **laik** kilim pig
TOK 2.SG want injure/kill pig
‘You want to kill a pig.’

E24 em i **laik** wokabout
TOK 3.SG is want walk
‘He is about to walk.’ (cf. Bybee, Perkins and Pagliuca 1994:255)

Verbs expressing desire are commonly used as future grams in many languages of Western Europe, such as English, Spanish, Portuguese or French. In English, for instance, the verb meaning ‘want’ has also given rise to the English *will*-future which is used for both intention-based and prediction-based future time reference (cf. Dahl 2000b:319). Such de-volitive constructions are also found in other Germanic languages such as Danish and Norwegian (cf. Dahl 2000b:319). Fleischman (1982a:134) discusses the French verbs *vouloir*, *devoir* and *penser* (expressing volition, obligation and intention respectively) as possible future auxiliaries of this language (cf. 2.5). The future use of *vouloir* ‘want’ can be observed in E25:

E25 Il ne veut pas pleuvoir.
FRE ‘It does not want to rain.’ (cf. Fleischman 1982a:144)

Bybee, Perkins and Pagliuca (1994:255f.) argue that futures derived from forms meaning ‘desire’ (i) have nuances of willingness and (ii) express intention somewhere on their paths.

Few languages use “**attempt meanings**” to refer to future time. One such language has been found in the sample of Bybee, Perkins and Pagliuca (1994). West Greenlandic uses a suffix meaning ‘try’. As the following examples show, this device too is polysemous and branches into attempt-expressing use (E26) and future use (E27):

E26 qitin-**niar**-punga
WG dance-try-1.SG.IND
‘I tried to dance.’

E27 sialuk-lir-**niar**-puq
WG rain-INGR-try-3.SG.IND

‘It is going to rain.’

(cf. Bybee, Perkins and Pagliuca 1994:249)

As mentioned earlier, future markers are often polysemous as the original meaning of the gram exists parallel to the new-developed future meaning (or, the late-developing uses exist parallel to the future meaning that has emerged). The following example from German illustrates the modal use (indicating supposition) of the otherwise future marking auxiliary *werden*:

E28 Er wird der Mörder sein.

GER ‘I guess he is the murderer.’

(cf. Ultan 1978:104)

Other languages that use future markers to indicate supposition are, amongst others, French, Dutch, Lithuanian or Dakota, a Siouan language (cf. Ultan 1978:104). In most Romance languages, the so-called “future tense markers” comprise modal elements²² (cf. Ludlow 1999:157).

Also, **imperatives** may serve as future devices. Directives are necessarily connected with future time. At the time of utterance, the proposition of a directive (obligation) is still to be carried out. Directives always convey the speaker’s will which, by uttering it, is imposed on another agent who then is obliged to make the proposition of the utterance come true. In other words, the subjective attitude of the speaker merges with the imperative meaning (cf. Lyons 1977:817). In contrast to the other future devices, the imperative is not reported to be a future source but a late-developing use evolving from future grams. Bybee, Perkins and Pagliuca (1994:273) argue that the imperative meaning develops from the future meaning as the imperatives of future grams show properties of what the authors refer to as *primary futures*.²³ They therefore propose the following development: obligation/desire > future > imperative. Particularly, future grams that have not undergone many grammaticalization processes are reported to have an imperative use (cf. Bybee, Perkins and Pagliuca 1994:280).

Most forms used to mark futurity have been observed to develop from modals. Therefore, instead of analyzing forms with modal and future meaning as either a modal or a temporal element, Bybee, Perkins and Pagliuca (1991) propose that modality and futurity are meaning components of ONE form or gram.

The retained meanings of future grams do not only indicate where the gram comes from but are also helpful in terms of determining their semantic development. Agent-oriented modalities are the most common sources of future grams. With respect to these devices, Bybee, Perkins and Pagliuca (1991:26-29) distinguish four semantic stages of development for future grams (illustrated in FIGURE 5). In all four stages, future is (at least) one meaning component of the gram. Except for stage 3, futurity is often rather implied than explicitly expressed. Bybee, Perkins and Pagliuca start from grams with agent-oriented uses (stage 1). The second stage in the semantic development of

²² In contrast, most past tense morphemes are reported to be aspectual markers (cf. Ludlow 1999:157).

²³ This notion denotes constructions involving motion verbs, markers of obligation, desire, and ability, and temporal adverbs. Markers of present tense, perfective and imperfective, in contrast, are referred to as *aspectual futures*.

futures evolving from these forms is the intention meaning. Utterances using the first person to express obligation (i.e. the speaker has to do something) or desire (i.e. the speaker wants to do something) usually allow the inference that the speaker intends something. Another path to future parallel to the obligation/desire > intention development is the development of root possibility from the ability meaning. The term *root possibility* denotes the general possibility that the agent is able to carry out the action in question (like English *Can you pick me up at noon?*). In the third stage, the future meaning is the only meaning of the gram. This concerns both the intention and the root possibility path. In stage four, new modal meanings evolve from the “pure future gram”. These new modal uses of the gram may be epistemic (i.e. expressing the degree of certainty the speaker assigns to a proposition: probability and possibility) or speaker-oriented modalities (directives). The evolution of future grams through these four stages is illustrated in FIGURE 5:



FIGURE 5 Stages of development of future grams from modal sources (Bybee, Perkins and Pagliuca (1991:29))

Following Lehmann (2002:112), the semantic reduction and the gradual loss of phonological substance usually proceed in parallel. Given the interaction between the semantic and the phonological attrition of a sign, the evolutionary time line shown in FIGURE 5 implies an increasing desemanticization and grammaticalization in direction of stage 4. Grammaticalization has been defined by Lehmann (2002:8, 11) as a gradual change of state in which a sign becomes or is made more grammatical.

3.1.2 Aspectual forms

Apart from modal elements, aspectual forms are also frequently used to express futurity. These forms commonly have undergone a long evolution and thus generally show a high degree of grammaticalization (cf. Bybee, Perkins and Pagliuca 1991:21). Bybee, Perkins and Pagliuca (1991:20) found the following aspectual co-meanings of future grams: present (9), continuous (9), habitual (7), imperfective (7), perfective (3) and past (3). (The numbers indicate the number of their co-occurrences with future meanings in the language sample studied.)

As the figures indicate, it is mostly **presents** that are used to refer to future time. In these cases, future reference needs to be established by the context since it otherwise would be interpreted as indicating present (cf. Bybee, Perkins and Pagliuca 1994:278). In Swedish, Norwegian, French (cf. E29), German (cf. E30) and Russian (cf. E31), future time reference is seldom obligatorily marked and is usually expressed with present tense:

E29 Je vais en ville.

FRE 'I will go to town.'

(cf. Dahl 2000b:312)

E30 Ich gehe morgen in die Stadt.²⁴

GER 'I go to town tomorrow.'

The time adverbial *morgen* may also be left out, but then the sentence has an immediate future interpretation (except for the case when it is used as response to a question like *What are you going to do tomorrow?*, i.e. when the response sentence is embedded in a future context).

In Russian, when talking about the speaker's immediate plans the imperfective present is used to refer to future time (cf. Dahl 2000b:311):

E31 **id-u** v gorod

RUS go.IMPF.PRS-1.SG to town.ACC

'I am going to town/I will go to town.'

(cf. Dahl 2000b:311)

The **perfective non-past** is used as future device in most of the East and West Slavonic languages (including Polish and Czech) and Georgian. However, this is not true for South Slavonic languages such as Bulgarian (cf. Comrie 1976:67). Many languages of Northern Europe use the present tense of the verb *become* (cf. Dahl 2000c:351), e.g. Gothic, Germanic and Celtic (cf. Ultan 1978:110).

Perfectives tend to indicate immediate future, while **imperfectives** are often used to express scheduled future. Nevertheless, both perfectives and imperfectives are rarely used to refer to future events. Imperfectives, however, occur more often as future time marker than perfectives (cf. Bybee, Perkins and Pagliuca 1994:278).

Further means for future time reference are entities expressing inchoativity. Finnish and Estonian, for example, use the verb meaning '**begin**' as a future marking device. Similarly, the Hungarian marker *fog* was probably originally used to express inchoativity (cf. Dahl 2000b:324f.).

Other aspectual forms used for future time reference are the **durative** and the **continuative** as in Haitian or Mauritian creole (cf. Ultan 1978:108).

Resultative affixes are used in Quileute (a North American Indian language belonging to the Chimakuan language family)²⁵ and Kwakiutl (a North American Indian language belonging to the Wakashan language family)²⁶ to refer to purposeful or consequential situations (cf. Ultan 1978:108).

²⁴ This sentence has already been given in E8.

²⁵ cf. Moseler and Asher 1994, map 9

²⁶ cf. Moseler and Asher 1994, map 9

3.1.3 Motion verbs

The results of the sample studied by Bybee, Perkins and Pagliuca (1991:17) give crosslinguistic evidence that futures develop from a rather small set of lexical sources.

In many languages the motion verbs ‘come’ and ‘go’ have been observed to be the most dominant lexical sources of future markers. Bybee, Perkins and Pagliuca (1991) found that futures far outnumber pasts in using motion verbs (cf. Fleischman 1982b:325). “Movement futures” basically means that an agent is moving toward a goal with this movement being already in progress. The temporal meaning (i.e. the movement in time) is inherent in the spatial meaning of the motion verbs (i.e. the movement in space) since moving toward a goal in space implies the movement in time. These movement verbs undergo the meaning changing process from a spatial to a temporal reading while the spatial meaning gradually gets lost.

In the literature, ‘come futures’ and ‘go futures’ are proposed as derivatives of two different metaphors or concepts of time perception, viz. the moving-ego and the moving-time model introduced in section 2.1.

Contrary to a number of other papers saying that ‘go’ is used more often as future strategy than ‘come’ (e.g. Fleischman 1982b:328), the language sample studied by Bybee, Perkins and Pagliuca (1991) gives evidence that ‘go’ and ‘come’ are equally frequent sources of future meaning.

“Come futures” (de-venitive constructions) have been found in Scandinavian languages such as Swedish, Finnish (cf. Dahl 2000b:319f.), Ewe (belonging to the Kwa language family)²⁷, Sicilian and Bassa (a Kru language)²⁸ (cf. Ultan 1978:111). ‘Come’ tends to give rise to immediate future meaning (cf. Bybee, Perkins and Pagliuca 1991:30f.; Bybee, Perkins and Pagliuca 1994:269).

E32 from Spanish illustrates the use of ‘go’ as a future auxiliary:

E32 Fernando **va** a venir
SPAN Fernando go.3.SG to come
‘Fernando is going to come.’ (cf. Payne 1997:238)

As already mentioned, most future devices are polysemous. This also holds for the verb ‘go’ in Spanish which is also used as main verb: *Fernando se va a Corvallis*. ‘Fernando is going to Corvallis.’ (cf. Payne 1997:238).

3.1.4 Time adverbials

Apart from their additional use as (grammaticalized) future grams time adverbials can serve both as alternative devices opposed to future grams and as lexical sources for future grams. While the latter case seldom occurs, time adverbials that are solely used to locate an event in time are frequent in languages. A language in which a time adverbial gave rise to a future gram is Tok Pisin: *bai* ‘by and by’ developed from a temporal adverbial into a (grammaticalized) future gram (cf. Bybee, Perkins and Pagliuca 1994:271).

²⁷ cf. Moseley and Asher 1994, map 107

²⁸ cf. Moseley and Asher 1994, map 111

Whereas not every language has tense, probably all languages have time adverbials. Compared to tense, time adverbials allow more precision with respect to the temporal location of an event (cf. Klein 1994:158), cf. E33 and E34:

E33 Anna war im Park.
GER ‘Anna was in the park.’

E34 Anna war **gestern** im Park.
GER ‘Yesterday Anna was in the park.’

While E33 refers to an unspecified time (interval) located somewhere on the time line on the left side relative to the moment of speech (cf. FIGURE 1), the time adverbial *yesterday* in E34 adds temporal precision as to where in the past the proposition ‘Anna BE in the park’ was true.

Klein (1994:149) distinguishes five types of time adverbials with respect to their functions:

- (i) positional temporal adverbials: they relate time intervals to other time intervals, e.g. English *tomorrow*
 - (ii) temporal adverbials of frequency, e.g. English *once in a while, every month*
 - (iii) temporal adverbials of duration, e.g. English *during the autopsy*
 - (iv) aspectual adverbials, e.g. English *slowly*
 - (v) adverbials indicating a position of a situation in a series of situations, e.g. English *at last*,
- and
- (vi) adverbials that do not belong to either group, e.g. English *still, again*

The adverbials relevant to the discussion of the temporal location of an event are those that can be counted among the groups (i) and (v). The notion of positional adverbials denotes adverbials whose reference point is either the moment of speech (expressing absolute time reference) or some other point in time (expressing relative time reference). In cases of absolute time reference the reference point is deictically given (e.g. English *tomorrow*), while in cases of relative time reference the reference point is given through the context (e.g. English *after Paul’s wedding*).

As far as the source of most time adverbials is concerned, it appears to be universal that spatial expressions are transferred to the temporal domain. In many cases, the elements concerned are imported without any modification (cf. Haspelmath 1997:3; Ultan 1978:105). For examples, compare E35 from Hocak and E36 from Gupapuyngu, a Pama-Nyungan language (Northern Territory, Australia):

E35 HOC *hiraréxji* ‘a little distant, after a while’
E36 GUP *bala* ‘away, then’ (cf. Christie 2001:68)

3.2 Future meanings most frequently distinguished

A language may use several future grams to distinguish future meanings. According to Bybee, Perkins and Pagliuca (1994:243) the following pairs of future meanings are frequently differentiated by using distinct grams: (i) simple future and immediate future, (ii) epistemic and non-epistemic future and (iii) definite and indefinite future. They also discuss grams encoding scheduled future.

Dahl (2000b) and Bybee, Perkins and Pagliuca (1994) agree in that the main functions of future grams are to express intention and prediction, where the latter arises from the former. The notion of intention is therefore a central aspect of the meaning of future.

3.2.1 Intention-based and prediction-based future

Intention and prediction are prototypical uses of future grams. Despite various sources of future grams they all have in common that the “paths converge early in the function of expressing the speaker’s intentions” (and later the intention of the agent of the main clause). Based on a speaker’s utterance a hearer can make predictions on the speaker’s intention (cf. Bybee, Perkins and Pagliuca 1994:279f.). Unlike intentions, predictions concern “courses of events that are not within human control or at least not within the control of the speaker“ (Dahl 2000b:310). A prediction is an assertion made by the speaker that the proposition of an utterance will be true at some future time or, in other words, will be known to be true at some future time (cf. Bybee, Perkins, Pagliuca 1991:24f.). Examples of intention-based and prediction-based future time reference are given in E37 and E38 respectively:

E37 I am going to watch a movie.

E38 Mediterranean coasts will remain sunny and very warm.

(cf. Dahl 2000b:310)

As mentioned above, future markers that originally indicated intention-based future time reference have the tendency to mark prediction-based future time reference as well. This, for instance, is true for the English auxiliary *will* (cf. Dahl 2000b:319). Similarly, the ‘be going to’ construction originally expressed intention and is now also used to indicate future time (cf. Lyons 1977:817).

As E38 illustrates, prediction-based future time reference is usually expressed in weather forecasts. In English, the future marking auxiliary *will* is obligatory (except for sentences that employ modal expressions such as *be likely*), while weather forecasts in Finnish go without a future marker. Predictable events in Finnish are expressed in present tense. Obligatory marking of prediction-based future time reference is one important indicator of whether or not future time reference is grammaticalized in a language. Consequently, the degree of grammaticalization for future time reference is higher in English than it is in Finnish. In many European languages, prediction-based contexts mostly exclude the use of present tense (cf. Dahl 2000b:315).

3.2.2 Simple future and immediate future

As a general tendency, futures refer rather to immediate futures than to remote futures. Immediate future meaning is expressed by grams that refer to impending events. Bybee, Perkins and Pagliuca (1994:245) found that, apart from simple futures, this future type is the most frequently occurring future expressed in natural languages²⁹. Most immediate futures are what Bybee, Perkins and Pagliuca (1994) refer to as *primary futures* (for the definition please see page 24). 21 percent of the languages in their sample differentiate simple and immediate future by using distinct future grams. One such language is Baining, a Papuan language³⁰. Immediate future is expressed by the perfective particle *sa*:

E39 **sa** *g̃oa tes*
BAI PERF/FUT_{IM} I eat
‘I have eaten/I will eat immediately.’
(cf. Bybee, Perkins and Pagliuca 1994:245)

E40 shows the expression of simple future in Baining:

E40 **ik** *g̃oa tes*
BAI FUT I eat
‘I will eat.’
(cf. Bybee, Perkins and Pagliuca 1994:245)

Furthermore, Bybee Perkins and Pagliuca (1994) found that on the one hand immediate futures outnumber immediate pasts whereas on the other hand remote pasts outnumber remote futures.

In the sample examined by Bybee, Perkins and Pagliuca (1994), they found 26 primary future grams having immediate future meanings of which 19 cases had this as their sole use. Also, two perfectives and two imperfectives have immediate future as their only interpretation (cf. Bybee, Perkins and Pagliuca 1994:271). The sample also showed that the grams used to express immediate future time reference consist equally of periphrastic and affixal expressions.

3.2.3 Epistemic and non-epistemic future

While epistemic modality indicates the degree of certainty (possibility and probability) the speaker assigns to the event in question, the term *non-epistemic modality* subsumes the notions of agent-oriented and speaker-oriented modality.

A language may allow the speaker to express her/his confidence in the prediction s/he makes. In the sample of Bybee, Perkins and Pagliuca (1994) six languages were found to have future grams which mark the degree of their confidence. Agau, a Papuan language³¹, is one language that marks both future certainty and future

²⁹ However, the authors point out that the frequent occurrence of immediate futures in their data may result from the use of this term in the reference grammars they consulted (cf. Bybee, Perkins and Pagliuca 1994:247).

³⁰ cf. Moseley and Asher 1994, map 32

³¹ cf. Moseley and Asher 1994, map 36

possibility. The examples E41 and E42 given below illustrate these epistemic modalities respectively:

E41 **táq-áyá**
AG know-2.SG:IMPF_{DEF}
'You will (certainly) know (it).'

E42 **dəhngéta** ča des-é
AG perhaps tomorrow study-1.SG:IMPF_{INDEF}
'Perhaps, tomorrow, I shall study.'

(cf. Bybee, Perkins and Pagliuca 1994:248)

While future certainty is expressed by the sole use of the suffixial element *-aya*, future possibility is expressed by the imperfective indefinite suffix *-é* and modal adverb *dəhngéta*.

Example sentences illustrating non-epistemic modalities, i.e. speaker-oriented and (one kind of) agent-oriented modalities (here volition) are given in E43 and E44 respectively from English:

E43 Give me some soup!

E44 I want some soup.

3.2.4 Definite and indefinite future

Yet another possible distinction with respect to future time reference is the marking of definite and indefinite predictions of future events. These notions refer to whether or not an event will happen at some definite time. Bybee, Perkins and Pagliuca (1994:249) found only one language marking definite future and two languages with indefinite future marking. Buriat, a Mongolian language³², is one language marking the latter function. It distinguishes between indefinite future (cf. E45) and simple future (cf. E46):

E45 **jab-uuža-b**
BUR go-FUT_{INDEF}-1.SG
'I shall go (at an indefinite time).'

E46 **jaba-xa-b**
BUR go-FUT-1.SG
'I shall go.'

(cf. Bybee, Perkins and Pagliuca 1994:249)

3.2.5 Scheduled future

This future type is also referred to as *expected future*. Grams marking scheduled or expected futures are rare. The term denotes futures that "refer either to events which are expected to occur in the near future, or to those which have been pre-arranged" (Bybee, Perkins and Pagliuca 1994:249). In the sample of Bybee, Perkins and Pagliuca (1994) only four out of 76 languages were found marking this distinction. Three of them used

³² cf. Moseley and Asher 1994, map 47

aspectual future grams (more precisely imperfectives) to express scheduled future (cf. Bybee, Perkins and Pagliuca 1994:250).

Scheduled events are likely to be marked with present tense in many languages, even in those which mark future time reference grammatically. E47 gives an example of scheduled future from English:

E47 [According to the timetable] the train leaves at noon. (cf. Dahl 2000b:311)

In English, however, scheduled future reading may be expressed by the use of present tense only if the event referred to is planned or scheduled AND if there is an appropriate temporal modifier that places the event in future time (cf. Bybee, Perkins and Pagliuca 1994:251).

3.3 Summary

On the one hand this section dealt with the structural material used to refer to future events. On the other hand it discussed the synchronic ambiguity and diachronic progression of future grams, particularly of those evolving from modals.

Future grams have various sources. They frequently develop from agent-oriented modalities, aspectuals and also from goal-oriented verbs (i.e. the motion verbs ‘come’ and ‘go’) that function as auxiliaries.

TABLE 2 summarizes the aspectual and modal forms most frequently used to indicate future time. The forms are given in descending order of probability:

aspectual forms	modal forms
present	obligation
continous	imperative
habitual	polite request
imperfective	optative
perfective	volitive
past	desiderative

TABLE 2 Aspectual and modal forms used for future time reference

As far as the modal category is concerned, speaker-oriented modalities and epistemic modalities are reported to be late-developing uses (i.e. new non-temporal uses) of future grams rather than future sources.

It is not uncommon for a language to have more than one future gram. In fact, languages are often found to use distinct future grams to express distinct future meanings. The following future meanings are commonly marked with distinct grams: simple future and immediate future, epistemic and non-epistemic future, and definite and indefinite future. The fact that future grams usually have more than one meaning and therefore more than one use results from the facts that (i) the retained meaning of the source exists parallel to the future meaning until the future gram has a purely temporal meaning and (ii) new non-temporal uses (e.g. imperatives) may develop from these purely temporal future meanings (cf. Dahl 2000b:313). Consequently, future grams seldom have future time reference as sole use, i.e. in most cases, future grams facilitate future readings instead of expressing futurity explicitly.

For those forms that have evolved from modals, four stages of development can be distinguished: future as pure mood, future as tense with modal connotations, future as pure tense and future with late-developing modal uses. The modal category is the only source category that may in turn evolve from futures. In contrast, future grams that developed from aspectual or goal-oriented sources do not serve as sources for late-developing aspectual or goal-oriented uses (cf. Ultan 1978:115).

4 Sketch of Hocak

4.1 Phonology

Hocak has the following consonant phonemes:

		labial	dental	palatal	velar	glottal
stops	voiceless	p	t	c	k	'
	voiced	b		j	g	
fricatives	voiceless		s	š	x	h
	voiced		z	ž	ğ	
nasals		m	n			
trill			r			
glides				y	w	

TABLE 3 Hocak consonants

(Helmbrecht 2004:6)

In contrast to the other consonants, there is no phonemic distinction between a voiced and a voiceless dental stop. The dental stop is always voiced (cf. Helmbrecht 2004:6). Hocak has five oral and three nasal vowels, cf. FIGURE 6 gives the oral vowels:

i	u
e	o
a	

FIGURE 6 Oral vowels in Hocak

(Helmbrecht 2004:7)

The vowels [i], [u] and [a] have nasal counterparts. Nasal and oral vowels are similar in quality, except that /a/ has a centralized pronunciation (cf. Helmbrecht 2004:7f.).

With respect to stress placement, the following rules apply in Hocak: (i) in lexically monosyllabic words, primary stress is placed on the first mora³³, (ii) lexically bisyllabic words receive stress in the second mora, (iii) words with three or more moras are stressed on the third mora, and (iv) in polysyllabic words, secondary stress (usually less marked than primary stress) is placed on every even-numbered mora thereafter (i.e. moras are counted and syllables are stressed) (cf. Miner 1992:18f.). In regard to this paper, stress is only relevant with respect to the discussion of the morphological status of the future markers. I will return to this issue in 5.2.

4.2 Some morphophonological processes

As I will present, Hocak has a rather complex morphology. A number of morphophonological processes contribute to this complexity. This section only deals with those processes that occur in sentences in 5:

³³ In accordance with Miner's definition (1992:18), a word has as many moras as vowels. Diphthongs count as two moras.

- the stem final /e/ to /a/ shift
- the voicing of stem final and suffix final obstruents before voiced sounds
- the nasalization of vowels and /r/
- the shortening of long syllables after prefixation
- the elision of /h/.

Stem final /-e/ shifts to /-a/ before certain elements, e.g. before *-ire* (third person plural), *-ra* (definite article), the positional and/or progressive markers *-nək* ('sitting'), *-ək* ('lying') and *-jee* ('standing'), before '(á)nəga ('and'), *-nəq* (potentialis), *-ni* (final negator), and *-wi* (plural). Some of these suffixes, however, do not only trigger but also undergo the /e/ to /a/ shift, such as *-ire*. See E48 for illustration:

E48 Hığairakjawi.

hı-higé-ire-kje-wi

U.1.E.-say-A.3.PL-FUT-PL

'They are going to say to us.'

(cf. Helmbrecht 2004:29)

This example also shows that the future marker *-kje* undergoes this process. This is also true for the other two future grams *-kjane* (>*-kjana*) and *-kjanahe* (>*-kjanaha*).

Except for /t/, voice is contrastive in obstruents. **Stem-final and suffix-final obstruents are voiced** before resonants and vowels. If /h/ separates a voiceless obstruent and a vowel, it is dropped. Then the voicing rule is applied. Compare E49 and E50:

E49 wáągra

wąąk-ra

man-DEF

'the man'

E50 wáągiža

wąąk-hiža

man-one

'one man'

(Helmbrecht 2004:31)

Similarly, the **nasality** of a vowel ([ą], [i] and [u]) affects nasalizable vowels of following syllables, as E51 and E52 show:

E51 hirokúı̃ne

hirokú-ire

utilize-A.3.PL

'they utilize (it)'

(cf. Helmbrecht 2004:31f.)

E52 hıəkjanəhəwı̃

hı-'ı̃-ı̃-kjanahe-wi

A.1.I-do/be-FUT-PL

'we will do (it)'

(ECO023)

E51 also shows yet another morphophonological process, i.e. the nasalization of /r/ after nasalized vowels. The /r/ in the suffix *-ire* changes to /n/ (<ñ>³⁴) as it is preceded by the nasalized vowel /i/ which in turn was triggered by the process that a nasalizable vowel takes on the nasality of the preceding vowel (here /ɥ/). To be complete, it should be mentioned that sometimes the rule of nasal spread does not apply. The exact conditions of this process are not clear but it seems to be only the first person singular undergoer *hi-* which is affected by this rule. Compare E53 for illustration:

E53 bóiksap
boo<hi>ksap
<U.1>come.to.consciousness
'I come to consciousness' (Helmbrecht 2004:33)

A further process concerns the **shortening of long syllables** after prefixation, cf. E54:

E54 haná
ha-na
A.1.E-sleep
'I sleep' (Helmbrecht 2004:31f.)

Yet another frequent morphophonological process is the **elision of /h/** in word internal position, cf. E55:

E55 háɣbogú
háɣ-hogú
day-grow
'sunrise' (Helmbrecht 2004:33)

(E55 also illustrates the voicing of (voiceless) obstruents (here /p/ → /b/) when preceding a voiced sound (here /o/).)

4.3 Sentence types

In Hocak three types of sentences can be distinguished, viz. declarative, imperative, and interrogative.

4.3.1 Declarative sentences

The following three examples E56, E57 and E58 show sentences with a transitive, intransitive and a ditransitive verb respectively:

E56 Paulga wažatíra ruwína.
Paul-ga wažatíre-ra **ruwí**-na
Paul-PROP car-DEF buy(A.3.SG.U.3.SG)-DECL
'Paul buys/bought a car.' (BO)

E57 Hąjıgi peejwáacra reekjáne.

³⁴ The diacritic above the <n> is to indicate the morphophonological process /r/ → /n/.

həjɨŋi peejwáac-ra ree-kjane
tomorrow train-DEF go(A.3.SG)-FUT
'The train will leave tomorrow (morning).'

(BO)

E58 Woonɨk'uuna.

wa-**ho**<nɨj>**k'u**-na
U.3.PL-<1&2>give-DECL

'I gave them to you/I gave you to them.'

(Helmbrecht 2004:36)

In transitive declarative sentences with verbal predicates (cf. E56) the order of constituents is SOV.

4.3.2 Imperative sentences

To indicate commands, Hocak uses two imperative markers. Commands that are marked with the imperative suffix *-re* denote obligations that have to be fulfilled immediately. In contrast, *-aje* is used to mark commands that do not refer to the present but to a future moment. This suffix will therefore be referred to as *delayed imperative marker*. I will return to this notion in section 5.1.1.4. E59 and E60 illustrate both types of commands:

E59 Xaapgúniŋe!

xaapgúni-**re**
be.quiet-IMP
'Be quiet!'

(BO)

E60 Həké hijá horuğucniájje!

həké hijá horuğuc-ni-**aje**
NEG_{IN} there look.at-NEG_{FIN}-IMP_{POST}

'Do not pay any attention to it (in the future)!'

(GHO022)

This distinction, however, has been fading over time. Today, *-aje* is frequently used to express polite commands (cf. 5.4.2.4). I know of only one speaker who still uses *-aje* as delayed imperative marker.

4.3.3 Interrogative sentences

Interrogative sentences may employ question words. One such example is given in E61:

E61 Jaagúiža raixúx?

jaagú-(h)iža ra-gixux
what-one A.2.SG-break

'What did you break?'

(cf. Helmbrecht 2004:36)

From a structural point of view, interrogative sentences without question words are similar to declarative sentences, cf. E62 and E63:

E62 Həjɨŋi hosɨŋhikjane.

hajɨŋi hoʃɨŋi-hii-kjane
tomorrow be.cold-arrive(A.3.SG)-FUT
'It will be cold tomorrow.' (BO)

E63 Hajɨŋi hoʃɨŋihikjane?
'Will it be cold tomorrow?'

In E62 and E63, the only feature that allows one to distinguish the declarative and the interrogative reading of the proposition is the rising intonation used in the interrogative clause (in E63 indicated by the question mark).

4.4 Verbal morphology

According to the pronominal marking of the arguments of a verb Hocak has (at least) seven verb classes: ditransitive, transitive and intransitive verbs. There is a further distinction between intransitive active verbs and intransitive inactive verbs. Intransitive inactive verbs can be further subdivided into verbs that take the full pronominal paradigm and verbs that inflect for third person only. The 'third person only' verbs may be inflected for third person singular only, third person plural only or third person singular and plural.

The pronominal marking of the arguments of a verb is mostly semantically motivated. Therefore, I will use the terms *actor* and *undergoer* for the analysis of the arguments of the verb. Following Foley and Van Valin (1984:29), an actor is understood as the argument of the verb which performs or controls a situation while an undergoer is the participant which is affected by the situation, i.e. undergoes the situation.

Hocak speakers do not make much use of independent pronouns (only for emphasis) but employ pronominal prefixes, infixes and suffixes that are added to the verbal stem. Therefore, a sentence may consist of a single word (cf. E58).

Hocak has two conjugation classes which will, henceforth, be referred to as *the first* and *the second conjugation*. The type of conjugation a verb takes is phonologically motivated. Section 4.4.2. attends to this issue.

Mostly, the pronominal affixes are prefixed to the verbal stem (except for the plural markers *-wi* and *-ire*). However, infixes are also found frequently. Pronominal affixes usually merge with the verbal stem. This issue will be dealt with in section 4.4.4. Except for the third person plural, plurality (first person plural inclusive *wqaga-...-wi* or *hɨ-...-wi*, first person plural exclusive *hɨ-...-wi* or *ha-...-wi*, second person plural *nɨ-...-wi* or *ra-...-wi*) is marked by what one could call discontinuous personal morphemes or affixes (illustrated in TABLE 7).

The semantic roles of the arguments of a clause are expressed on the verb by means of the actor or the undergoer inflectional paradigm (cf. FIGURE 7). Hocak neither shows the morphological category of case on nouns nor does it have adpositions.

4.4.1 The first conjugation

As indicated above, intransitive active verbs and intransitive inactive verbs behave differently with respect to their personal inflection. Intransitive inactive verbs are

inflected by means of the undergoer series of pronominal affixes (illustrated with *š'áak* 'be old') while intransitive active verbs take pronominal affixes from the actor series (illustrated with *šgáac* 'play'), cf. FIGURE 7:

<i>š'áak</i>	'to be old'	<i>šgáac</i>	'play'
h̄j - <i>š'ák</i>	'I am old'	ha - <i>šgác</i>	'I play'
n̄j - <i>š'ák</i>	'you are old'	ra - <i>šgác</i>	'you play'
Ø - <i>š'áak</i>	'he is old'	Ø - <i>šgác</i>	'he plays'
wáąaga - <i>š'ák</i>	'you and I are old'	h̄j - <i>šgác</i>	'you and I play'
wáąaga - <i>š'ák-wi</i>	'we (incl.) are old'	h̄j - <i>šgac-wi</i>	'we (incl.) play'
h̄j - <i>š'ak-wi</i>	'we (excl.) are old'	ha - <i>šgac-wi</i>	'we (excl.) play'
n̄j - <i>š'ak-wi</i>	'you (all) are old'	ra - <i>šgác-wi</i>	'you (all) play'
<i>š'áak-ire</i>	'they are old'	<i>šgáac-ire</i>	'they play'

FIGURE 7 Actor affixes of intransitive inactive and intransitive active verbs (first conjugation) (Helmbrecht 2004:39)

It is obvious from FIGURE 7 that there is no structural distinction made between the actor and undergoer function for the third person singular (zero marking) and the third person plural (*-ire*).

Transitive verbs are personally inflected by means of a combination of pronominal affixes from both the actor series and the undergoer series. Generally, the undergoer prefix precedes the actor prefix. There are, however, two exceptions to this rule: the first person dual/plural actor form *h̄j*- and the portmanteau prefix *n̄j*- denoting the first person singular acting on the second person singular. TABLE 4 gives the paradigm of pronominal affixes for a transitive verb form of the first conjugation:

	U	1.SG	2.SG	3.SG	1.I.D	1.I.PL	1E.PL	2.PL	3.PL
A			<i>n̄j</i> -V	Ø -ha-V				<i>n̄j</i> -V-wi	wa-ha-V
1.SG									
2.SG		<i>h̄j</i> -ra-V		Ø -ra-V			<i>h̄j</i> -ra-V-wi		wa-ra-V
3.SG		<i>h̄j</i> - Ø -V	<i>n̄j</i> - Ø -V	Ø - Ø -V	<i>wáąaga</i> - Ø -V	<i>wáąaga</i> - Ø -V-wi	<i>h̄j</i> - Ø -V-wi	<i>n̄j</i> - Ø -V-wi	wa- Ø -V
1.I.D				<i>h̄j</i> - Ø -V					<i>h̄j</i> -wa-V
1.I.PL				<i>h̄j</i> - Ø -V-wi					<i>h̄j</i> -wa-V-wi
1.E.PL			<i>n̄j</i> -ha-V-wi	Ø -ha-V-wi				<i>n̄j</i> -ha-V-wi	wa-ha-V-wi
2.PL		<i>h̄j</i> -ra-V-wi		Ø -ra-V-wi			<i>h̄j</i> -ra-V-wi		wa-ra-V-wi
3.PL		<i>h̄j</i> -V-ire	<i>n̄j</i> -V-ire	Ø -V-ire	<i>wáąaga</i> -V-ire	<i>wáąaga</i> -V-ire-wi	<i>h̄j</i> -V-ire-wi	<i>n̄j</i> -V-ire-wi	wa-V-ire

TABLE 4 Pronominal affixes of transitive verbs (first conjugation) (cf. Helmbrecht 2004:)

While the third person singular always receives zero marking (both as actor and as undergoer), the third person plural shows distinct codings for actor and undergoer function. No matter if it is a transitive or an intransitive verb, as actor, the third person

plural is marked with *-ire*. As undergoer, however, it receives a different marking: *wa-* (cf. TABLE 4). Despite these differences between the third person singular/plural on the one hand and the first and second person on the other hand, for the sake of simplicity, I will gloss the central arguments of the verb with *A* (actor) and *U* (undergoer).

The blank cells in TABLE 4 indicate that there is no pronominal affix expressing the corresponding concept. In some of these instances the actor is co-referential with the undergoer (cf. Helmbrecht 2004:39f.). The affixes in TABLE 4 are given in their underlying morphological forms to which various morphophonological rules apply (cf. 4.4.4).

Clauses with ditransitive verbs are often ambiguous (cf. E58). This is due to the fact that both the undergoer of the action and the recipient receive identical marking, i.e. are inflected by the undergoer series.

4.4.2 The second conjugation

Verbs with a stem-initial or stem-internal /w/, /r/, /l/, /h/, /n/, /g/, /t/ or /j/ behave differently with respect to the agent marking pronominal affixes for the first and second person singular. The second conjugation mostly concerns transitive verbs. However, there are also some intransitive verbs that are inflected by means of the second conjugation. Some of them are semantically active (e.g. *gúu*), some are inactive (e.g. *rucirís*).

Instead of employing the pronominal affixes (of the first conjugation) *ha-* (first person singular for active verbs) or *ra-* (second person singular for active verbs) these verbs take special affixes (cf. Helmbrecht 2004:43f.), cf. TABLE 5:

verb person	wapóx 'stab'	rucirís 'freeze'	'uꞥ 'do'/ 'be', 'make'	húu 'start coming'	mijnák 'sit'	gúu 'come'	t'ée 'die'	hajá 'see'
1.SG	paapóx	tuuciris	ha'uꞥ	húu	mijanák	kúu	cee ~ hĩt'e	hacá
2.SG	šawapóx	šurucíri	š'uꞥ	šúu	mijšanáx	šgúu	šjee ~ nĩt'e	hašjá

TABLE 5 The pronominal affixes of the second conjugation

Affixes of the undergoer series are not affected by the second conjugation, cf. the transitive verb *hajá* 'see' in E64:

E64 Žigé hanıçakjena.

žigé ha<nı>ca-kje-na

again <2.U>see\A.1.E-FUT-DECL

'I will see you later/see you later.'

(CL)

The letters in bold type indicate the rules of the second conjugation, e.g. instead of having **ha-gu* 'I come' and **ra-gu* 'you come' it is *kuu* and *šguu* respectively. The example *t'ee* indicates that some verbs have alternative inflected forms for the first and second person. Yet other verbs require both the first and the second conjugation class, as illustrated in E65:

E65 jiiRé 'pass by'

hajité ‘I pass by’

To express the first person plural exclusive and inclusive agent or the second person plural agent, *-wi* is suffixed to the verbal stem (e.g. *paapóxwi* ‘we (excl.) stab him/her’).

4.4.3 Verbal affixes

The following paragraphs contain a list of the (most frequently occurring) elements that can be prefixed or suffixed to the verbal stem. To begin with the prefixes, the first person inclusive dual actor *hĭ-*, the first person inclusive dual undergoer *wáqga-* and the third person plural undergoer *wa-* are the elements placed farthest away from the verbal stem. These prefixes may be followed by the locative prefixes *ha-* (‘with’), *ho-* (‘in’) or the instrumental prefix *hi-* (‘with’). These in turn may be followed by the outer instrumentals *boo-* ‘by blowing/shooting’, *náq-* ‘by foot’, *máq-* ‘by knife’ and *taa-* ‘by heat’. The next position may be occupied by the first or second person singular (actor and undergoer) which in turn may be followed by *gi-* (indicating a benefactive relation) or *kii-* (reflexive or reciprocal marker) and *kara-* ~ *k-* (marking possession). Subsequent to these morphemes, the pronominal affixes of the second conjugation may occur. The prefixes closest to the verbal stem are the inner instrumentals *gi-* ‘by striking’, *ra-* ‘by mouth/teeth’, *ru-* ‘by hands’ and *wa-* ‘by pressure’. The order of these elements is illustrated in TABLE 6:

pronominal affixes 1		applicative	outer instrumentals	pronominal affixes 2		BEN RFL/RCP POSS	pronominal affixes 3	inner instrumentals	verbal root
				U	A				
hĭ	wa-	ha-	boo-	hĭ-	ha-	gi- ki- kiki- kara- /k-	second conjugation	gi- ra- ru- wa-	
wáqga-		ho-	náq-	nĭ-	ra-				
		hi-	máq-	nĭ-					
			taa-						

TABLE 6 Template of verbal prefixes in Hocak (cf. Helmbrecht and Lehmann, to appear)

The first position after the verbal stem is occupied by the positional markers³⁵ *-nqk* (sitting position), *-jee* (standing position) or *-qk* (lying position). For plural reference, the form *-nqak* is used. It neutralizes the positional distinctions found in the singular. All four elements are also used to mark the progressive. In these cases, the positional distinction is also neutralized. The second position after the verbal stem may be occupied by the third person plural actor form *-ire*. Suffixes that may come after this position are, amongst others, the frequentative marker *-ke*, the second negator *-nĭ*, the habitual marker *-šunu*, the future markers *-kje* ~ *-kjane*, ~ *-kjanahe*, the final anteriority maker *-nĭ*, the plural marker *-wi*, the iterative marker *-s’a*, the dubitative markers *-šgunĭ* ~ *-gunĭ* and the potentialis marker *-nqq*. Final suffixes are the quotative marker *-že* ~ *-še*, the declarative marker *-nq* ~ *-šqnaq*, the sequential marker *-gajq*, the topic

³⁵ Considering the behavior of the positionals ((i) they are often stressed, (ii) in their function as auxiliaries they usually carry a verbal inflection) it seems best to analyse them as words. However, for the sake of simplicity, and in accordance to Miner (1992) I will treat them as suffixes here.

(and conditional) marker *-gi* ~ *-giži*³⁶, the imperative and delayed imperative markers *-re* and *-qje* respectively, the simultaneity marker *-regi*, the continuator *-ga* (meaning ‘and’), the optative marker *-šeži* ~ *-žeži* and the dubitative marker *-s’are*.

The suffixes marking futurity will be discussed in 5.3.1.

4.4.4 Morphophonological changes in verbal prefixes

In Hocak, pronouns merge or contract with various prefixes and parts of the verbal stem. The most frequently occurring blendings are given in TABLE 7:

Contraction	Underlying forms	Example
haa	ha- (stem/loc.) + ha- (A.1.E)	haapé (ha<ha>pé) ‘I wait for him/her’
hij	hĭ- (1.I.D) + ha- (stem/loc.)	hĭjpéwi (hĭ-hapé-wi) ‘we (all) wait for him/her’
	ha- (stem/loc.) + hĭ- (U.1 (SG))	hĭjpé (ha<hĭ>pé) ‘s/he waits for me’
hüü	ho- (stem/loc.) + hĭ- (U.1 (SG))	hüügírak (ho<hĭ>girák) ‘s/he tells me’
raa	roo- (initial part of stem) + ha- (A.1.E)	raágu (roo<ha>gu) ‘I want (it)’
woo	wa- (U.3.PL) + ho- (stem/loc.)	woogirak (wa-hogirak) ‘s/he tells them/so.’
waa	wa- (U.3.PL) + ha- (A.1.E)	waak’u (wa<ha>k’u) ‘I pay (it)’
	ho- (stem/loc.) + ha- (A.1.E)	waagítak (ho<ha>giták) ‘I tell him/her/so.’
	woo (wa- + ho-) + ha- (A.1.E)	woaagirak (wa-ho<ha>girak) ‘I tell them’
wii	wa- (U.3.PL) + hi- (stem/loc.)	wiipéres (wa-hiperés) ‘s/he knows them’
yaa	hi- (stem/loc.) + ha- (A.1.E)	yaagé (hi<ha>gé) ‘I say to him/her’

TABLE 7 Frequent morphophonological changes in verbal prefixes (cf. Helmbrecht 2004:50-54)

4.5 The tense system

Hocak grammatically distinguishes between **future and non-future** events. Futurity is marked on the finite verb form (cf. E66) by means of the three phonologically related suffixes *-kje*, *-kjane* and *-kjanahe* (cf. 5.2). As in Lakota (cf. E10 and E11), events referring to non-future events (past and present events) receive zero marking (cf. E67). The information whether an utterance refers to past or present is given through the context or through additional time adverbials (cf. E68). In sentences referring to future time, future marking is mostly obligatory. This also holds for utterances containing a time adverbial with future reference (cf. E69 and E70):

E66 Hicakóro haara	horaájekjane.
hicakóro haa-ra	hora<ha>jé- kjane
friend have.kin\A.1.E-RCM	<A.1.E>visit(U.3.SG)-FUT
‘I will visit my friend.’	(BO)

³⁶ The forms *-giži* and *-gi* are about equally frequent in Radin texts. However, *-gi* is found more often than *-giži* in recently recorded texts. In some sentences I elicited, the form *-ga* occurs. In these instances, *-ga* can be replaced by *-gi* without any difference in meaning. The conditioning of this alternation is not clear yet.

- E67 Həké niǵé wažá 'uunına.
 həké niǵé wažá 'uun-ni-nə
 NEG_{IN} somewhere something do/be(U.3.SG)-NEG_{FIN}-DECL
 'Nothing happens/happened to him/her.' (GHO040)
- E68 Xjaanáne həké niǵé wažá 'uunına.
xjaanáne həké niǵé wažá 'uun-ni-nə
 yesterday NEG_{IN} somewhere something do/be(U.3.SG)-NEG_{FIN}-DECL
 'Yesterday, nothing happened to him/her.' (BO)
- E69 Hicakóro haara hainǵi horaájekjane.
 hicakóro haa-ra **hainǵi** hora<ha>jé-**kjane**
 friend have.kin\A.1.E-RCM tomorrow <A.1.E>visit(U.3.SG)-FUT
 'I will visit my friend tomorrow.' (BO)
- E70 Hicakóro haara hiraréxji horaájekjane.
 hicakóro haa-ra **hiraréxji** hora<ha>jé-**kjane**
 friend have.kin\A.1.E-RCM later <A.1.E>visit(U.3.SG)-FUT
 'I will visit my friend later.' (BO)

The analysis of Hocak having a two-way tense distinction, namely future vs. non-future is analogous to the interpretation of the tense systems of Dyrbal (FUT vs. NFUT) or German (PST vs. NPST) (cf. 2.2). The future markers (or grams), however, are also used to indicate several notions of modality (cf. 5.4.2). Apart from the future grams, Hocak has various other affixes that have modality as their sole uses, such as *-šgyni* ~ *-gyni* (dubitative), *-s'are* (dubitative), *-žeži* ~ *-šeži* (optative), *-naq* (potentialis) and *-na* (declarative). I will return to these markers in 5.3.1.2.

5 Future time reference in the Hocak language

5.1 Devices used for future time reference

The following sub-sections will have their focus on how Hocak expresses **absolute** (i.e. an event is located in time relative to the moment of speech) **and relative time reference** (i.e. an event is located in time relative to some time other than the moment of speech)³⁷. Given the reference point (*relatum*) structural devices locate the second event (*theme*) before, after or simultaneously with this anchoring point. According to the topic of this study, the following discussion will only consider the structural means used for future time reference.

In E69 and E70, absolute future time reference is expressed by positional adverbials and the future tense marker (introduced in 3.1.4). Relative time reference may be accomplished by means of several elements, of which some are suffixes (*-gajq*, *-regi*, *-gi*), and some are independent words ((*'a*)*naga* ‘and’, *'eegi* ‘(and) then’, *haixá* ‘after’). A further device is the discontinuous temporal adverbial *kenj ... -ni* ‘before’. All of these forms are used to indicate the temporal position of a situation in a series of situations (hereafter *sequential elements*).

5.1.1 Devices used for absolute future time reference

5.1.1.1 Future markers and positional future time adverbials

Apart from sequential elements (cf. 5.1.2), positional time adverbials are used to relate two events to each other (cf. 3.1.4). Structures belonging to this group of adverbials are, for instance, *hajnigi* ‘tomorrow (morning)’ (cf. E69) or *coowé* ‘in (the) future’, cf. E71:

E71 Cowerégi hake niǰǰitenǰkjane.
coowé-regi hake niǰǰ-gijité-nǰ-kjane
in.future-SIM NEG_{IN} 1&2-help\A.1.E-NEG_{FIN}-FUT
‘In the future I won’t help you (again).’ (BO)

5.1.1.2 Future markers and the topic marker

Apart from its functions as topic marker and temporal or conditional clause marker (I will attend to these functions in the sections 5.3.2.1 and 5.3.2.2)³⁸, the suffix *-gi* is also used for temporal modification by being suffixed to structural elements with temporal meaning, such as *haqhé* ‘night’ or *hajnǰ* ‘morning’. In such cases *-gi* indicates future time reference. In this use, *-gi* is opposed to *-re* which denotes past time reference, cf. E72 and E73:

³⁷ As pointed out in 2.3 there is no “pure” relative time reference, that is, all events that are referred to with relative time reference are also related to the moment of speech.

³⁸ The form *-gi* will be glossed with TOP throughout this paper because its function as topic marker seems to be the common denominator of all its uses.

E72 *həjɪŋi*
həjɪŋi-gi
morning-TOP
'the next morning' (EL, BO)
(lit.: 'when it is morning')

E73 *həjɪŋə*
həjɪŋi-re
morning-ANT
'the last morning' (cf. Miner 1992:64f.)
(lit.: 'the morning that just passed')

The expression given in E72 can solely (i.e. without the employment of a future marker) be used to answer the question *Jaajánq rakirikjane?* 'When will you be here?'.
The morpheme *-gi* is exchangeable with *te'e* 'this' whenever it is suffixed to elements with temporal meaning, cf. E74 and E75:

E74 *Həqəhé te'e waagáx haşjakjáne?*
həqəhé te'e waagáx ha<ş>ja-kjane
night this paper <A.2>see-FUT
'Will you be studying tonight?'

E75 *Həqəhégi waagáx haşjakjáne?*
'Will you be studying tonight?'
(cf. Bybee, Perkins and Pagliuca 1994:251, BO)

(*Həqəhé te'e.* would also suffice to answer the question *Jaajánq rakirikjane?*)

5.1.1.3 Future markers and the motion verb 'come'

Analogous to *-gi* and *te'e*, the motion verb *huu* 'come' may be used to indicate future time reference. In E76, *huu* is part of a relative clause (*huuhera*) which follows the reference noun (*həqəp*) that is to be modified:

E76 *Həqəp huuhéra,* *Gəşgónək 'eeja hanihékjane.*
həqəp [huu-he-ra] *Gəşgónək 'eeja ha-nihéh-kjane*
day come(A.3.SG)-PROG-DEF Chicago there A.1.E-be/PROG-FUT
'I will spend the coming day in Chicago.' (BO)

In contrast to the employment of *-gi* and *te'e* in *Həqəhégi.* and *Həqəhé te'e.* respectively, the expression *Həqəp huuhéra.* may not serve as answer to the question *Jajánégi Gəşgónək 'eeja ranışékjane?* 'When will you be in Chicago?'. This construction may only be used in a sentence (as given in E76).

This example shows that the Hocaks are familiar with the moving-time conceptualization introduced in 2.1. I cannot present an example that feeds the moving-ego concept. Nevertheless, it seems worthwhile to study the issue of future time reference and the use of motion verbs in Hocak in more detail.

5.1.1.4 The delayed imperative marker

The notion *delayed imperative* denotes an imposed obligation that does not hold for the time (interval) that immediately follows upon the time of the utterance but that holds for some remote time (interval) in the future. As in E77, utterances marked with this element may be interpreted as an advice:

E77	'Eeži	hisúk	'eeji	nəənı́aje.
	'ee-ži	hisúk	'ee-ji	nəə-nı́- aje
	this-FOC	younger.brother	have.kin-INTS	fall.asleep-NEG _{FIN} -IMP _{POST}
	‘Under no conditions, however, must you (younger brother) be asleep (on that fourth night)’.			(OH1.3_016)

In contrast, utterances marked with the imperative marker *-re*, are meant to be carried out immediately after the moment the utterance was made, cf. E78:

E78	"Hicüşgé, waruúcre,"	hinı́gékjanena.		
	hicüşgé	wa-ruuc- re	hi<nı́>gé-kjane-nə	
	grandson	U.3.PL-eat-IMP	<U.2>say(A.3.SG)-FUT-DECL	
	“‘But now, grandson, eat!’” Thus he will speak to you.’			(GHO089)

(Further examples are given in 4.3.2.)

Both the delayed and “ordinary” imperative marker do not co-occur with a future gram. They are mutually exclusive.

Following Bybee, Perkins and Pagliuca (1991) imperatives are new modal uses developing from future meanings (cf. 3.1.1). According to this theory, one could hypothesize that *-aje* may be a future gram that has already gone through the stages 1-3 and now has such a late-developing (speaker-oriented) modal use in which the future meaning component has merged with the imperative meaning. Another hypothesis could be that the imperative marker *-re* had lost its future meaning component completely. This marker then would have to be placed further right on the evolutionary time line given in FIGURE 9. However, there are no linguistic data available that could shed light on the diachronic development of these two elements.

5.1.2 Devices used for relative future time reference: The sequencing of events

This sub-section has its focus on the sequential elements introduced in 5.1.

E79 shows the adverb *haixá* expressing **anteriority**: this element locates the event it refers to (i.e. the expression of the event it is attached to) prior to the event uttered in the subsequent main clause. This device may be translated with either ‘past’ or ‘after’. Futurity is indicated by the future marker *-kjane*:

E79 Wiira roocáje haixági Paulga kirikjáne.
wii-ra roocá-jee haixá-gi Paul-ga kiri-kjane
sun-DEF be.straight(U.3.SG)-POSVERT after-TOP Paul-PROP return(A.3.SG)-FUT
'Paul will come back this afternoon' (BO)
(lit.: 'After the time the sun was (standing) straight up, Paul will return.')

Posteriority is expressed by the discontinuous temporal adverbial *keni ... -ni* 'before'. As illustrated in E80, the discontinuous element surrounds the subordinate clause and indicates that the event expressed in the subordinate clause (being summer) happens after the event expressed in the main clause (their return):

E80 Keni tookní hakirírekjaneną.
keni took-ni ha-kiri-ire-kjane-ną
ANTIN summer-ANTFIN COLL-return-A.3.PL-FUT-DECL
'They will return before summer.' (CL)

Devices used to indicate the **simultaneity** of the theme with the relatum (cf. 2.3), are *-gi* (cf. E81), *-regi* (cf. E113) and *-gają* (cf. E114).

E81 Hirohąpra watużákjanegi řgurairekjaneną.
hirohą-ra wa-tuużá-kjane-gi řgure-ire-kjane-ną
window-DEF U.3.PL-wash\A.1.E-FUT-TOP be.clean-A.3.PL-FUT-DECL
'When I will wash the windows they will be clean.' (BO)
(or 'When I will have washed the windows they will be clean.')

In its function as subordinate clause marker, *-gi* can often be observed to co-occur with one of the three future grams. However, E81 has a similar reading when the future gram in the subordinate clause is left out. This is due to the fact that the event of washing has to take place before the event of being clean.

In contrast to *-regi* which has not been found to co-occur with a future gram, *-gają* occurs with future marking within a clause. These issues will receive more attention in 5.3.2.1.

Hocak also has adverbials such as *gaająga* 'at last' or *cooni* 'first' indicating the position of a situation in a series of possible situations, cf. E82:

E82 Cooni ważatírrera pią'úkje.
cooni ważatíre-ra pi- ha-'u- kje
first car-DEF be.good-A.1.E-do/be-FUT
'First, I will fix the car.' (BO)

However, speakers prefer the use of the conjunctions (*'a*)*naga* and/or *'ee*gi to display the order of events syntactically. Both clauses may be marked future, cf. E83:

E83	Wažatírera	pią'úkje		nąga	'eegi	waruc
	wažatíre-ra	pi-i-ha-'u-u-kje		('a)nąga	'eegi	waruc
	car-DEF	be.good-A.1.E-do/be(U.3.SG)-FUT	and		then	food

nigi'úkje.

nii-gi-'u-u-kje

1&2-BEN-do/be(U.3.SG)-FUT

'I will fix the car and then I will make food for you.'

(EL)

Sentences in which futurity is only marked on the verb of the second clause are found more frequently in spontaneous speech, cf. E84 and E85:

E84	Wažatírera	pią'ú	'anąga	'eegi	waruc	nigi'úkje.

'I (will) fix the car and then I will make food for you.'

(BO)

E85	Annaga	horaáje	nąga	'eegi	Paulga	horajé
	Anna-ga	hora<ha>jé	('a)nąga	'eegi	Paul-ga	horajé
	Anna-PROP	<A.1.E>visit(U.3.SG)	and	then	Paul-PROP	visit

teekjane.

tee-kjane

go/A.1.E-FUT

'I (will) visit Anna and then I will go to see Paul.'

(BO)³⁹

5.2 The phonology and morphology of the future markers

With respect to their form, their semantic and their distribution (apart from some exceptions), the three future markers *-kje*, *-kjane* and *-kjanahe* are allomorphs. The two polysyllabic forms *-kjane* and *-kjanahe* show an /e/ → /a/ alternation: *-kjane* ~ *-kjene*, *-kjanahe* ~ *-kjenehe*. Furthermore, the first vowel in these forms is often omitted. (In fast speech these alternations can be observed with one speaker.)

There also seem to exist dialectal variants of at least two of these markers: *-kjanel-kjene* ~ *-šene*, *-kjanahel-kjenehe* ~ *-šenehe* (used by (some) speakers in and near Black River Falls), and *-kjanel-kjene* ~ *-kene*, *-kjanahel-kjenehe* ~ *-kenehe* (used by (some) speakers in the Wisconsin Dells area)⁴⁰.

In cases where a future marker is suffixed directly to a verbal stem which ends with an obstruent, an /i/ is inserted, e.g. *tuxuruk-i-kjane* 's/he/it will be able to'. This happens for phonological purposes only.

For the sake of simplicity, and in accordance with Susman (1943) and Miner (1992) the future morphemes are here treated as suffixes. However, according to some criteria it is reasonable to conclude that these markers are clitics, or even words rather than suffixes.

Semantically, the future markers are polysemous (cf. 5.4). Given a word-clitic-affix continuum this feature is typically found in words or clitics. Also, their

³⁹ This example sentence is also correct without *'eegi*.

⁴⁰ This information was given to me in a personal conversation and needs to be checked. No consultant I have worked with used these alternations.

morphosyntactic distribution supports the analysis as clitics or words. Although the future grams usually occur with verbs they are also found with other parts of speech (cf. E95, E96 and E97). Similarly, one would not expect the phonological substance of a grammaticalized tense marker to be polysyllabic: the forms *-kjane* and *-kjanahe* (and their alternations) consist of two or even three syllables.

However, there is evidence supporting Susman's and Miner's claim: the future morphemes undergo word internal processes such as nasalization and the /e/ → /a/ shift (cf. 4.2), and their morphological slot lies between discontinuous personal affixes (such as *nj-* ... *-wi* in E86). In Hocak, as in many other languages, stress (see 4.1 for the rules of stress placement in Hocak) turns out to be the most important phonological criterion in regard to determining an entity's degree of "wordness": forms can be either accentable (i.e. words) or clitics (cf. Basboll 2000:383). An in depth analysis of six texts⁴¹ gave that *-kjane* and *-kjanahe* (and their alternative forms) sometimes carry primary stress what would be an argument for the word status of these future forms. For examples see E86, E87 and E88:

E86 ... *honikárákit'ekjanaháwi*.
ho<nj-kara>kit'e-kjanahe-wi
<1&2-POSS>talk-FUT-PL
'... I'm going to talk to you (you belonging to me).'

(ECO003)

E87 ... *ha'ehákjenehé*.
ha'e_haa-kjenehe
talk.about\A.1.E-FUT
'... I'm going to talk about it.'

(WIL010)

E88 ... *njge círekjenégiži* ...
njge cí-ire-kjene-giži
somewhere live-A.3.PL-FUT-TOP
'... where they were going to live ...'

(WIL107)

In E86 and E87, primary stress is placed on the word's third mora (*honikárákit'e* and *ha'ehá*) AND on the third mora of *-kjanahé*. Similarly, *-kjené* carries primary stress in E88. The only example known from the literature where a future gram (*-kjane*) carries primary stress is given in E97 (according to Susman). However, in many other cases, these two future grams are shortened (i.e. the first mora is omitted) and/or pronounced more quietly compared to the preceding part of the "word". When the first vowel is omitted stress is no longer placed on the second and third mora but on the first and second mora of *-kjane* and *-kjanahe* respectively. Due to this stress shift, in some instances, *-kjne* and *-kjnahe* are stressed according to the rule of secondary stress placement (see definition in 4.1). In order to make a valid statement about the distribution of stress on future grams, more texts from different speakers need to be analysed.

⁴¹ FEA, DES, ECO, DEE, MOC, WIL

5.3 The distribution of the future markers

The analysis of a corpus of 42 texts gave that the most frequent future form is *-kjane* (55%), followed by *-kje* (39%).

The least frequently employed future form in both Radin texts and recently elicited texts is *-kjanahe* (6%). However, amongst the recently recorded texts are five texts in which this form has a significantly higher frequency: WIL (18), DOL (22%), ECO (30%), WOL (33%) and MOC (41%). The other recently recorded texts show no instance of *-kjanahe*. TABLE 8 gives more detailed information on the frequencies of the future grams found in the corpus (percentage is rounded):

corpus type	speaker	text	frequency						
			<i>-kje</i>		<i>-kjane</i>		<i>-kjanahe</i>		
			number of occurrences	%	number of occurrences	%	number of occurrences	%	
Radin texts	JB	GHO	9	8	99	92	0	0	
	JBA	SPL	39	74	14	26	0	0	
	JR	TWO	95	52	86	47	1	1	
	unknown	OH1.1		2	100	0	0	0	0
		OH1.2		6	100	0	0	0	0
		OH1.3		6	37	10	63	0	0
		OH1.4		4	29	10	71	0	0
recently recorded texts	BO	JOK	4	44	5	56	0	0	
		DES	1	4	23	96	0	0	
	ED	ED01	0	0	2	100	0	0	
		ED02	1	100	0	0	0	0	
		ED03	1	33	2	67	0	0	
		ED04	2	33	4	67	0	0	
		ED05	6	75	2	25	0	0	
		ED07	0	0	1	100	0	0	
		ED08	0	0	2	100	0	0	
		ED09	2	50	2	50	0	0	
		ED10	1	50	1	50	0	0	
		ED11	5	100	0	0	0	0	
		ED12	1	50	1	50	0	0	
		EL	DEE	3	100	0	0	0	0
	WAT		1	50	1	50	0	0	
	GT	M2S	1	11	8	89	0	0	
	JG	GRIZ	1	100	0	0	0	0	
		WOL	3	50	1	17	2	33	
	JWE	WIC	1	100	0	0	0	0	
	KF	ECO	18	39	14	30	14	30	
DOL		20	48	12	29	9	22		
MOC		4	15	12	44	11	41		
NG	HAP	1	100	0	0	0	0		

PD	HIL	0	0	1	100	0	0
	MAP	1	100	0	0	0	0
RG	WOM	0	0	1	100	0	0
RM	RIC	1	14	6	86	0	0
	FEA	1	9	10	91	0	
PD	SCH	2	100	0	0	0	0
WL	WIL	2	18	7	64	2	18
BO, WL, CL	RRT	3	37	5	63	0	0
BO, WL, RM	CHT_disc	0	0	12	92	1	8
unknown	LP	2	100	0	0	0	0
	NEW	2	17	10	83	0	
	WAR	3	60	2	40	0	0
Total		255	39	366	55	40	6

TABLE 8 Frequency of the Hocak future grams

The fact that three of the texts with a high frequency of *-kjanahe* were produced by the same speaker (KF) could lead to the conclusion that the choice of a future gram is an expression of a speaker's personal style which would mean that the choice is speaker-dependent. In order to find out whether or not this is a reasonable assumption, further research is needed. Since most of the other recently recorded texts (except DOL, ECO and MOC) show a low occurrence of future markers, they are not very useful with respect to investigating future marking. Therefore, it would be necessary to examine more texts that express future time reference more frequently from different speakers.

5.3.1 Morphological distribution

The distribution of the three future markers is neither phonologically nor morphologically motivated. However, it is difficult to determine to what extent they are semantically distributed. In some of the example sentences I collected all three markers are mutually exchangeable, cf. E89, E90 and E91:

E89 Horajékjanahe.
 horaje-**kjanahe**
 visit(U.3.SG.A.3.SG)-FUT
 'S/he will visit him/her.' =

E90 Horajékjane.
 'S/he will visit him/her.' =

E91 Horajékje.
 'S/he will visit him/her.' (BO, EL)

Similarly, in E92 *-kjane* and *-kjanahe* could be substituted for *-kje* without causing a change of meaning:

- E92 'Eegi waruc niġi'úkje.
'eegi waruc niġ-gi-'úu-**kje**
then food 1&2-BEN-do/be(U.3.SG)-FUT
'I will make food for you.' (BO)

In many other sentences the meaning conveyed, however, differs depending on which of the future markers is chosen. The different readings often are speaker dependent, cf. E93 and E94:

- E93 Haġniġi naańa hiża waażúkjane.
haġniġi naa-ra hiża wa<ha>žu-**kjane**
tomorrow tree-DEF one <A.1.E>plant(U.3.SG)-FUT
'Tomorrow I will (definitely) plant a tree.' (EL)
'Tomorrow I will plant a tree/I intend to plant a tree tomorrow.' (CW)
- E94 Haġniġi naańa hiża waażúkje.
'Tomorrow I might plant a tree.' (EL)
'Tomorrow I will plant a tree.' (CW)

The connotation conveyed by the future marker in E93 varies: *-kjane* may express future certainty, or have an intentional and/or future reading. In E94 the employment of *-kje* also allows different readings: it may convey future uncertainty, or have a future interpretation⁴². (More examples concerning the distribution of the future grams are discussed in 5.4.2. This section concerns the modal interpretations conveyed with the grams.)

As demonstrated with several examples in previous sections future is primarily marked on the inflected verb of a sentence. E95 and E96, however, show that future morphemes can also be suffixed to other parts of speech functioning as predicates, e.g. to adverbials (cf. E95) or numerals (cf. E96). Therefore, it is best to say that the future morphemes are expressed on the predicate of the sentence.

- E95 [...] coowéja jaasgékjane 'eegi hiperésre
coowé-'eeja **jaasgé**-kjane 'eegi⁴³ hiperés-ire
in.future-there how-FUT then know-A.3.PL
'[...] they knew how it was going to be in the future.' (ECO061)

The event stated in the subordinate clause ([...] *cooweja jaasgekjane*) is located in the future relative to the event stated in the main clause which itself is “marked” non-future. With respect to the context, the main clause receives a past time interpretation. The expression of relative time reference is displayed in the translation with ‘... how it **was** going to be ...’.

⁴² CW prefers *-kjane* before *-kje*.

⁴³ In this sentence, *'eegi* rather indicates hesitation on the part of the speaker.

Adverbials are only marked future in clauses that lack a verb. (I did not come across a clause in which an adverbial agrees in tense with the verb.)

Similarly, futurity is expressed on numerals or nouns when a clause does not have a verbal predicate. In the text corpus consulted (see appendix) I detected the following two clauses that show these phenomena respectively, cf. E96 and E97:

E96 Joopíkjanawi.

joopi-kjane-wi

four-FUT-PL

‘It is going to be four (points).’

(MOC035)

E97 Wąątóšewéešgekjaná 'anąga, wąąk

wąątóšewée-šge-kjane 'anąga wąąk

medicine.man-also-FUT and man

wášošéešge woonąğiréešge cųųkjane.

wášošéešge woonąğirée-šge cųų-kjane

be.brave war-also be.provided.with-FUT

‘Perhaps he would become a man of healing, or perhaps he would be a

brave man, if there was war.’

(CHT017a)⁴⁴

All three future grams occupy the same morphological slot. FIGURE 8 illustrates the order of (relevant) elements that may occur on the verbal stem (see also 4.4.3):

⁴⁴ This example shows that, depending on the context, the future markers may instantiate a modal meaning rather than a future meaning.

V E R B A L S T E M	POS	3.PL (-ire)	FREQ (-ke)	NEG _{FIN} (-nĭ)	FUT	ANT _{FIN} (-nĭ)	PL (-wi)	ITE R (- s'a)			HAB (-šy _{nu})	DECL (-nq)	TOP (-gi (ži))	SEQ (-gajq)
								POT (-nq̄)			-		-	
									DUB (-šg _u nĭ, -s'aare ⁴⁵)		-			-
		-	-	-	IMP (-re)	-	-	-	-	-	-	-	-	-
		-	-	-	IMP _{POST} (-aje)	-	-	-	-	-	-	-	-	-
												QUOT (-že ~ -še)		
												SIM (-regi)	-	-
												CONT (-ga)	-	-
												CAUSAL (-ge(jinĭ))	-	-

FIGURE 8 Order of suffixes on the verbal stem

(cf. Helmbrecht 2006)

⁴⁵ The complementary distribution of -(š)g_unĭ and -s'aare is semantically motivated. While -(š)g_unĭ mostly marks utterances of which one is not sure whether they are true (e.g. , [I think] he did that. '), -s'aare is frequently used when inferring something from something (e.g. ' [Given the fact that you have been working outside all day I infer that] you must be cold). The exact meanings of these morphemes, however, are not clear yet.

Each element given in FIGURE 8 is optional. Entities that are listed vertically are mutually exclusive. The minus sign (–) indicates that I did not detect cases in which the corresponding suffixes co-occur with each other.

E98 shows five of these elements expressed on the verbal stem:

E98 Hake niġijiteniġjanawi.
hake ni-gijite-ni-kjane-wi
NEG_{IN} U.2-help\A.1.E-NEG_{FIN}-FUT-PL
'We will not help you.' (BO)

In E98, except for the final negator (NEG_{FIN}) and the final anterior (ANT_{FIN})⁴⁶, none of these elements triggers or is triggered by another form.

The distribution and functions of the future markers will be discussed in more detail in subsequent sections (5.3 and 5.4.). As far as the obligatory employment of the grams is concerned, there are few exceptions to this rule. This issue will receive attention in 5.3.2.3.

5.3.1.1 Future time marking and aspect

Hocak has the following three aspectual markers at its disposal: *-šunu* (expressing habituality), *-s'a* (expressing iteration), and *-ke* (expressing frequency). With respect to the text corpus I consulted (see appendix) none of the future grams has been found to co-occur with one of these elements.

With respect to future, Hocak distinguishes between events of which the course includes the moment of speech (e.g. English *from now on* or *until tomorrow*) and events of which the course does not include the moment of speech (e.g. English *tomorrow*), cf. E99 and E100 respectively:

E99 Hainiġi hipá hosniġhikjane
hainiġi hipá hosniġ-hii-kjane
tomorrow until be.cold-arrive-FUT
'Until tomorrow it will be cold.' (BO)

E100 Hainiġi hosniġhikjane.
hainiġi hosniġ-hii-kjane
tomorrow be.cold-arrive-FUT
'It will be cold tomorrow.' (52⁴⁷, BO)

Hocak does not distinguish **perfective** and **imperfective** events grammatically. E101⁴⁸ carries both meanings 'They will have returned.' and 'They will return.':

⁴⁶ These forms are triggered by the NEG_{IN} or ANT_{IN} respectively which precede the verb.

⁴⁷ These numbers refer to the numbers in the questionnaire by Dahl (2000d).

⁴⁸ This clause has already been given in E80.

E101[...] hakirírekjanena.
ha-kiri-ire-**kjane**-na
COLL-return-A.3.PL-FUT-DECL
‘[...] they will (have) return(ed).’ (CL, EL)

(The declarative marker may also be left out.)

There is one lexical element which is only rarely used to indicate perfectivity, i.e. *gĩnjĩ* ‘already’. The only future marker that it has been found with is *-kjane*, cf. E102:

E102 “Hicakóro, herekjáne gĩnjĩná.”
hicakóro here-**kjane** **gĩnjĩ**-na
friend be(A.3.SG)-FUT already-DECL
“‘Friend, the time has now arrived.’” (TWO441)

Whether or not the future marker co-occurs with this element does not, however, seem to have an effect on the meaning of the clause, cf. E103:

E103“Here gĩnjĩže”.
here **gĩnjĩ**-že
be(A.3.SG) already-QUOT
“‘It is time.’” (TWO476)

Progressivity is obligatorily marked, either by means of the verb *nijhé* ‘be’ (cf. E104) or by the suffix *-he*⁴⁹ (cf. E76) or by one of the positional markers *-nqk*, *-jee*, *-qk* or *nqak* (cf. 4.4.3) (cf. E105). Both *nijhé* and the positionals may co-occur with a future gram⁵⁰:

E104 Hana haníhékjane.
ha-naa ha-**nijhé**-**kjane**
A.1.E-sleep A.1.E-be/PROG-FUT
‘I will be sleeping.’ (BO)

E105 Hake hirowágix píjĩni wa'ų'akkjanena.
hake hirowágix píjĩ-ni wa'ų-'**ak**-**kjane**-na
NEG_{IN} go.around be.good-NEG_{FIN} do/be-POSHOR-FUT-DECL
‘It won’t be possible to go around it.’ (GHO004)

⁴⁹ The use and distribution of this element requires further research.

⁵⁰ The form *nijhé* often co-occurs with a future marker (particularly with *-kje*) (e.g. TWO005, TWO225), while positionals (functioning as progressive markers) have frequently been found with future grams in GHO: GHO37 (*-nqk*), GHO64, GHO076 (*-jee*) and GHO071 (*-nqak*).

5.3.1.2 Future time marking and modality

As far as modal markers (introduced in 4.5) are concerned, only the dubitative marker $-(\acute{s})g\acute{u}n\acute{i}$ ⁵¹ (cf. E106) and the declarative marker $-n\acute{q}$ (cf. E107) have been found to co-occur with a future gram:

E106 Jaagušge hihekjánešgūnī?
 jaagu-šge hihe-**kjane-šgūnī**
 what-also say\A.1.E(U.3.SG)-FUT-DUB
 ‘What am I going to say?’ (MOV001)

E107 Hilaréxji Paulga kirikjáneṇa.
 hilaréxji Paul-ga kiri-**kjane-nā**
 later Paul-PROP return(A.3.SG)-FUT-DECL
 ‘Bill will return later.’ (BO)

I did not come across an example showing the co-occurrence of a future marker with the dubitative marker $-s'are$. Furthermore, the potentialis marker $-n\acute{q}\acute{q}$ and the optative marker $-žeži$ (~ $-šeši$) have not been found co-occurring with one of the future grams.

To be complete, it should be mentioned that modal elements may also co-occur with each other, cf. E108:

E108 Heesge jaasgánaṇa hegu 'eeja hapahí woragra hiža
 heesge jaasgé-nāṇa hegu 'eeja hapahi worak-ra hiža
 thus how-POT thus there point.to story-DEF one

 hošaráknas'are nīkjākhi'ū.
 ho<ša>rak-**nāṇa-s'are** nīkjākhi'ū
 <A.2>tell-POT-DUB doll
 ‘Concerning that, do you think you can tell the story about the dolls.’
 (DOL175)

The combination of the potentialis and the dubitative marker in this sentence is displayed in the translation by ‘you think you can (tell)’.

5.3.1.3 Future time marking and negation

Lyons’ (1977:816) statement that the future vs. non-future distinction is frequently neutralized in negative clauses is not true for Hocak (cf. E98). With respect to the distribution of the future markers, it should be noted that the only gram that can be used in this negated sentence (E98) is $-kjane$. In contrast, $-kje$ may be used to express the positive counterpart of the sentence, cf. E109:

⁵¹ I only found four such example sentences (i.e. DOL315, MOV001, ONE008 and TWO192). The dubitative marker $-šgūnī$ occurred only with $-kjane$.

- E109 Nijijítekjawi.
nĭ-gijite-**kje**-wi
U.2-help\A.1.E-FUT-PL
‘We will help you/let us help you.’ (BO)

5.3.2 Syntactic distribution

The devices used to express relative (future) time reference (cf. 5.1.2) mark subordinate clauses in which the future vs. non-future distinction is frequently neutralized. This section will discuss the issue of future time marking in subordinate clauses in more detail. Before I turn to the individual clause types, some general statements about complex sentences should be made first.

In sentences with complex predicates, future usually is only marked on the last verb. Its semantic scope covers all preceding verbal concepts, cf. E110:

- E110 Žeegú nĭge hahí, ceekjé,
žeegú nĭge ha-**hii** **cee-kje**
thus somewhere A.1.E-get.there die\U.1.E-FUT

jaajíga nāącgéra teegwíına.
jaají-ga nāącgé-ra teek-hĭ-hii-ra
father-PROP heart-DEF hurt-U.1.E-make/CAUS(A.3.SG)-RCM
‘I will go somewhere and die, father hurt my heart.’ (CHT011, BO)

5.3.2.1 Temporal clauses

Future time reference is reported to be less likely marked systematically in temporal and conditional clauses (cf. Dahl 2000b:314). As far as Hocak is concerned, this finding has been proved true in most cases, i.e. except for scattered examples (cf. E115, E116 and E117) futurity is not marked in subordinate clauses.

With respect to the simultaneity marker *-regi* no co-occurrence with a future marker has been found in the corpus (cf. 5.1.2). Constructed sentences aiming to elicit this phenomenon were judged to be wrong, cf. E111:

- E111 *Waruc ha'ųájąkjaņegi
waruc ha-'ųų-ha-jee-**kje-regi**
food A.1.E-do/be-A.1.E-POSVERT-FUT-SIM

Paulga wažatírrera pĭ'ųkjene.
Paul-ga wažatíre-ra pĭĭ-'ųų-kjene
Paul-PROP car-DEF be.good-do/be(A.3.SG.U.3.SG)-FUT
‘While I will be cooking Paul will fix the car.’ (BO)

Similarly, the adverb *haixá* ‘after’ has not been found co-occurring with one of the future grams. It seems that this element only occurs when a SPECIFIED time point/interval (e.g. English *noon*) is to be located relative to some other time (which is not identical with the moment of speech) (cf. E79).

Regarding the co-occurrence of the sequential marker *-gajq* with a future gram I also found only a few examples in the corpus⁵². In these sentences, *-gajq* occurs with a future marker (only *-kjane*) and is used to mark the individual clauses, cf. E112:

- E112 Hagorežā žigé wažā hižā 'uṇékjanegaja žeesgé
[hagorežā žigé wažā hižā 'uṇ-ire-**kjane-gaja**] žeesgé
one.time again something one do/be(U.3.SG)-A.3.PL-FUT-SEQ thus
- woošgá žee 'eeja wagi'ú wa'uṇaąkgaja.
woošgá žee 'eeja wa-gi-'uṇ wa'u-ṇaąk-gaja
way.of.life this there U.3.PL-BEN-do/be do-POSNTL.PL-SEQ
'Some day they are definitely going to do something for them, that is
why they had done this particular thing (live alone).' (TWO075)

(In complex sentences) *-gajq* and *-regi* (both can often be translated with 'when') usually mark the subordinate clause while futurity is expressed in the verb in the main clause, cf. E113 and E114:

- E113 Haąhérégi hahiírekjane.
haąh-**regi** ha-hii-ire-**kjane**
night-SIM COLL-return-A.3.PL-FUT
'They will be there at night.' (BO)
(lit.: 'At the time when it is night they all will return.')

- E114 Wiira roocájegaja peecra hižā
wii-ra roocá-jee-**gaja** peec-ra hižā
sun-DEF be.straight(U.3.SG)-POSVERT-SEQ fire-DEF one
- waat'úkje.
ho<ha>t'u-**kje**
<A.1.E>poke.fire(U.3.SG)-FUT
'When the sun is straight up, I will make a fire.' (BO)

(One could substitute *-gi* for *-gajq* without causing a difference in meaning.)⁵³

In contrast to *-regi* and *-gajq*, the topic marker *-gi* is frequently found co-occurring with one of the three future grams, particularly with *-kjane*, cf. E115, E116⁵⁴ and E117:

⁵² i.e. DOL029, TWO075, TWO193 and TWO210

⁵³ The conditions of the distribution of *-gi* and *-gajq* are not yet clear. Sometimes they are mutually exchangeable, while in some other cases they co-occur.

⁵⁴ This example sentence has already been given in E81.

- E115 Jaasgé rakjegí.
jaasgé raa-**kje-gi**
how make/CAUSVA.2-FUT-TOP
'Do what you want.' (HOR121)
- E116 Hirohąpra watužákjanegi šguraírekjanena.
hirohąpra wa-tuužá-**kjane-gi** šgure-ire-kjane-na
window-DEF U.3.PL-wash\A.1.E-FUT-TOP be.clean-A.3.PL-FUT-DECL
'When I am going to wash the windows they are going to be clean.' (BO)
- E117 Nąąkíkjanahegi [...].
nąąk-i-**kjanahe-gi**
run(A.3.SG)-0-FUT-TOP
'If he is going to run [...].' (DOL158)

These example sentences illustrate that future is not necessarily neutralized in subordinate clauses. In contrast, the subordinate clause in E118 must not be marked with a future gram (cf. E119):

- E118 Hagigi warúc ha'ųkjé.
ha-gii-**gi** warúc ha-'ųų-**kje**
A.1.E-return-TOP food A.1.E-do/be(U.3.SG)-FUT
'When I will return I will cook (make food).' (BO)
- E119 *Hagikjéne-**gi** warúc ha'ųkjé. (BO)

The cases in which future may be expressed in subordinate clauses marked with *-gi* require further research.

In "before-clauses", the distinction between future and non-future is neutralized, i.e. the future marker does not occur in this clause type, cf. E120:

- E120 Kenj waruc ha'ųńj Paulga horaájekje.
kenj waruc ha-'ųų-ńj Paul-ga hora<ha>jekje
ANT_{IN} food A.1.E-do/be-(U.3.SG)ANT_{FIN} Paul-PROP <A.1.E>visit(U.3.SG)-FUT
'Before I (will) cook a meal I will visit John.' (BO)

E120 is ungrammatical when futurity is expressed in the subordinate clause marked by the discontinuous time adverbial *kenj ...-ńj*, cf. E121:

- E121 *Kenj waruc ha'ųkjánj Paulga horaájekje. (BO)

The conjunctions ('a)nąga and/or 'eegi are often used to connect two clauses. Their occurrence with future grams has been discussed in 5.1.2.

5.3.2.2 Conditional clauses

The suffix *-gi* (also discussed in 5.1.1.2 and 5.3.2.1) is used to mark both temporal and conditional clauses. Hocak does not make any structural distinction between these two clause types. This suffix can be translated either with ‘when’ or ‘if’. Analogously, the example sentence E116 also has the interpretation ‘If I (am going to) wash the windows they are going to be clean.’

E122, E123 and E124 give further examples of conditional clauses in which the condition is expressed in the subordinate clause which is marked with *-gi*, while the potential consequence of this condition is conveyed in the main clause and is located in the future. Futurity can be expressed by means of all three future grams. E122 illustrates the employment of *-kje* in the main clause:

E122	Howera hįŋągířawahági	hiruwí	nįgígikje.
	howé-ra hį-řa-gi-řa-wahá-gi	hiruwj	nį-gigi-kje
	way-DEF U.1.E-A.2-BEN-A.2-show(U.3.SG)-TOP	money	1&2-let(U.3.SG)-FUT
	‘If you show me the way, I will give you money.’ (23, BO)		
	(lit.: ‘If you show me the way, I will let you (have) money.’)		

(The meaning of this sentence does not change when the potentialis marker *-naq* is substituted for *-kje*.)

In E123 futurity is expressed with *-kjane*:

E123	Nįžugi hirutíra tookékjanena.		
	nįžu-gi hiruti-ra tooké-kjane-na		
	rain-TOP car-DEF be.wet(U.3.SG)-FUT-DECL		
	‘If it rains the car gets wet.’ (PM)		
	(lit.: ‘If there is rain the car will get wet.’)		

The future marker may not be omitted. (Further conditional clauses employing the form *-kjane* are cited in E147 and E116.)

In E124 the gram *-kjanahe* is used to express futurity in the main clause:

E124	Wa'ųnégira rakurúcgi,	wažá	'aas	honįk'ųkjanahe.
	wa'ųnegi-ra ra-ku-ruuc-gi	wažá	'aas	ho<nį>k'ų-kjanahe
	lunch-DEF A.2-RFL-eat-TOP	something	delicious	<1&2>give(U.3.SG)-FUT
	‘If you eat your lunch you'll get a treat.’ (BO)			

5.3.2.3 Complex sentences expressing hopes, wishes, beliefs and promises

In order to refer to future time in sentences expressing hopes, wishes, beliefs or promises, the complements of the verbs of believing, wishing etc. are marked future. The propositions of such complements are then located in the future relative to the moment when the hope, wish, belief or promise is uttered (i.e. absolute time reference). Verbs of believing, wishing etc. do not trigger future marking. The verbs *hiré*, *roogų* etc. are only marked future when the believing or wishing will take place at a future time.

In Hocak there is no word for ‘hope’. The verb *wewí* ‘ponder’ is used instead, cf. E125:

- E125 Hą̀nı́gi hají́rekje peewínakšana.
hą̀nı́gi ha-jii-ire-**kje** **peewí**-nak-šana
tomorrow COLL-get.there-A.3.PL-FUTponder\A.1.E-POSNTL-DECL
‘I hope they will be here tomorrow.’ (BO)
(lit.: ‘I think they will be here tomorrow.’)

Wishes are expressed by means of the desire verb *roogú* ‘want’. In E126 future time reference is expressed by marking the complement of this verb with future:

- E126 Hą̀nı́gi hají́rekje waragı́gu.
hą̀nı́gi ha-jii-ire-**kje** wa-**ráa**<gi>**gu**
tomorrow COLL-get.there-A.3.PL-FUT U.3.PL-<BEN>want\A.1.E
‘I wish they will be here tomorrow.’ (BO)
(lit.: ‘I want them to be here tomorrow.’)

In order to indicate that the wish itself is located in the future, a future gram is to be suffixed to *roogú*, cf. E127:

- E127 [...] hą̀ke reeni roragúkjanena.
hą̀ke ree-ni **roo**<ra>**gú**-**kjane**-na
NEG_{IN} go-NEG_{FIN} <A.2>want(U.3.SG)-FUT-DECL
‘[...] you will not want to go on.’ (TWO289)

Beliefs may be expressed by means of the transitive verb *hiré* ‘think’. To locate the proposition of the belief in the future a future marker is used, cf. E128:

- E128 Hą̀nı́gi hají́rekjanegunı́ yaaré.
hą̀nı́gi ha-jii-ire-**kjane**-gunı́ **hi**<ha>**ré**
tomorrow COLL-get.there-A.3.PL-FUT-DUB <A.1.E>think
‘I believe they will be here tomorrow.’ (EL)

The meaning of this sentence can also be conveyed by the following construction, cf. E129:

- E129 Hą̀nı́gi waakarakjapšana.
hą̀nı́gi wa-ha-**karakjap**-šana
tomorrow U.3.PL-A.1.E-expect-DECL
‘I believe they will be here tomorrow.’
(lit.: ‘I expect them tomorrow.’) (BO)

The verb in E129 does not carry a future marking as the speaker who utters this clause has this expectation at the moment of speech. The verb *karakjap* incorporates what is being expected (*wa-* ‘them’).

As indicated in 5.3.1, there are few (other) exceptions to the rule that an utterance aiming to express future time reference necessarily requires a future marker. This, for instance, is the case when a statement is made that expresses ability (using the form *ruxurúk* ‘be able to’), cf. E134 and E135:

E134 Həhə'o həjɨŋi wəʒətírera piǎ'ú
həhə'o həjɨŋi wəʒətíre-ra piǎ-ha-'úú
yes tomorrow car-DEF be.good-A.1.E-do/be(U.3.SG)

tuxurúkna.
tuxuruk-na
be.ableA.1.E(U.3.SG)-DECL
‘Yes, I will be able to fix the car tomorrow.’ (BO)

E135 Həhə'o həjɨŋi wəʒətírera piǎ'ú tuxurúkikjanena. (BO)

Another exception has been shown with the perfectivity marking element *gɨni* in E102 and E103.

Furthermore, utterances expressing possibility or probability (epistemic modalities) are not marked future. These cases will be discussed in 5.4.2.4.

5.4 Functions of the future markers

Instead of arguing as to whether the future markers are better described as tense or as modal markers, I will analyze them as future grams ranging on an evolutionary time line with a modal and a temporal endpoint. In other words, the future markers in Hocak are forms that have future as one of their meanings.

In the following sections, I will demonstrate that the three future markers have, to a great extent, the same uses.

5.4.1 Future meanings

5.4.1.1 Simple and immediate future

With respect to a distinction between simple and immediate future meaning, Susman (1943:132) reports that the future marker *-kje* is used to mark activities which will be carried out in the near future. This finding cannot be verified by recent research data.

Neither does Hocak distinguish degrees of remoteness in the future. This confirms the general tendency in languages that there are never more distinctions in the future than in the past (cf. 2.6). Since Hocak does not mark past events at all there are no distinctions in the past and, consequently, no distinctions in the future, cf. E136 and E137:

E136 Waruc niǰi'úkjene.
waruc niǰi-gi-'úú-kjene
food 1&2-BEN-do/be-FUT
‘I will cook for you.’ (CW)

- E137 Hagoreža hjš'agikjene.
hagoreža hjš'aak-i-**kjene**
one.time U.1-be.old-0-FUT
'Some day I'll be old.' (CW)

While *-kjenehe* can be substituted for *-kjene* in both E136 and E137 without leading to a difference in meaning, *-kje* may only be used in E136 (ungrammatical in E137).

5.4.1.2 Definite and indefinite future

Hocak does not mark the distinction between definite and indefinite future time reference grammatically. If a speaker intends to express a certain time at which an event will happen in the future, s/he uses time adverbials for specification, cf. E138:

- E138 Hicakóro haara hājīgi horaájekjane.
hicakóro haa-ra **hājīgi** hora<ha>jé-kjane
friend have.kin\A.1.E-RCM tomorrow <A.1.E>visit(U.3.SG)-FUT
'I will visit my friend tomorrow.' (BO)

Without *hājīgi*, the event expressed in E138 is placed somewhere in the future, i.e. at some indefinite time subsequent to the moment of speech.

Definite future time reference can also be expressed by means of the grams *-kje* (cf. E94) and *-kjanahe* (cf. E161).

5.4.1.3 Prediction

5.4.1.3.1 General remarks

In contrast to statements expressing intentional events, future meanings conveyed in predictions do not inevitably involve the modal notion of uncertainty.

Hocak does not distinguish between intention-based and prediction-based utterances grammatically.

The following two sentences E139 and E140 show the grams *-kjane* and *-kjanahe* being used to refer to predictable events:

- E139 Hīñajigašikjane.
hī-ra-gigaš-i-**kjane**
U.1.E-A.2-miss-0-FUT
'You will miss me.' (BO)
- E140 Paulga hašjagí, hirakšákjanahe.
Paul-ga ha<š>ja-gi hi<ra>kšá-**kjanahe**
Paul-PROP <A.2>see(U.3.SG)-TOP <A.2>laugh-FUT
'When you see Paul you'll laugh.' (BO)

Further examples with *-kjane* conveying the prediction sense have been given in E90, E99 and E100. I did not come across an example with *-kje* expressing prediction.

5.4.1.3.2 Scheduled and predetermined events

Utterances referring to predetermined and scheduled future events are special kinds of predictions. In Hocak, these concepts are not distinguished. The following two examples show the future marker *-kjane* being used to express both scheduled (cf. E141) and predetermined events (cf. E142):

E141 Hąjıŋıgı gıçıwı haruwągi peejwáacra reekjáne.
hąjıŋıgı gıçıwı haruwák-gı peejwáac-ra ree-**kjane**
tomorrow clock eight-TOP train-DEF go(A.3.SG)-FUT
'The train will leave at eight o'clock tomorrow (morning).' (90, BO)

E142 Hąjıŋıgı hąp hıŋubáhąkjane.
hąjıŋıgı hąp_hıŋubáhą-**kjane**
tomorrow Tuesday-FUT
'Tomorrow is Tuesday.' (BO)

I did not find examples with *-kje* or *-kjanahe* conveying these two types of prediction. However, this is not to say that these grams may not be used to indicate scheduled or predetermined situations.

According to Dahl (2000b:315), the obligatory marking of prediction-based future time reference indicates that the expression of this temporal concept is grammaticalized in Hocak (cf. 3.2.1).

5.4.2 Modal meanings

As pointed out with E93 and E94, speakers sometimes have contradictory opinions about the connotations conveyed by the individual grams. I will discuss this case for modal readings of the future grams with an additional example sentence that was elicited (separately) from two speakers (BO and CW), cf. E143:

E143 Waruc 'uŋı hajiáairekjane.
waruc 'uŋı ha-jii-ha-ree-ire-**kjane**
food do/be COLL-get.there-COLL-go-A.3.PL-FUT
'They are going to start cooking/they will start cooking.' (BO, CW)

In E143, *-kjane* could be exchanged with *-kjanahe* without leading to a different interpretation. While the construction with *-kje* was not accepted by one speaker (cf. E144), another speaker offered a command-like interpretation (cf. E145):

E144 * Waruc 'uŋı hajiáaire**kje**. (BO)

E145 Waruc 'uŋı hajiáaire**kje**.
'They should start cooking.' (CW)

Similarly, different interpretations with respect to the use of *-kje* and *-kjane* can be observed in E146 and E147:

- E146 Higi naakgi waacákje.
higi naak-gi wa-haca-**kje**
here POSVERT.PL-TOP U.3.PL-see\A.1.E-FUT
'If they are here I will meet them/if they were here I would meet them.'
(BO)
'If they are here let me meet them.'
(CW)
- E147 Higi naakgi waacákjane.
'If they are here I will meet them/if they were here I would meet them.'
(BO)
'If they are here I will meet them.'
(CW)

The interpretation alternatives in E146 and E147 show that *-kjane* and *-kje* do not always convey a distinct connotation.

Given the different interpretations of *-kje* in E94 and E146 by one speaker (CW) one could conclude that the meaning assigned to a future gram does not only depend on the speaker but also on the context.

5.4.2.1 Desire

The gram *-kje* has also been found to express desire, cf. E148⁵⁵:

- E148 Wažajža hinijgipaxikje.
waža-(h)iža hi<nj-gi>pax-i-**kje**
something-one <U.2-APPL.BEN>ask\A.1.E-0-FUT
'I want to ask you something.'
(CL)

The desire meaning can also be conveyed by means of the verb *roogú* 'want' (cf. E149) which has been introduced in 5.3.2.3:

- E149 Hitajé roakígu.
hitajé **roo**<ha-kii>**gú**
be.rich <A.1.E-RFL>want
'I want to be(come)⁵⁶ rich.'
(EL, BO)

As illustrated with E126 and E127, *roogú* may co-occur with a future gram.

5.4.2.2 Obligation

All three future markers can be used to express obligation, as illustrated by examples E150 to E152:

⁵⁵ A further example sentence illustrating the desire meaning of *-kje* has already been given in E115.

⁵⁶ In Hocak there is no distinction between 'being' and 'becoming' when it comes to future time reference.

E150 'Eeja naka šawa'ákjawi žeeḡ.
 'eeja naka ša-wa'a-**kje**-wi žeeḡ
 there POS_NTL.DIST A.2-raise(U.3.SG)-FUT-PL thus
 'This one there you have to raise this way.' (MOC007)

E151 'Eeja hahí hakipérekjane 'airéna.
 'eeja hahí ha<ki>pé-ire-**kjane** 'ee-ire-na
 there finally <RCP>wait.for-A.3.PL-FUT say(U.3.SG)-A.3.PL-DECL
 'There, at that place, they are to wait for one another, they say.' (TWO019)

E152 [...] 'eeḡi žee hirakíkara hı̀kjanahawı́ [...]
 'eeḡi žee hira<kii>kara hı́-'uḡ-**kjanahe**-wi
 then this <RFL>take.care.of A.1.I-do/be-FUT-PL
 '[...] we are to take care of ourselves [...].' (ECO023)

Nevertheless, in order to indicate obligation, the future grams usually combine with *hesge*⁵⁷ 'that's why', cf. E153, E154 and E155:

E153 Xapgeı́g ciira wiikúruwı́nekje hesge.
 xapge-ı́g cii-ra wii<ku>rúwı́-ire-**kje** **hesge**
 soon-INTS house-DEF <REF>sell-A.3.PL-OBL_{IN} OBL_{FIN}
 'They must sell their house soon.' (82, BO)

E154 [...] hı́agı́ḡusikjanawi hesge [...]
 hı́-wa-gı́ḡus-i-**kjane**-wi **hesge**
 A.1.I-U.3.PL-teach-0-OBL_{IN}-PL OBL_{FIN}
 '[...] we need to teach them [...]' (ALV043)

E155 'Eeḡi haḡe wažana hiža hirohireni 'eeḡi
 'eeḡi haḡe wažá-ra hiža hirohire-nı́ 'eeḡi
 then NEG_{IN} something-DEF one be.wrong-NEG_{FIN} then

 'eeḡi hı́gi'ukjanahawı́ hesge 'eeḡi.
 'eeḡi hı́-gi-'uḡ-**kjanahe**-wi **hesge** 'eeḡi
 then A.1.I-APPL.BEN-do/be-OBL_{IN}-PL OBL_{FIN} then
 'We are not supposed to do anything wrong.' (ECO025)

The future markers are, however, not (always) mutually exchangeable. The following two examples sentences E156 and E157 are ungrammatical with *-kjane* or *-kjanahe*:

⁵⁷ In such cases, the future marker will be glossed with OBL_{IN} to indicate that it is part of the construction with *hesge* (expressing obligation).

E156 Annaga həjini həəhəgi ciejá nəəwákje hesge.
 Anna-ga həjini həəhə-gi cii-eeja nəəwá-**kje** hesge
 Anna-PROP morning night-TOP house-there sing(A.3.SG)-OBL_{LIN} OBL_{FIN}
 ‘Anna is to sing tomorrow night in the church (house).’ (BO)

E157 Maəkəniña hacakjé hesge.
 maəkəni-ra haca-**kje** hesge
 doctor-DEF see\A.1.E(U.3.SG)-OBL_{LIN} OBL_{FIN}
 ‘I have to see the doctor.’ (BO)

The construction future marker (here *-kje*) + *hesge* is also used to convey obligations that are located in the past (here expressed by means of the positional time adverbial *xjaanəne*), cf. E158:

E158 Xjaanəne wiira roocəregi nige
 xjaanəne wii-ra roocə-regi nige
 yesterday sun-DEF be.straight-SIM somewhere

howarékje hesgera ree.
 howaré-**kje** **hesge**-ra ree
 go.forward(A.3.SG)-OBL_{LIN} OBL_{FIN}-DEF go(A.3.SG)
 ‘Yesterday he had to leave at noon.’
 (lit.: ‘Yesterday, when the sun was up straight he left because he had to go somewhere.’) (BO)

5.4.2.3 Intention

The following three example sentences E159, E160 and E161 illustrate the intention meaning component of the future grams:

E159 Wažatire hiža tuuwíkje yaare.
 wažatire hiža tuuwí-**kje** yaare
 car one buy\A.1.E(U.3.SG)-FUT think\A.1.E
 ‘I think I am going to buy a car.’ (EL)

E160 Ya’učákjanawi.
 hi<ha>’uča-**kjane**-wi
 <A.1.E>try(U.3.SG)-FUT-PL
 ‘We are going to try (it).’ (HOR004)

- E161 Hotoğúickjanahawi hą̀nigi.
hotoğuc-**kjanahe**-wi hą̀nigi
look.at\A.1.E(U.3.SG)-FUT-PL tomorrow
'We are going to look at it tomorrow.' (BEA059)

With respect to the expression of intentional events that are located in the past, an interesting phenomenon can be observed: the future gram (*-kjane*) co-occurs with *'oire*⁵⁸, cf. E162:

- E162 Wažatíreižą tuuwıkjane'oire.
wažatíre-(h)ıžą tuuwı-**kjane**-'oire
car-one buy\A.1.E(U.3.SG)-FUT-???
'I intended to buy a car/I was going to buy a car.' (BO)

Since this morpheme only occurs in few utterances expressing an intention that is located in the past, I am not able to grasp its meaning. More sentences need to be elicited.

5.4.2.4 Hortative

Each of the three future markers may be used to express hortatives, cf. E163 and E164:

- E163 Higuą̀nałxji hiyarújikjanahawi!
higuą̀nał-xji hi-waruc-i-**kjanahe**-wi
right.now-INTS A.1.I-eat-0-FUT-PL
'We (are going to) eat right now!' (27, BO)

- E164 Ke hųkišgácniłkjawı!
hą̀ke hi-ho<kii>šgác-ni-**kje**-wi
NEG_{IN} A.1.I-<RFL>abuse-NEG_{FIN}-FUT-PL
'Let's not abuse ourselves!' (ECO027)

The future morpheme *-kjanahe* in E163 may be replaced by *-kje* or *-kjane* without leading to a difference in meaning.

Ultan (1978:103) put forward the thesis that, in Hocak, polite requests would be marked by future. This cannot be verified by recent research data. In order to express polite requests speakers either use the potentialis marker *-nał* (cf. E165) or the delayed imperative marker *-aje* (cf. E166):

- E165 Małhıńą hižą yaa'únał.
małhı-ra hižą hi<ha>'ú-**nał**
knife-DEF one <A.1.E>use-POT
'Would you please give me the knife.'
(lit.: 'Could I use the knife?') (BO)

⁵⁸ BO and EL agree that *'oire* means something like 'so. intended to do something but changed his/her mind'.

E166 Ke wakikununjaje!
hake wakikununí-aje
NEG_{IN} forget-IMP_{POST}
‘Please don’t forget it.’ (CL)

(There is no word for ‘please’ in Hocak.)

Future grams have not been found to express possibility or probability (epistemic modalities). Propositions of utterances of which the speaker is not sure as to whether they will come true may be marked by (i) the potentialis marker *-naq* (cf. E167), (ii) the adverbial *koresge* ‘maybe’ (cf. E168), (iii) the dubitative marker *-(š)gunj* (cf. E169) which (iv) in many cases is followed by a conjugated form of the verb *hiiré* ‘think’ (cf. E170). The suffix *-naq* is used to express possibility while *koresge* and *-šgunj* (+ *hiiré*) convey a certain degree of probability.

E167 Joopiwinąa.
joopíwi-naq
four-POT
‘There could be four.’ (EL)

E168 shows the use of the adverbial *koresge*. As this example sentence illustrates, this element does not necessarily trigger a future marker:

E168 Koresge wooğuc niğigí hianąa.
koresge wooğuc_<niğ>gigi hianąa
maybe <1&2>interrupt and
‘I might interrupt you.’ (DOL037)

(The sentence is also correct with a future morpheme: *Koresge wooğuc niğigíkjane hianąa*.)

E169 Maryga hiratira ruwígunj.
Mary-ga hirati-ra ruwí-gunj
Mary-PROP_{car}-DEF buy(A.3.SG.U.3.SG)-DUB
‘It is possible that Mary bought the car.’ (PM)

As indicated above *-(š)gunj* frequently occurs with the verb *hiiré* ‘think’, cf. E170:

E170 Hisgé wašegunj yaare.
hisge waše-gunj hii<ha>ré
be.true say\A.2-DUB <A.1.E>think
‘I think you are right.’
(lit.: ‘I think you said (sth.) true.’) (BO)

5.5 The evolution of the future markers

As illustrated in 3.1.1, most forms marking futurity evolve from agent-oriented modalities such as desire and obligation. In the following discussion I will hypothesize that this may also be true for Hocak. According to the evolutionary process proposed by Bybee, Perkins and Pagliuca (1991), forms that show a semantic development from a (pure) modal meaning to a (pure) temporal meaning usually pass through a stage in which they express intention. Furthermore, future grams with (agent-oriented) modal sources have often been observed to give rise to new modal meanings (cf. FIGURE 5). This evolution is illustrated in FIGURE 9 for Hocak:

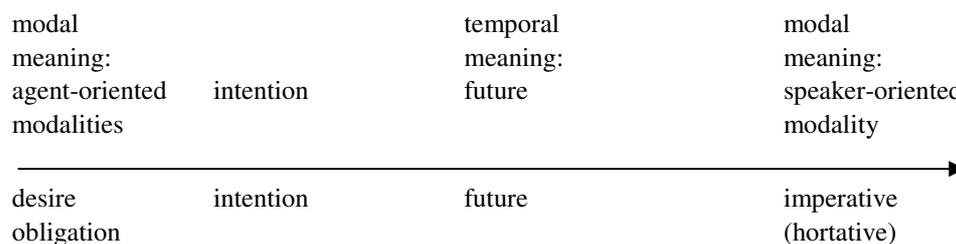


FIGURE 9 Evolution of future grams in Hocak

Apart from their future uses the three future grams in Hocak may also express obligation (cf. 5.4.2.2) and intention (cf. 5.4.2.3). In addition, *-kje* is also used to indicate desire (cf. 5.4.2.1).

Since the future grams may express the two agent-oriented modal meanings of desire and obligation, one could conclude that these modalities are the retained modal meanings of these grams. Considering the phonological relationship of the three future markers and the finding that the semantic development of future grams (modal > temporal use) is accompanied by their formal reduction (cf. 3.1.1), it seems reasonable to assume that these forms evolved from each other where the phonologically least marked form *-kje* is the latest development (i.e. *-kjanahe* > *-kjane* > *-kje*). Given this assumption and the fact that obligation is the only agent-oriented modal use of *-kjanahe*, it could be argued that obligation is the source meaning which gave rise to the future meaning component of the gram(s). In order to verify this analysis more research needs to be done on the uses of the future markers in older texts (e.g. Radin texts).

In sum, the future grams currently convey their retained modal meanings, the new-developing future meaning and the “intermediate” intention meaning which is reported to be expressed somewhere on the path leading to future. Given these facts, the future grams in Hocak could be analyzed as being on their way to become pure temporal forms.

However, the future grams can also be used to convey a late-developing use (cf. Bybee, Perkins and Pagliuca 1991, 28f.): all three markers may express imperative (hortative) meaning (speaker-oriented modality) (cf. E163 and E164). Following the findings of the relevant literature (e.g. Bybee, Perkins and Pagliuca 1991), it is surprising to find future grams being used to express the meanings of ALL evolutionary stages at one given time on the synchronic axis. FIGURE 10 summarizes the above findings:

desire <i>-kje</i>			
			imperative (hortative) <i>-kje</i> <i>-kjane</i> <i>-kjanahe</i>
obligation <i>-kje</i> <i>-kjane</i> <i>-kjanahe</i>		<i>-kje</i> <i>-kjane</i> <i>-kjanahe</i>	

FIGURE 10 Functions of the Hocak future grams

Since the three future markers have, to a great extent, the same meanings/uses they cannot be interpreted as forms representing three evolutionary stages of one single gram. Instead, each one of them has a gram status.

5.6 Summary

Hocak distinguishes between future and non-future events. While the reference to non-future events is zero marked, futurity is expressed by three future grams, viz. *-kje*, *-kjane* and *-kjanahe* (and their alternative forms). These markers are suffixed to the predicate of the sentence (usually the inflected verb) and differ with respect to their phonological complexity, frequency (*-kjanahe* being the least frequent form) and their distribution.

With respect to future marking, I did not find any systematic (phonological, morphological or semantic) pattern on which the distribution of the future grams may be based on. Although the three future markers seem to be interchangeable with respect to most of their functions (cf. FIGURE 10), it has been shown that this is not always the case. The question how each of the three grams is distributed remained unanswered.

Hocak expresses absolute and relative future time reference. While the former is indicated by (positional) time adverbials, the latter is conveyed by the employment of sequential elements (both affixes and independent words). Relative future reference is expressed in complex sentences. The affixes used to indicate relative future reference mark the subordinate clause, whereas the future grams USUALLY only occur in the main clause. In sentences expressing hopes, wishes, beliefs or promises, it is the complement of the verb of hoping, wishing etc. which is marked future.

Hocak does not (grammatically) distinguish between intended and predictable events. Apart from their future use, the future grams may also express modal meanings, i.e. desire, obligation, intention and imperative (hortative). Given the theory of Bybee, Perkins and Pagliuca (1991), who introduced an evolutionary time line for future grams evolving from agent-oriented modalities, and the fact that all three Hocak future grams may express the agent-oriented modality of obligation, I argue that this may be the source meaning of the grams from which the future meaning developed. The future markers currently express the whole range of meanings placed on this time line. All three markers may express obligation, intention, future and imperative meaning. The form *-kje* may also be used to express desire. In other words, the meaning components of the three future grams are (i) their retained agent-oriented modalities (desire and

obligation), (ii) intention (the “intermediate” meaning), (iii) the new-developing future use, as well as (iv) the late-developing speaker-oriented modality (imperative).

6 Summary

Assuming a linear conceptualization of time, three basic temporal concepts arise: past, present and future. However, only a few languages show a tripartite tense system differentiating past, present and future tense respectively. Instead, the majority of languages grammatically distinguish between the reference to past and non-past events. Future vs. non-future tense systems are less frequent.

Compared to the temporal status of the past, futurity is more associated with the notion of modality. The conceptual relationship between futurity and modality is often displayed in the devices used to refer to future time. Future grams frequently develop from modals, aspectuals or from the goal-oriented verbs ‘come’ and ‘go’. Modality is reported to be used most often as source category and therefore receives most attention in the literature. Future grams, in particular, evolve from elements with agent-oriented (modal) uses such as desire or obligation. Forms with modal sources may in turn give rise to new modal meanings expressing epistemic or speaker-oriented modalities. This semantic development goes together with the process of grammaticalization (which includes the formal reduction of the future grams). In most of these evolutionary stages the future meaning exists parallel with the source meaning or the new (or late) developing modal use(s) of the gram, i.e. future grams are often semantically ambiguous. This ambiguity is accompanied by the continual rise and fall of the salience of the modal and temporal meaning components of the gram which results in the instability of these forms.

As the majority of languages, Hocak reveals a binary tense system in which future is opposed to a non-future category covering temporal reference to the past and present. While futurity is, in most cases, obligatorily and overtly marked by means of three phonologically related future grams (i.e. *-kje*, *-kjane* and *-kjanahe*), the reference to non-future events is zero marked. Whether an utterance with non-future marking refers to the past or the present is either given through time adverbials or has to be inferred from the context.

The different future grams are neither phonologically nor morphologically motivated. It also seems difficult to find a semantic pattern that allows to predict the conditions of their choice. Although the future grams convey, to a large extent, the same meanings they often vary with respect to their connotations. The general tendency of future grams using distinct forms to express distinct future meanings cannot be confirmed with Hocak.

Hocak expresses absolute and relative future time reference by means of time adverbials and sequential elements respectively. Relative future reference is expressed in complex sentences in which future is frequently neutralized in the subordinate clauses.

Aside from their future use, the future grams are also used to express the modal meanings of desire, obligation, intention, and imperative (hortative). Consequently, the meaning components of these grams are their retained agent-oriented modalities (desire and obligation), the “intermediate” meaning of intention, the new-developing future use, and the late-developing modality conveying imperative meaning (speaker-oriented modality).

Summary

The modal and temporal meaning components of the future grams have been analyzed as being linked by an evolutionary process in which the future meaning developed from the agent-oriented modality of obligation.

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Appendix

The following list of consultants provides some personal data about both the consultants I have worked with and some Hocąk speakers who I know only from their recordings.

1. List of consultants

1.1 Hocąk

AC, Alvin Cloud	no further information available
BO, Bill O'Brien	*1932 in Valley Junction, Wisconsin
CL, Chloris Lowe Sr.	*1927 in Jackson County, Wisconsin; now working as an artist at the Hocąk language Center
CW, Carolyn White Eagle	*in the 1940s, now working as language teacher
ED, Elisabeth Deere	no further information available
EL, Ed Lonetree	*1932 in Black River Falls, Wisconsin
JB, Jasper Blowsnake	*in the middle of the 19 th century (presumably) in Black River Falls, Wisconsin (cf. Radin 1949b:66)
JBA, John Baptiste	*in the middle of the 19 th century; told the story in writing only (cf. Radin 1949d:47)
JG, John Greengrass	no further information available
JR, John Rave	*in the middle of the 19 th century; had no particular reputation as a story teller (cf. Radin 1949c:12)
JWE, John White Eagle	no further information available
KF, Kenneth Funmaker	*approximately in the 1940s; did not acquire Hocąk as his mother tongue but learned it as an adult
NG, Norma Greengrass	no further information available
PD, Parmington Decorah	no further information available
PM, Phillip Mike	*in the 1940s
RG, Rebecca Greendeere	no further information available
RM, Richard Mann	*1947 in Reedsburg, Wisconsin

All speakers (except for Kenneth Funmaker) have acquired Hocąk as their mother tongue. English is their second language which they were forced to learn when they started school. As far as I know, they can all be considered to speak the Wisconsin dialect.

Ed Lonetree, Preston Thompson and Richard Mann are now employed as language instructors at the Hocąk language Center in Mauston.

My main consultant, Bill O'Brien, has been living in Hollywood for 40 years and returned about ten years ago. Nevertheless, he is very fluent in Hocąk and is regarded as a very good speaker by other tribal members.

1.2 French

AB, Amani Bohoussou *1972 in Adaou (Ivory Coast), native speaker

1.3 Russian

EJ, Elena Jelinek *1979 in Saratov (Russia), native speaker

1.4 Lithuanian

TD, Teresa Dainoraviciute *1981 in Mickunai (Lithuania); Her mother tongue is Polish but as she grew up in Lithuania she is fluent in this language as well.

2. List of texts mentioned in the paper

abbreviation	title	speaker
ALV	alvin	Alvin Cloud
BEA	two_bears	Preston Thompson
CHT	child_teaching	recorded by Amelie Susman (in the 1940s) (no information available)
CHT_disc	child_teaching_discussion	Willard Lonetree, Bill O'Brien, Richard Mann
DEE	deerhunt	Parmington Decorah
DES	description_wagujégikok	Bill O'Brien
DOL	ken&pauline	Kenneth Funmaker and Pauline Mike
ECO	ecology	Kenneth Funmaker
ED01-05, 07-12	Elizabeth Deere	Elizabeth Deere
FEA	feather	Richard Mann
GHO	ghost_journey	Jasper Blowsnake
GRIZ	grizzlybear	John Greengrass
HAP	hąąp	Norma Greengrass
HIL	hills	Parmenton Decorah
HOR	horses	Bill O'Brien and Chloris Lowe Sr.
JOK	joke	Bill O'Brien
LP	The Lord's prayer	unknown
MAP	marplesyrup	Parmenton Decorah
MOC	moccasin_game	Kenneth Funmaker
MOV	Bill_bear_movies	Bill O'Brien
M2S	meal2_speech	Gordon Thunder
NEW	new_birth	unknown (gospel recording, probably made in the 1940s)
OH1.1	origin myth1	unknown
OH1.2	origin myth2	unknown
OH1.3	origin myth3	unknown
OH1.4	origin myth4	unknown
ONE	OAAT	Josephine White Eagle
RIC	Richard	Richard Mann

RRT	retelling_OH1.3	Bill O'Brien, Willard Lonetree, Chloris Lowe Sr.
SCH	school	Parmington Decorah
SPL	spiritland	John Baptiste
TWO	two friends	John Rave
WAT	watermelon	Ed Lonetree
WIC	drying_squash	John H. White Eagle
WIL	willard_speech	Willard Lonetree
WOL	wolf	John Greengrass
WOM	womantrack2	Rebecca Greendeere

3. Additional texts consulted

title	speaker
names	Parmington Decorah
preston	Preston Thompson Jr.
twins	John Greengrass
cook1	Chloris Lowe Sr., Ardella Quackenbush
napak	Richard Mann
drum	Bill O'Brien
caa_worak	Kenneth Funmaker
wagujégikok	Lyle A. Greendeere, L. Funmaker, Josephine P. White Eagle
MAP_BO_cut	Bill O'Brien
birthday2_prayer	Gerold Cleveland
newspaper	Parmington Decorah
maplesyrup	Parmington Decorah