Argument Structure of the Hocąk (Winnebago) Clause

Johannes Helmbrecht

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1. Introduction

The notions predicate and argument in mathematics and logic have been fruitfully applied in linguistics to describe a basic type of syntactic relations called government in terms of traditional grammar. The verb is taken as the predicate of the clause opening one or more syntactic slots for noun phrases which serve as argument(s) of the predicate. The notion of a predicate—argument relation applied to the structure of a clause accounts for the fact that verbs lacking their arguments are felt to constitute incomplete clauses. A minimal requirement for a complete clause designating a proposition is to have at least one predicate often a finite verb plus one or two noun phrases filling its argument positions.

Verbal predicates designate typified situations that involve up to three central participants. On the cognitive level of representation, situations are of course much more complex. Usually, more participants are involved in the cognitive representation of a specific situation than are actually expressed in the corresponding linguistic representation. Languages and their speakers classify situations and this includes that they impose a certain perspective on a situation with only a few core participants. The structural correlate of the linguistic classification of situations and the imposition of a certain perspective on the situation type is a) the verb and b) its complements and adjuncts. The complements of the verb fill the argument positions the verb provides. These are the central participants of the situation type compared to the peripheral participants of the same situation type that may be realized as adjuncts. The distinction between complements and adjuncts reveals one aspect of the categorizing activity of speakers. Certain participants are considered to be relevant and important elements of a certain type of situation, others are considered to be peripheral.

The present paper aims to explore the argument structure of the Hocâk clause. Hocâk is a Siouan language of the Mississippi Valley group closely related to Chiwewa (Otoe, Missouri, and Iowa). The term Hocâk is the traditional one and now official name of the self denomination of this tribe. The Hocâk tribe is better known as Winnebago since this was the term of reference first used by the neighboring Algonquian tribes and later the term of reference in the literature.
Starting from the argument structure of the basic non-derived verbs (cf. section 2) and their inflectional characteristics, I shall discuss first the rather valence increasing grammatical operations such as causativization (cf. section 3), the instrumental prefixes (cf. section 4), the locative applicatives (cf. section 5), the instrumental applicative (cf. section 6), and the benefactive applicative (cf. section 7). Section 8 is dedicated to the discussion of the so-called external possessor marking in Hocak. Hocak has two grammatical means to indicate an additional possessive relation between two different participants of a situation. The first is actually a systematic polysemy of the benefactive applicative, i.e. the benefactive participant can be interpreted systematically in most cases as the possessor of the undergoer in a situation. The second case is the morphological marking of the possessive relation between the actor and the undergoer in a situation. External possessor marking is neither a valence increasing nor a valence decreasing mechanism, but the expression of an additional relation – possession – between two core participants of a situation. The last sections deal with grammatical processes which tend to be rather valence decreasing operations cross-linguistically. However, it will be shown that most of these operations are valence decreasing only in the sense that one argument position of the verb is filled by some indefinite/impersonal pronoun or an incorporated noun. Intransitivization is a concomitant effect of these processes. Reflexivization (cf. section 9) is a real intransitivizing process, but the others are not. The third person plural transitive undergoer marker and the homophonous indefinite undergoer marker (cf. section 11) fill the undergoer argument position and cannot be interpreted as a real grammaticalized detransitivizer. The same holds for the third person actor marker discussed in section 10. This form has a definite and an impersonal interpretation and cannot be reasonably interpreted as a detransitivizer and passive marker. Noun incorporation is a viable process in Hocak too. The incorporated noun fills the patient or instrument argument of a verb such that this position is no longer available for other participants (cf. section 12).

1.1 The semantic and syntactic description of arguments

The relation between the predicate and its argument(s) is usually described in terms of semantic roles and/or grammatical relations. In principle, it is the verbal predicate which specifies the semantic relation of the argument(s) in a clause. For instance, with regard to the verb *riiue* 'to eat sth.' it is the EATER and the EATEN FOOD that are the semantic roles of
the core participants. From a cognitive point of view, other participants are necessarily involved in the eating situation. For instance, there are instruments such as a fork, a knife, a plate, hands, teeth, etc. that are used in a human eating situation. These participants are not central to the prototypical eating situation, hence they are not complements of the verb 'to eat' but may be added as adjuncts.

Typological research on semantic roles has shown that languages and their speakers categorize predicate specific semantic roles into more general semantic roles which are traditionally termed agent, patient, instrument, receiver etc.\(^1\) in case theory. These semantic roles are, however, not language specific notions. They are defined as language independent functional notions that serve as \textit{tertium comparationis} for language comparison. The notions are not arbitrarily chosen, though. Cross-linguistic research has revealed that these roles are grammaticalized in different ways and to various degrees in the grammars of the languages. In addition, it has been shown that languages even further generalize these roles thus subsuming semantically similar roles under two or three macro-roles. The concept of very general macro-roles was first proposed by Foley & Van Valin 1984 within role and reference grammar\(^2\). It was hypothesized that there are two macro-roles, actor and undergoer that subsume the more specific agent-like and the patient-like roles just mentioned. Recently, Lehmann et. al. 2000a have proposed a third macro-role, the indirectus, a participant which is indirectly affected by the situation designated by the verb, but less so than the undergoer. The indirectus may subsume specific roles such as recipient and reversed recipient, benefactive, sympatheticus, and the experiencer (cf. Lehmann et. al. 2000a:19). The postulation of macro-roles is motivated by the fact that semantically similar arguments of a verb are encoded formally in the same fashion. E.g. the nominative marked subject of English active voice verbs conflate all kinds of agent-like specific semantic roles, and the same is true for the direct object that is assigned the accusative case. A reason for the postulation of the indirectus is e.g. the fact that the dative case marked indirect object conflates all kinds of indirectly affected participant roles (cf. Lehmann et. al. 2000a:149). However, even if macro-roles may coincide with grammatical relations, they are not identical. Grammatical relations can be identified on the basis of certain morphological coding properties in the clause and the grammatical behavior

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\(^2\) But see also Dowty 1991, and Lehmann et. al. 2000a.
across clause boundaries (cf. Van Valin & LaPolla 1997:242-309). Grammatical relations are even less sensitive to semantic roles than the postulated macro-roles. This can easily be seen in English passive clauses. The nominative marked subject in a passive clause is semantically the undergoer, i.e. the grammatical relation subject conflates actor and undergoer (and even the indirectus) which demonstrates that the assignment of the nominative in English is not controlled by the semantic role of the participant. Since there is no evidence in Hocąk – at least on the level of the simple clause - that hints at the existence of grammatical relations in Hocąk, I won’t discuss grammatical relations here further. The possibility of the existence of grammatical relations in Hocąk will be taken up again in section 10 when the question will be examined whether the third plural actor marker may be analyzed as a passive marker. If it would turn out that there is a passive in Hocąk this would be a strong index that we have to analyze participant roles and their encoding in Hocąk in terms of grammatical relations. But this is not the case.

A further indication for a rather semantically controlled coding of arguments is the semantic distinction of intransitive arguments. Hocąk has a so-called split S marking pattern3; i.e. the argument of an intransitive verb is marked in one way, if the predicate designates an activity, and marked in another way if the event is inactive or stative. The coding of the intransitive actor is identical to the coding of the actor in a transitive predicate, and correspondingly, the coding of the inactive intransitive undergoer is identically to the coding of the transitive undergoer. This marking pattern of predicate - argument relations is largely semantically determined. However, this does not mean that there is a choice between active/inactive marking of intransitive arguments. That intransitive verbs are active or inactive is conventionally fixed, i.e. a feature of the lexicon. This includes that the classification of verbs as active and inactive is sometimes arbitrary. For instance, the rather inactive process of sleeping is treated as an activity, the verb niqu 'to sleep' takes the actor series of pronominal prefixes.

For the analysis of the argument structure of the Hocąk clause I will adopt the concept of macro-roles assuming that there are two of them, namely actor and undergoer. This corresponds nicely to the facts of the morphological encoding of intransitive and transitive clauses. There are two series of pronominal affixes, an actor series and a undergoer series. Intransitive active situations require the actor series, intransitive inactive/stative situations require a pronominal marker of the undergoer series. In transitive clauses, the agent-like
participants are represented by a pronominal marker of the actor series, and the patient-like participants are represented by a marker from the undergoer series. A problem arises with regard to ditransitive clauses expressing transfer situations or with three argument verbs derived by means of a benefactive applicative. Here the recipient or the benefactive are represented in the same way as the patient thus employing two pronominal marker of the undergoer series. If there were a third series of pronominal markers as it is the case in other North American Indian languages, one could postulate a third macro-role, the indirectus. Since indirectus roles and undergoer roles are not formally distinguished with regard to different sets of pronominal markers in Hocak, I will disregard the indirectus for the description of the argument structure of the Hocak clause assuming that there are only two macro-roles, actor and undergoer, while the latter subsumes also the roles of the indirectly affected participant.

1.2 The identification of arguments in Hocak

One of the most important criteria to identify arguments of a predicate is their obligatoriness. Noun phrases which cannot be omitted without producing an incomplete clause are arguments, otherwise they are adjuncts. Adjuncts are not governed by the verbal predicate. In a clause such as Peter caught the rabbit with a trap the verb to catch obligatorily requires two arguments which are filled by the noun phrases Peter and the rabbit. The third noun phrase in this example with the trap is an adjunct, it can be left out without destroying the completeness of the clause. From a semantic point of view one can say that the participants Peter and the rabbit are inherent parts of the event designated by the verb to catch. A human or animate agent as well as an animate or inanimate moving patient are implied in the concept of catching. The instrument with the trap is not a part of the verbal meaning. Nothing is specified in the semantic of to catch about the instrument by means of which something is caught. The noun phrases Peter and the rabbit are hence obligatory with regard to the semantics of the verb and with regard to its distributional (syntactic) properties. However, the semantic obligatoriness of arguments does not always coincide with syntactic obligatoriness, i.e. semantically implied participants may sometimes be syntactically omitted, or oblique noun phrases encoded like adjuncts may be syntactically obligatory. This is obvious e.g. in English

passive clauses which usually omit the agent noun phrase. Semantically, an agent is implied, but syntactically this agent is no longer obligatory.

The possible mismatch between syntactic and semantic argument hood is dealt with in the present investigation in the following way. Priority is given to the syntactic
(distributional) criterion of obligatoriness. Tests such as the omission of potential argument filling expressions are applied. In addition, there are a few morphosyntactic operations – mostly verbal derivations - in Hocak which reveal the syntactic argument structure of a verb indirectly. For instance, the second type of external possessor marking (cf. section 8.2) as well as the reflexive marking are allowed only for transitive verbs. The syntactic conditions of these and the other verbal derivations will be addressed in the main body of this paper. It is also possible that there are labile verbs which can be used intransitively and transitively without any morphological or syntactic modification. Unfortunately, this possibility requires further research.

There is a peculiar difficulty in Hocak verbs to identify arguments. Arguments of the verb are obligatorily indicated by means of pronominal prefixes in Hocak. These are not real agreement affixes, since free personal pronouns and lexical noun phrases with which they could agree can always be omitted. It is the pronominal prefixes which fill the argument slot\(^4\). Up to three pronominal prefixes can appear on the verb in order to indicate three different arguments. However, the third person singular is always marked zero. In this case, the omission of a noun phrase in the clause does not work as test for argument hood, since the omitted noun phrase is still represented as zero in the verb. In order to prove argument hood one has to avoid third person singular arguments all together which is sometimes a kind of hard, particularly with regard to direct objects that naturally tend to be third persons singular. There are also other semantic roles which usually reject speech act participants as arguments, e.g. the instrument role.

### 1.3 The scope of the investigation

\(^4\)This is a morphosyntactic property Hocak shares with other so-called pronominal argument languages. The concept of pronominal arguments was first introduced in linguistics by Jelinek 1984. Her hypothesis is developed in this publication is not relevant for the present investigation of Hocak though.
Predicate - argument relations can not only be found in verbs governing their argument(s) but also in adpositions governing their complement. Adpositions, however, do not play a role in Hocak. Since Hocak is a strict verb final language one would expect postpositions governing nominal complements used e.g. for locative adjuncts and the like. There are no such morphemes which could unambiguously classified as postpositions, though. It is a preferred strategy of Hocak to integrate "oblique constituents" by means of subordinated predicates and clauses. Hocak has no morphological case marking and hence no "oblique" case markers. But there are also no adpositions. The scope of the present investigation is therefore restricted to the domain of verbs. All grammatical processes which cause changes in the argument structure of non-derived and derived verbs are the subject of this investigation. Such changes may either increase or decrease the number of arguments of a verb, or they may add some meaning components to the verb resulting in a change of the semantic role of its arguments.

1.4 The data

The bulk of the data for this investigation were collected with the help of Hocank consultants in Wisconsin by means of elicitation. Other relevant sources are the grammatical descriptions by Susman 1943, Lipkind 1945, and Miner 1992b, and the lexical studies by White Eagle 1988, Miner 1992a, and Zeps 1996.

2. Verb classes

There are at least four different classes of plain non-derived verbs with regard to the number and semantic type of arguments: intransitive active verbs, intransitive inactive/stative verbs, transitive verbs and ditransitive verbs, cf. the summary in Figure 1.
Figure 1: Principal verb classes in Hocank

Plain (non-derived) verbs

- intransitive
- transitive
- ditransitive
- active
- inactive/ stative

Transitive and intransitive active verbs can be further subdivided into a group of verbs inflected by means of the first conjugation, and another group inflected by means of the second conjugation. Since the choice of the two conjugations is phonologically conditioned, this distinction won't be considered further in the reminder of this paper. In addition, the sometimes quite complex morphophonemics of the verbal inflection is treated in the present paper only in so far as it is relevant for the understanding of the morphological operations and the argument structure of the verb⁵.

The class of intransitive active verbs includes all verbs designating movements, body positions and body actions, cf. the examples in E 1.

E 1  

- **húí**  'to arrive, to get there'
- **hiirá**  'to bathe, to swim'
- **náazí**  'to stand'
- **hikšá**  'to smile'
- **hikorohó**  'to get ready, to get dressed'
- etc.

All these verbs imply a human or animate actor. Morphologically they are distinguished from intransitive inactive/ stative verbs by requiring the actor set of person markers either of the first or of the second conjugation. The paradigm of the active intransitive pronominal prefixes (first conjugation) is given in E 2.

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⁵ For information on the morphophonemics of the verbal inflection, the reader is referred to the detailed description of this aspect of the Hocak morphology in Lipkind 1945:25-27; Marten 1964; Helmbrecht in prep.)
E 2  Paradigm of the active intransitive verb šgáac 'to play'

<table>
<thead>
<tr>
<th></th>
<th>sg</th>
<th>du</th>
<th>pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1incl</td>
<td>ḥī-šgáac</td>
<td>ḥī-šgaj-wí</td>
<td></td>
</tr>
<tr>
<td>1excl</td>
<td>ḥa-šgáac</td>
<td>ḥa-šgaj-wí</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ra-šgáac</td>
<td>ra-šgaj-wí</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ť-šgááč⁶</td>
<td>Ť-šgáaj-irv</td>
<td></td>
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</tbody>
</table>

The class of intransitive inactive/stative verbs comprises all verbs designating properties such as colors, dimensions, values, etc., unintentional processes, and results of processes, cf. the examples in E 3.

E 3  šfī  'to be fat'  
  pūfī  'to be nice, to be good'  
  nágwó  'to swell'  
  šséré  'to break, to be broken'  
  hokiráč  'to be puzzled'  
  etc.

Morphologically these verbs are distinguished from the active intransitives in that they take the undergoer series of personal affixes, cf. the paradigm in E 4. Note that there is no distinction between first and second conjugation in the undergoer series of pronominal prefixes.

E 4  Paradigm of the inactive/stative intransitive verb šáak 'to be old'

<table>
<thead>
<tr>
<th></th>
<th>sg</th>
<th>du</th>
<th>pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1incl</td>
<td>wággana-šáak</td>
<td>wággana-šáak-wí</td>
<td></td>
</tr>
<tr>
<td>1excl</td>
<td>ḥī-šáak</td>
<td>ḥī-šág-wí</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ṉi-šáak</td>
<td>Ṉi-šág-wí</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ť-šáak</td>
<td>Ť-šág-irv</td>
<td></td>
</tr>
</tbody>
</table>

⁶The zero sign in the paradigms here is introduced for reasons of a better and more transparent exposition of the morphological structure of the inflectional paradigms. The question whether there is indeed a zero or rather nothing has to be examined further. A third singular person category lacks a morphological reflex on the verb in each case. This suggests that there is indeed no zero morpheme. However, the third singular anaphoric function of this zero form rather suggests that a third singular zero morpheme should be assumed. I prefer to leave this question open here for further research.
There is a large group of verbs which should be classified as inactive/stative intransitive verbs on semantic grounds. The peculiarity of these verbs is that they can be inflected only for either animate or inanimate third persons. Since the third person singular actor and undergoer is generally zero marked, and the third person plural suffix -ire does not distinguish between actor and undergoer, the active/inactive distinction is neutralized in these verbs. In other words, the active/inactive distinction in intransitive verbs exists only for verbs allowing a first and second person intransitive argument. Note further that the split between first/second person versus third person with regard to the active/inactive marking pattern leads to lexical oppositions such as šišre' versus xuuxre' 'to break, to be broken' (cf. the examples in E 3 and E 5) depending on the person category of the single argument. The second one is possible only for third persons. Some examples for verbs which allow only third person subjects are given in E 5.

E 5  
roocý 'to become ripe (3rd person only)'
tuuch 'to be cooked (3rd person only)'
xuuxre' 'to break, to be broken (3rd person only)'

etc.

The vast majority of transitive verbs show some kind of morphological derivation, plain underived transitive verbs are less frequent. Transitive verbs designate actions which are instigated and conducted by an intentional and controlling actor on a more or less affected undergoer, cf. some examples in E 6. Morphologically these verbs require a pronominal prefix of the actor and one of the undergoer series. Since third person singular actor and undergoer is marked zero, the verbs in E 6 could also be translated as honj 'he/she hunts it', ruq 'he/she carries it' and so on7. Note that the plain verbs express a complete proposition, but do not constitute a complete utterance. A declarative suffix such as -naq or -šunq is required in each case.

E 6  
honj 'to hunt sth., to look for sth.'
ruq 'to carry, to lift sth.'
honqc 'to borrow sth.'

etc.

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7 Note that there is no infinitive category in the Hocak verb.
Plain underived ditransitive verbs are really rare. I found only two or three instances of such a verb, e.g. *hok ypi* 'to give sth. to someone' and *wahá* 'to show sth. to so.'. It is therefore doubtful whether one can speak of a proper subclass of Hocák verbs. That *hok ypi* 'to give sth. to someone' is really a three place verb can be seen in E 7a-b.

E 7 (a) *woonífk ypiŋ*  
/ *wa- ho- ypi- k’yi- ng/  
3pl.U-ST-1->2-give-Decl  

(b) *woónák ypiŋ*  
/ *wa- ho- hj- ra- k’yi- ng/  

Hocák, like Lakhota and other Siouan languages, has a portmanteau pronominal prefix *ypi*-indicating a first person acting on a second person. In addition, the *wa-* prefix is a 3pl.U form which is used only with transitive verbs. There is no rule which says that maximally two arguments may be pronominally indicated on the verb which is sometimes the case in head marking languages.

There is a remarkable uncertainty with regard to the undergoer series of pronominal affixes. In the examples in E 7a-b they indicate the patient and the recipient and it can only be inferred from the discourse context which one of the undergoer prefixes refers to which semantic role. Therefore, there are two possible translations of these expressions. The default interpretation is always the first one, since speech act participants are usually not the object of a giving event. The third person plural undergoer pronoun *wa-* may refer either to animate or inanimate entities, the latter are much more common objects of giving. This uncertainty with regard to the assignment of semantic roles is systematic, if there are two undergoer pronouns and can be found also in benefactive applications (cf. section 7 below). The possibility of the pronominal prefixes of the undergoer series to indicate the patient and the recipient role is an argument in favor of describing them in terms of the macro-role undergoer in the sense of Foley & Van Valin 1984. This generalized patient-like macro-role undergoer subsumes

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8 The following abbreviations are used in the glossing of the examples: A = actor, U = undergoer, Pat = patient, Rec = recipient, Ben = benefactive applicative, Instr = instrument applicative, Loc = locative applicative, INSTR = instrumental prefix, Refl = reflexive, Recip = reciprocal, Poss = possession, Def = definite article, Indef = indefinite article, 1, 2, 3 = first, second, third person, 1->2 = first person acting on a second person, sg/pl/du = singular/plural/dual, incl/excl. = first person inclusive/exclusive, ST = part of verbal stem, Decl = declarative suffix, PN = proper name marker, Sub = subordinator.
several distinct semantic roles even the ones called indirectus (cf. Lehmann et al. 2000a) formally discerned in other languages e.g. by a dative case marker or a special series of pronominal affixes.

Some remarks on verbal stems are due before I begin with the discussion of the various possible morphological manipulations of the argument structure of verbs in Hocâk. The verbs in the Hocâk lexicon are morphologically transparent. There are numerous forms which begin with one of the locative or instrumental applicatives such as ha-, ho-, and hi- (cf. section 5 and 6 below), or with one of the eight instrumental prefixes such as boo-, nqa-, nga-, taa-, gi-, ra-, ru-, and wa- (cf. section 4 below). This does, however, not mean that these are productive derivations of the one or the other type. Even if the morphological behavior looks as if it is a productive derivation, the semantics of the verb and the argument structure do often not show the expected behavior. In this case, the form has to be treated synchronically as a single verb stem, even if it is possible to analyze the form diachronically as a derivation. I will illustrate this with an example. There is e.g. a transitive verb hiperés 'to know sth./ someone' which is morphologically transparent. It is historically presumably a derivation of hi- 'with (instrumental applicative)' plus the verb perés 'to be clear'. The latter is still used as a free intransitive inactive verb. The hi- prefix normally adds an instrument argument to the verb thus increasing the valence. No such process can be recognized synchronically in the verb hiperés, except that it is transitive compared to perés that is intransitive. An additional instrument argument cannot be identified on the basis of the semantics of the verb. The morphophonemic rules, however, associated with the instrumental applicative hi- apply in the same way in the inflection of hiperés as in any other "real" productive derivation with hi-. The likely historical derivation of hiperés has become lexicalized. From a synchronic point of view, this verbs has to be treated as a single non-derived verb. Similar cases abound in the Hocâk lexicon.

3. Causatives

A causative construction typically consists of a predicate with two or three arguments that have been termed causer, causee, and patient (if there are actually three arguments).

Semantically, the causer forces the causee to do something or is the causal source that a state of affairs comes into being. Structurally, causative constructions can be formed analytically by means of auxiliaries or morphologically by means of verb derivations (less often by
inflection). Lexical oppositions representing the causative argument structure such as *kill* versus *die* exist too.

In principle, it should be possible to form causatives from intransitive as well as from transitive verbs resulting in argument structures as given in Figure 2.

Figure 2: Argument structure of causative formations
(a) [Causer - Causee - Verb_{intr} + CAUSE]
(b) [Causer - Causee - Patient - Verb_{tr} + CAUSE]

Typologically, the most variation with regard to argument encoding can be found in the causee, since the causee is at the same time the undergoer of the causation and the agent of the event designated by the verb.

Hocq̃ causative formation is analytical. Hocq̃ has four forms such as =hiʔ, gigi, sii, and rech/n̂ that are used to various degrees to form causative constructions. The first one of these =hiʔ⁹ 'to make, to do' is the most frequently used form; it is a cliticized auxiliary appearing after the main verb. However, =hiʔ does not only form causative construction, but – as can be expected of the most grammaticalized causative marker in a language - functions also as a transitivizer. The transitivizing function can be observed almost exclusively in causative constructions based on intransitive inactive/stative verbs, cf. the examples in E 8 - E 10 a-b.

\begin{itemize}
  \item E 8
    \begin{itemize}
      \item (a) *caq̃r̄* 'to be visible, observable'
      \item (b) *caq̃r̄=hiʔ* 'to make sth. visible'
      \item (c) *caq̃r̄=wahānq* 'I make them visible'
    \end{itemize}
    \leftroot{3}\righttop{2}3p1U-1sg.A-cause-Decl

  \item E 9
    \begin{itemize}
      \item (a) *hik̃r̄uʃe* 'to be twisted (3rd person inanimate only)
      \item (b) *hik̃r̄uʃe=hiʔ* 'to twist something'
    \end{itemize}

  \item E 10
    \begin{itemize}
      \item (a) *cuw̃g̃uʃn̂* 'to be gone, to be empty'
      \item (b) *cuw̃g̃uʃn̂=hiʔ* 'to take it away (from someone)'
      \item (c) *cuw̃g̃uʃn̂=nji-nqa* 'I take it away from you'
      \lefttop{2}1-2-cause-Decl
    \end{itemize}
\end{itemize}

⁹There is a homophonous verb *hiʔ* 'to arrive, to get there' that is used for complex predicate formation in Hocq̃ too. It occupies the same position after the main verb, but has different meanings, e.g. it is sometimes used to indicate durative aspect. Both verbs can be confused only in third persons, because they follow different conjugation patterns.
The arguments of the transitivized/ causativized constructions are both pronominally marked on =hūi. This is illustrated in E 8c. Note that =hūi is inflected irregular, the /h/ drops and the stem vowel is changed to a long /a/ for the first person actor. The undergoer is the 3pl. U wa-.

In E 10c, the transitivization/ causativization introduces two new arguments, the transitive patient and the recipient\(^{10}\), i.e. the person from whom something is taken. As is usually the case in Hocq a recipient, or benefactive, and here in E 10c the reversed recipient takes precedence over the patient argument with regard to marking, because of the prototypical high position of this participant on the empathy hierarchy. It is more likely that the recipient etc. is marked pronominally, since recipients are more likely speech act participants than transitive patients. Otherwise, it is principally possible to have both arguments marked by pronominal affixes of the undergoer series. Obviously Hocq neither belongs to the group of so-called "primary object" languages nor to the group of "direct object" languages in terms of Dryer's syntactic typology (cf. Dryer 1986)\(^{11}\).

As can be expected with regard to verbal derivations, hūi is not fully productive. There are intransitive inactive verbs such as širre 'to break, to be broken' that do not allow a derivation on hūi. The reason may be that these verbs are regularly transitivized by other means such as of one or more of the instrumental prefixes (cf. section 4 below).

The prototypical causativizing function of =hūi can best be observed with intransitive active verbs. The intransitive agent is forced to conduct the action by the causer thus becoming a causee, cf. the illustrating examples in E 11a-b and E 12a-b. With most of verbs of coming and going (except the progressive series of these verbs)\(^{12}\) – the addition of the causative auxiliary produces meanings of sending, cf. E 13a-b.

\[\begin{array}{ll}
\text{E 11} & \text{(a) hikšá} & \text{‘to laugh, to smile’} \\
& \text{(b) hikša=hūi} & \text{‘to make someone laugh, smile’} \\
\text{E 12} & \text{(a) keré} & \text{‘to leave’} \\
& \text{(b) kere=hūi} & \text{‘to make someone leave, to send someone away’}
\end{array}\]

---

\(^{10}\) Actually it is a reversed recipient termed Emittent in Lehmann et. al 2000a:100ff.

\(^{11}\) Primary object languages are languages which code the indirect object (i.e. the recipient) in ditransitive clauses in the same way as the direct object (i.e. the patient) in transitive clauses. Direct object languages are hence languages that encode the direct object in transitive and ditransitive clauses in the same way.

\(^{12}\) Hocq has a set of twelve systematically organized verbs of coming and going that distinguish movement towards speaker and away from speaker, towards a place one belongs to, or has been recently and away from this place, and progressive aspect. They can be grouped together as a subclass of verbs of motion on semantic grounds, but also because they behave similar with regard to some morphological derivations.
E 13 (a)  gúa  'to start returning'
             (b)  guu=hūi  'to send back someone/something'

With transitive verbs, the addition of =hūi produces verbs with a three argument frame
including the causer, the causee, and the patient, cf. the example in E 14.

E 14  Peregá Paulgá ḕuqe-puqe gущhũŋa  'Peter made Paul shoot the bear.'
    /Peregá Paul-gá ḕuqe-rá ḕuqe- hūi- nŋ/  
P.-Prop.N P.-Prop-N bear-Def shoot-cause-Decl

Since 3sg arguments are always marked zero, the coding properties of the three arguments are
not visible in E 14. The rules of argument marking can be inferred from the additional
example in E 15. The causer and the causee are always marked pronominally on the causal
auxiliary =hūi. The patient is obligatorily marked on the main verb. The causee who is the
actor of the main verb can be marked there too, but this is optionally. Thus the causee may be
marked twice in a complex predicate phrase, cf. the schema in Figure 3.

E 15  hūi(nŋ)guc=ŋhũŋa  'he made you shoot me'
    /hūi-(ŋ)- guc=  nŋ-  hūi- nŋ/  
   1sg.U-(2sg.A)-shoot=2sg.U-cause-Decl

Figure 3: Person inflection in causative formations
   [Pat – (Agent) – Verbbr [Causee1 – Causer – VerbCAUSE ]]

The other verbs,  gígí  'to let someone do sth., to allow someone to do sth.' and  sii  'to
tell someone to do sth.', are used to form causatives to a lesser degree. They are not used with
inactive/ stative intransitive verbs since they require the causee to have some control over the
performance of the action. There is no control of the argument in inactive/ stative verbs.
Therefore,  gígí  'to let someone do sth., to allow someone to do sth.' is only possible with
intransitive active and transitive verbs. The rules of argument coding are the same as in =hūi
The causer is the actor of the causative verb, the causee the undergoer, and the patient (if
present) is marked on the subordinated verb of the complex predicate, cf. the examples in E
16 and E 17.
E 16  

$higuc n\jigi\ireena$  

'/h\i- g\uc n\j- g\igi- ire- n\q/


E 17  

$n\jigu h\ji\ireena$  

'/n\j- g\uc h\j- s\i- ire- n\q/

2sg.U-shoot 1sg.U-tell-3pl.A-Decl

The causee who is at the same time the undergoer of the cause verb and the actor of the subordinated verb may be optionally marked on the subordinated verb as actor, cf. the examples in E 18 and E 19. Note that the primary stress of $gigus$ 'to teach' would move one syllable to the right, if the causee/ agent would not be marked.

E 18  

$wa(ra)\jigu n\jigii\in$  

'/wa- (ra)- gigus n\j- g\igi-n\q/

3pl.U-2sg.A-teach 1->2-let- Decl

E 19  

$wa(ra)\jigu n\jigii\in$  

'/wa- (ra)- gigus n\j- g\igi-n\q/

3pl.U-2sg.A-teach 1->2-let- Decl

The last of the four causal auxiliaries is $rech\i$ 'to cause', cf. the example from White Eagle (1988:12) in E 20.

E 20  

... $hoih\u\ rech\i-\gi$ $gi\jara\jara\x-n\q- n\q$

... swing cause-if rattle- would-Decl

... it would rattle if one shakes it.

It appears sometimes in causative constructions, but it does not seem to be a productive means to this end. I could not elicit any productive causative constructions with this form. In E 20, $rech\i$ certainly transitivizes the intransitive verb $hoih\u$ 'to swing' deriving the meaning 'to shake sth. (= cause to swing sth.).' Diachronically, $rech\i$ might be analyzed as a combination of $ree$'to go, to start going' plus causative $h\i$.

4. Instrumental prefixes

Instrumental affixes of the type to be discussed in the present section are not uncommon among North American Indian languages, but they are particularly common in Siouan
languages, certainly being a property of the proto language. Hocak has a set of eight different prefixes which are formally subdivided into two groups, the instrumental prefixes having a long vowel, and the ones having a short vowel. Semantically, these prefixes add an instrumental meaning to the verb in the sense that the action designated by the verb is accomplished by means of some instrument (body part or artifact), by force, or a special type of instrumental movements. The instrumental prefixes can be glossed semantically as in E 21.

E 21 Semantics of instrumental prefixes

<table>
<thead>
<tr>
<th>Long instrumental prefixes</th>
<th>Short instrumental prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>boo-</code></td>
<td><code>gi-</code></td>
</tr>
<tr>
<td>'by shooting, by blowing, by force'</td>
<td>'by striking'</td>
</tr>
<tr>
<td><code>magg-</code></td>
<td><code>ra-</code></td>
</tr>
<tr>
<td>'by cutting'</td>
<td>'with the mouth, with the teeth'</td>
</tr>
<tr>
<td><code>naq-</code></td>
<td><code>ru-</code></td>
</tr>
<tr>
<td>'by foot'</td>
<td>'by hand'</td>
</tr>
<tr>
<td><code>taa-</code></td>
<td><code>wa-</code></td>
</tr>
<tr>
<td>'by fire, by heat'</td>
<td>'by pressure, by pushing'</td>
</tr>
</tbody>
</table>

The majority of verbs beginning with an instrumental prefix in the Hocak lexicon are transitive verbs. This fact suggests that these prefixes have a transitivizing function. And indeed, if one considers the productive cases of word formation with these prefixes, one can quickly find cases where the transitivizing function is obvious. In E 22a-b and E 23a-b, an intransitive inactive verb is transitivized by means of the instrumental prefix `boo-`. The resulting verb is a regular transitive verb. The semantics of the derivational relation between the root and the derived form is less obvious in E 24a-b. The intransitive inactive verb `tée` 'to die, to be dead' can be derived by `boo-` too. The resulting verb is transitive, but the meaning deviates from what can be expected.

E 22 (a) `ṣīnj` 'to be cold (weather)'
   (b) `boo-ṣīnj` 'to blow sth. cold'

E 23 (a) `sēēp` 'to be black'
   (b) `boo-sēēp` 'to extinguish at a distance, blow out (as a lamp)'

E 24 (a) `tēē` 'to die, to be dead'
   (b) `boo-tēē` 'to hurt someone/ sth. as with a blow'

By far the majority of verbs with a instrumental prefix do not show a derivational relation between an intransitive (inactive) verb root and a derived stem as the examples presented in E
22 - E 24. The main reason is that there is – from a synchronic point of view - simply no free independent verb root which is the base for the derivation. For instance, there are transitive verbs such as *boošaräc* 'to poke sth. away', *boosće* 'to sweep clean sth.', *boosgäp* 'to knock over sth. by running into it' etc. whose derivational counterpart is not an independent verbal root. There is no independent *šarac*, *šic*, and *šgäp*. This observation can be made with all other instrumental prefixes. Most of the derivations on instrumental prefixes in the Hocak lexicon have therefore to be treated as historically lexicalized derivations. Sometimes even the semantics of the instrumental prefix is no longer visible.

The basis of the derivation with instrumental prefixes may be a verbal root which appears in other derivations, but does not exist as a free word. This is the case e.g. in E 25a-c. The base forms do occur in other derivations with instrumental prefixes (not given here) and seem to be quite productive there. The roots of the derivations in E 25 occur as inactive intransitive verbs in the lexicon with the suffix *-re*. This suffix looks like a detransitivizer, because there are a number of verbs with it in Hocak which have a somewhat passive-like translation. But in fact *-re* is a lexically fixed no longer productive suffix which perhaps had this passivizing or detransitivizing function once historically.

E 25  

<table>
<thead>
<tr>
<th>No.</th>
<th>Stem</th>
<th>Meaning</th>
<th>Base</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td><em>boošēp</em></td>
<td>'to shoot sth. down'</td>
<td><em>šēbrĕ</em></td>
<td>'to fall down'</td>
</tr>
<tr>
<td>(b)</td>
<td><em>boošēš</em></td>
<td>'to break sth. by a blow'</td>
<td><em>šēbrē</em></td>
<td>'to break, to be broken'</td>
</tr>
<tr>
<td>(c)</td>
<td><em>boošēx</em></td>
<td>'to break sth. in pieces'</td>
<td><em>šēxē</em></td>
<td>'sth. brittle breaks, is broken'</td>
</tr>
</tbody>
</table>

That derivations with instrumental prefixes do not always derive transitive verbs can be illustrated with *taawūs* 'to be dried by heat' which is an intransitive verb based on another intransitive inactive verb *wūs* 'to be dry', cf. E 26a.

E 26  

<table>
<thead>
<tr>
<th>No.</th>
<th>Stem</th>
<th>Meaning</th>
<th>Base</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td><em>taawūs</em></td>
<td>'to be dried (by heat)'</td>
<td><em>wūs</em></td>
<td>'to be dry'</td>
</tr>
<tr>
<td>(b)</td>
<td><em>boosī</em></td>
<td>'to tip over'</td>
<td><em>wūs</em></td>
<td>'to be dry'</td>
</tr>
<tr>
<td>(c)</td>
<td><em>boosårac</em></td>
<td>'gayser'</td>
<td><em>wūs</em></td>
<td>'to be dry'</td>
</tr>
</tbody>
</table>

The derivational base form does not exist as a free independent word or does exist but with a totally different meaning. The verb *boosī* 'to tip over' in E 26b has a corresponding form *sūmărē* 'to be tipped over' in the lexicon, but no independent form *sūq* with a comparable meaning. The basis of the derivation *xārēc* in E 26c does not exist at all as an independent word. These examples also demonstrate that words with a instrumental prefix need not be
transitive verbs, but may be intransitive (cf. E 26b), or may designate a nominal concept (cf. E 26c).

5. Locative applicatives

There is a group of three prefixes, ha- 'on it', ho- 'in it', hi- 'with it' that occupy the same structural slot in the morphology of the verb. They are termed locative prefixes by Lipkind (1945), Susman (1943), and Miner (1992b) according to the traditional practice among Siouanists. This term is to some extent a misnomer, at least for the last prefix hi- that has nothing to do with local relations. hi- is a instrumental applicative and will be treated separately in the subsequent section.

The locative applicatives ha- and ho- are derivational prefixes that add a new locative argument to the argument of the derived verb; ha- means 'on sth', ho- means roughly 'in, inside, within sth'. The function of the locative applicatives is illustrated in E 27 and E 28.

E 27  (a)  t’qp  'to jump down, to step down (as from a chair)'
(b)  ha’tqp  'to jump on sth.'
(c)  homigra haat’qpšaŋa  ‘I jumped on the bed’
     //homjk-ra  ha-  ha-  t’qp-  šqaŋ/  
     bed-     Def on.it-1sg.A-jump-Decl
(d)  hanjt’pqšaŋa  I jumped on you'
     //ha-  nij-  t’qp-  šqaŋ/  
     on.it-1->2-jump-Decl

In E 27a-d, the active intransitive verb t’qp 'to jump' receives an additional locative argument indicating the place where the movement of the actor ends, i.e. the actor is brought in a local relation to another entity. In English such supplementary information is usually given by means of oblique prepositional phrases. That the actor and the place 'on sth.' are indeed arguments of the verb ha’tqp is demonstrated in E 27d where both entities are speech act participants, i.e. pronominally marked by non-zero forms. If there is no pronominal but a lexical noun phrase filling the argument position as in E 27c, this noun phrase may have an optional locative enclitic ejá 'there' which is a very general local deictic marker. In terms of relational grammar, one might analyze this derivation as a promotion of an oblique locative object to direct object status. However, the non promoted oblique (locative) object may be marked by ejá, but the locative argument promoted to direct object may be marked by ejá too.
It is clear that *efá* cannot be analyzed as a local or locative oblique case marker, and it seems to be better not to speak of a promotion to a higher grammatical relation.

The prefix *ho*-'in sth.' works in a parallel fashion, cf. the examples in E 28a-c. The difference is that it is much harder to find reasonable locative arguments which are not third person singular. With the verb *hikf* 'to wake up' for instance it is impossible to imagine a pragmatic reasonable place argument which could be a speech act participant.

E 28  (a)  *hikf*  'to wake up'
     (b)  *ho-hikf*  'to wake up in some place, the place one wakes up''
     (c)  *honatá hoyaðkín*  'I woke up in the bedroom'
           /honat-  rí  ho-hi-  ha-  kí-  na/  
           bedroom-Def  in-ST-1sg.A-wake.up-Decl

In a recent paper by Craig & Hale 1988 on relational preverbs in some American Indian languages, it is tacitly assumed that the derivation by locative applicatives in Hocak is a productive process. This, however, is at best misleading. The locative applicative *ha-* can be used productively with only a small subset of verbs in Hocak, mostly intransitive verbs designating movements and bodily positions. *ha-* is not possible with the set of intransitive verbs of coming and going which is surprising, since they seem to be the natural target for locative applicatives from a semantic point of view. In addition, *ha-* is not possible with almost all transitive verbs. I could not elicit productive derivations on *ha-* with plain non derived transitive verb stems. One clear exception to this rule is *wahq* 'to pour, spill sth. (liquids)' which has a derived form *hawahq* 'to pour sth. (liquids) on sth.' There might be other derivations of this type, but if so, they are exceedingly rare.

The same holds for transitive verbs which are derived with instrumental prefixes (cf. 4 below). Productive derivations with one of the instrumental prefixes such as *boo-, nq-, mg-, ta-, gi-, ra-, ru-, wà-, result in transitive verbs. I found no productive derivations of the type *[ha- [INSTR + verb]₇]. This does not mean that there are no morpheme combinations of the type *[ha- + INSTR + verb] in the lexicon of Hocak. But in every case, the stem of the *ha*-derivation turns out to be either not a productive derivation with an instrumental prefix, i.e. the [Instr + verb] stem is a lexicalized stem with an idiomatic meaning, often also intransitive, or there is no derivational (i.e. systematic) relation between the [Instr. + verb] stem and the derived form on *ha-*, i.e. the *ha*-derivation has become lexicalized itself with an idiomatic meaning.
The latter case can be illustrated with e.g. the verb *ratěk* 'to bruise, mark by biting' beginning with an instrumental prefix *ra-* 'with mouth, by biting'. This verb is lexicalized, there is no independent root *-těk*. There is also a form *haratěk* with the rather idiomatic meaning 'to slur words'. There is certainly no derivational relation between both of them.

The former case can be illustrated with *wagęp* 'to turn up earth with the shovel, to plow'. This transitive verb is a productive derivation of *géep* 'to remove a layer' plus the instrumental prefix *wa-* 'by pressure'. However, the derivation on *ha-*, *hawagęp* 'to plow' has the same meaning and argument structure as *wagęp*, it has therefore to be treated as a lexical variant in the lexicon of Hocak. This is not an exception. There are numerous words in the lexicon which begin with *ha-* and do not show any locative meaning 'on it' nor can they be identified as productive derivations. In the majority of cases they have to be treated as separate stems in the lexicon.

A last observation with regard to *ha-* derivations can be made. There are occasionally cases where *ha-* seems to have a transitivizing function, cf. the examples in E 29 and E 30.

E 29  (a)  *nagjik*  'to stretch out one's legs'  
      (b)  *hunagjik*  'to put pressure on sth. with feet and legs'

E 30  (a)  *naxgį*  'to hear sth., to understand'  
      (b)  *hunaxgį*  'to listen to sth., to obey'

The semantic result of the derivation in E 29b is not only the 'stretching out of the legs on sth.' but also the effect of 'putting force on sth.' by this movement. The whole event is from a semantic point of view more transitive. The same can be observed in example E 30b, where the 'locally directed hearing' implies an intentional act on the side of the actor which increases the transitivity of the expression.

What has been said about *ha-* holds in principle also for *ho-*, although it is much more difficult to find a common denominator for the function of *ho-*. As said above, *ho-* adds a locative argument to the verb if it is used productively, cf. the examples in E 28a-c. I have to stress the fact that productive derivations of this type are not frequent. Another productive example would be the intransitive active verb *nagį* 'to stand' which becomes *honagį* 'to stand in sth.' which is the regular expression for 'to wear sth. (clothing)'.

---

13 In the sense of transitivity as a prototype with central and peripheral instances as described by Hopper & Thompson 1980.
A related function of *ho*- is to derive words which designate the place where the action of the verb takes place. For instance, the intransitive active verb *waši* 'to dance' becomes *howaši* 'dancing arena', i.e. where the dancing takes place. It also designates the Pow-wow, the traditional dancing and gathering events of the Hocąks. Another example of this derivation is *rucgu* 'to store sth.' which becomes *horucgu* 'silo', i.e. the place where sth. is stored. The locative applicative *ho*- may also designate 'the time when sth. happens'. Compare e.g. the example *hocųjina* 'birthday' that may be translated literally as 'the time when someone is born'. One result of the derivation of such nominal concepts is the reduction of the valence of the original verb often producing words which are translated by nouns in English. However, these words are often ambiguous, they may be used as heads in noun phrases, and at the same time they may be used as verbs in predicate position. It would therefore be misleading to term this operation as a nominalization.

A third function of *ho*- is to derive words which designate the result of the action of the verb, e.g. there is a transitive verb *rusgíc* 'to tie sth., to tie sth. up' that becomes *horusgíc* 'knot', i.e. the thing which is tied up. Another example is *wagáx* 'to write, to make marks' which becomes *howagáx* 'design, drawing'.

A fourth function of *ho*- is to derive words designating abstract concepts, e.g. *homąšjá* 'strength, power' from *mqąšjá* 'to be strong'.

The restrictions in productivity with regard to *ho*-derivations seem to be arbitrary. One cannot properly delimit the productivity of *ho*- by referring to special verb classes as was the case with *ha*-.*ho*- appears with intransitive active and inactive verbs, as well as with transitive verbs. Sometimes *ho*- adds a new lokative argument preferable with active intransitive verbs of movement and position (but again, it is not allowed with the verbs of coming and going), sometimes it derives nominal concepts designating locations and abstract concepts thus reducing the semantic valence of the verb. As with *ha*-, there are also examples where *ho*- seems to have a transitivizing function. The intransitive verb *rusgé* 'to get juice by squeezing, to drip' becomes *horusgé* 'to sprinkle sth. '.

There are also many lexical pairs where *ho*- does not seem to make a difference, this is the case e.g. in *mqąšóx* 'make noise with the feet' which has approximately the same meaning as *hongšóx*. Another example is *rųksáp* 'to break sth. apart by pulling with the hands' which has approximately the same meaning as *horukšáp*.

By far the majority of lexical entries in the lexicon beginning with *ho*- do not show any traces of a productive derivation in terms of argument structure or in terms of the
meaning of the words. That they may be analyzed as *ho*-derivations diachronically remains to be shown. Synchronously, they have to be treated as lexical entries of their own right.

6. Instrumental applicative

From a morphological point of view, the instrumental applicative *hi*-patterns with the lokative applicatives *ha-* and *ho-* discussed in the preceding section. *hi-* has the same morphological position and like *ha-* and *ho-* undergoes heavy morphophonemic changes depending on the adjacent morphemes. From a syntactic point of view, *hi-* adds an instrument argument to the verb. Since instruments are always inanimate entities (and never speech act participants) there is never a pronominal reflex of the instrument argument in the verb form. *hi-* derivations are never possible with intransitive inactive verbs, e.g. there is no form *hiššērē* derived from ššērē 'to be broken, to break'. *hi-* always requires a human or animate actor, i.e. only transitive or intransitive active verbs allow a *hi-* derivation. In E 31, an example is given that illustrates the *hi*-derivation with the intransitive active verb *hiţi* 'to wake up'. Waking up is not really an intentional action, but with the instrumental applicative, the meaning changes somewhat. The coffee is taken as the means to get awake, the whole action is consequently interpreted intentional.

E 31  Intransitive active verb
(a)  *hiţi*  'to wake up'
(b)  *hiţɪj*  'to wake up with sth.'
(c)  *niţišjark hiyâajjaŋ*  'I wake up with coffee, I use coffee to wake up'
    *niţišjark hi- hi- ha- kj- nq*
    coffee with.it-ST-1sg.A-wake.up-Decl

E 32 gives an example of a *hi*-derivation with a transitive verb. Note that the actor and the undergoer are pronominally marked on the verb, the instrument argument has no pronominal reflex. The NP 'a gun' can be dropped, but then an instrument is implied which has been already mentioned in the preceding contexts.

E 32  Transitive verb
*hiiţuk wiţiāgucšaŋ*  'I shot them with a gun'
/hiiţuk wa- hi- hiju- šaŋ/
    gun 3sg.U-with.it-1sg.A-shoot-Decl
The semantic role of the instrument argument is strictly instrumental, *hi-* does not allow metaphorical extensions of the argument that are often associated with instrumental case markers or adpositions. For instance, the English preposition *with* (the same holds for German *mit* 'with') allows manner adjuncts, comitative adjuncts, and vehicle adjuncts expressing the tools for transportation\textsuperscript{14}. All these extensions are not possible with *hi-* in Hocak. In E 33a-c, it is shown that tools of transportation such as vehicles cannot be complements of the *hi-* applicative. Instead, the type of actions, e.g. 'sitting in it' (cf. E 33c), associated with the vehicle has to be expressed; syntactically this part is a subordinated clause.

E 33 No *hi-* derivation for transportation tools
(a) *hikiwärö* 'to travel, to look around'
(b) *hirarütii hiyaakipataanq* 'I travelled with (my) car'
   / hirarütii *hi-* *ha-* *kipata-* *näj/
   car with-ST-1sg.A-travel.1sg.A-Decl
(c) *hirarütii homjának yaakipataanq*
   /hirarütii *homj-há-* *näk* *hi-* *ha-* *kipata-* *näj/
   car sit- 1sg.A-Prog ST-1sg.A-travel.1sg.A.-Decl
   'I travelled with my car (lit. I travelled sitting in (my) car)'

A similar restriction holds for manner adjuncts. In English and German, they may be expressed by optional prepositional phrases in a clause such as *mit* *Eile*, 'with a hurry', *in a rush*, etc. This is not possible in Hocak, cf. the examples in E 34. If a movement is made in a rush, this adverbal information has to be expressed as a separate subordinate clause, cf. E 34a. This is a general strategy of Hocak which can be observed with other types of "oblique constituents" as well. Note that the subordinate verb *hikûhë* 'to hurry' is not inflected for the person of the actor. If the actors of the matrix verb and the subordinate verb are co-referential, the subordinate verb need not be conjugated, but may optionally be so.

E 34 No *hi-* derivation for manner adjuncts
(a) *hikûhë hakereënq* 'I left in a rush (lit. I left hurrying)'
   /hikûhë *ha-* kerë-* nāj/
   hurry 1sg.A-leave-Decl
(b) *hikûhë yaakerëënq* I left in a rush'

Accompanying entities and comitatives cannot be expressed by *hi-* either, cf. the examples in E 35 and E 36. In E 35, the inanimate entity 'with a cup of coffee' accompanying the actor of

\textsuperscript{14} Cf. Lehmann et al. 2000b.
the clause needs to be expressed by an adjoined subordinate clause expression the action associated with the cup. The same is true for persons accompanying the actor of the clause, cf. E 36. In principle, Hocãk has two possibilities to express a comitative relation. Either the two actors are coordinated in one NP by means of a coordinating conjunction –āngga 'and', or a subordinate clause with a verb such as hákižú 'to be together' has to be used. The comitative participant is integrated into the state of affairs of the sentence by means of a subordinated clause.

E 35  No hi-derivation for inanimate accompanying entities
(a)  wanĩŋk niiččak horcágá harukós hamũŋn̓ kšaŋq
    /wanĩŋk niiččak horcágá harukós ha- mũ- hã- nãk-šaŋq/ chair coffee cup holding on.it-ST-1sg.A-sit- Decl I sit on a chair with a cup of coffee (lit. I sit on a chair holding a cup of coffee).
(b)  *.... hi-mũn̓ n̓ k-šaŋq

E 36  No hi-derivation for comitative, i.e. accompanying persons
(a)  wąŋižq wanųkózižq hákižú jińq
    /wąŋ-k-šaŋq wanųkós- hã- šaŋq/ man-Indef policemen-Indef be.together 3sg.A.arrive-Decl A man came with a policeman.
(b)  *.... hi-ju-nq

I have the impression that hi-derivations are much more productive in Hocãk than the locative applicatives discussed in section 5. However, there are many active intransitive and transitive verbs in the lexicon which do not allow a hi-derivation for no obvious reason. Sometimes it can be assumed that initial hi- of such verb stems (that may be an instrumental applicative historically, but is lexicalized now, or they may be reinterpreted as containing the instrumental applicative, although they do not) prevents another hi-derivation. Furthermore, the verbs of coming and going do not allow a hi-derivation without exception. In such cases, Hocãk speakers use a general instrumental verb hi-q 'to use' and form a subordinate clause, cf. the example in E 37.

E 37  "Oblique" marking of instrumental noun phrases if no hi-derivation is possible
(a)  hákižq hi-q nąqkikaraŋq 'I hunted with a gun (lit. I hunted using a gun)'
    /hiźq hĩ- q - nąq - kika-ra-naq/ gun use.it ST-1sg.A-hunt-Decl
(b)  *.... hińqkikaraŋq
The intransitive active verb *nqąkikara* 'to hunt, to go hunting' cannot be derived by *hi*, instead a subordinated verb has to be used to integrate the instrument into the sentence. That *hiq*‘to use’ is a verb and not an oblique instrumental case marker can be concluded from the fact that this verb can be optionally inflected for the person category of the actor as any other subordinated verb.

7. Benefactive applicative

Hocak has a very productive benefactive applicative *gi*- that increases the argument frame of the verb by one. Semantically, the new argument may sometimes be a sympatheticus (cf. Lehmann et al. 2000a:12f), i.e. a participant which is indirectly affected by the state of affairs designated by the verb that is often expressed by what has been termed dative ethicus, cf. for instance the examples in E 38 and E 39. Much more frequently the new participant has benefactive relation to the state of affairs designated by the verb, cf. the examples in E 40 and E 41.

E 38  Sympatheticus interpretation of the *gi*- argument

*hiqawf-gi-té*  'widower, (lit. his wife died to him and he was affected by that)
wife-Ben-die

E 39  Sympatheticus interpretation of the *gi*- argument

(a)  *hiqšá*  'to laugh, to smile'
(b)  *ghiḥqšá*  'to laugh at so.'
(c)  *hagıqšaanq*  'I laughed at him'

/ha- gi- hikša-naʃ/
1sg.A-Ben-laugh-Decl

There are two meaning nuances of the benefactive role in Hocak:\(^{15}\). Dependent on the semantics of the verb and the discourse context, the action designated by the verb can be interpreted as being instigated in favor of (or ‘in behalf of’) the benefactive participant or as being instigated instead of the benefactive participant. Accordingly, the derived form in E 40a could also be glossed ‘to cry instead of someone’ which is pragmatically unlikely in this case. There are, however, verbs such as *gimqnaʃ* ‘to walk for someone’ which are more likely to be

---

\(^{15}\) Both meaning nuances are formally distinguished in Lakhota. There are two different so-called dative series of pronouns, the first one meaning ‘on behalf of’ the second one meaning ‘instead of’, cf. Boas & Deloria 1941:87; Helmbrecht 1998:169-174.
interpreted as 'to walk instead of someone'. Pronominal marking of the arguments is – with
the exception of the 3pl –äre – always prefixal preceding the gi-, cf. E 40b.16.

E 40  gi- with intransitive active verb
(a)  giğiğ 'to cry for someone'
(b)  hıgiğiğinen 'they cried for me'
    /хи-  gi-  giğiğ- äре-  няг/
    1sg.УBen-cry- 3pl.A-Decl

The gi-derivation is possible with intransitive active (cf. E 40) and with transitive verbs (cf. E
41). Transitive verbs with gi- become three place verbs with the actor (actor series of
pronominal affixes) and the benedictory (undergoer series of pronominal affixes) usually
marked pronominally. The patient is third person singular in the overwhelming number of
cases and remains zero. However, it is in principle possible to elicit forms with three
pronouns if the patient is a speech act participant showing that the preference for the primary
object marking is not grammaticalized in Hocak.

E 41  gi- with transitive verbs
(a)  hurukös 'to hold sth.'
(b)  hagirîkos 'to hold sth. for someone'
(c)  mağshîrojın hağirîtukosşanqan
    /mağshîrojın-ra  ha-nj- gi- tukos- šanqan/
    hammer-  Def ST-2sg.УBen-1sg.A.hold-Decl
    'I hold the hammer for you.'

The argument structure of benefactive derivations with intransitive active and transitive verbs
can be schematically summarized as in Figure 4.

Figure 4: The argument structure of benefactive derivations I.

(a)  Actor  Verb<sub>intransive</sub>  Benefactive (Sympatheticus)
(b)  Actor  Verb<sub>transitive</sub>  Patient  Benefactive

However, the derivation with gi- is systematically ambiguous in Hocak in that the benefactive
can be interpreted in almost all cases as the possessor of the patient. This type of external

16 Information of the morphological structure of the Hocak verb, in particular with regard to
the position of the pronominal affixes in relation to the other affixes can be found in Susman
1943:104-110, and Helmbrecht in prep.
possessor marking is most obvious with intransitive inactive verbs which will therefore be treated below, but is always present with the other verb classes too.

8. External possessor marking

The term external possessor marking refers to possessive constructions that are not confined to one noun phrase but transcend constituent boundaries. In European languages, possession is typically expressed by complex noun phrases consisting of a genitive attribute (possessor) preceding or following the head noun (possessum). In English, both possibilities are realized. In Peter's car, the genitive attribute Peter's precedes the head noun car, in the car of the government, the genitive attribute of the government follows the head noun the car. There are of course other types of constructions which are used for the expression of possessive relations. Adjectives in attributive function may express the possessor as in the governmental car, or nouns functioning as determining constituent in nominal compounds may express the possessor. The latter construction is less good in English but very productive in German, cf. e.g. das Regierungsauto 'the government car'. All constructions mentioned so far have in common that they are confined to a noun phrase with the possessum expressed as the head noun and the possessor expressed as a modifier of the head noun. Possession in these constructions is not an instance of a predicate – argument structure.

This is different in Hocąk (and many other languages). Here, possession is largely expressed verbally, i.e. either by verbs designating (and predicating) possession, or by special markers on the verbal predicate. In both cases, the possessor is an argument of the verb (as well as the possessum) and morphologically marked there, i.e. the syntactic expression of possession is a matter of a predicate argument - structure and not restricted to the noun phrase, hence the terminology: the possessor is marked external to the noun phrase. Before I shall discuss the two strategies of external possessor marking in the subsequent sections, some further introductory remarks on possession marking in Hocąk are due.

The various construction types used for possession marking (in a wide sense) in Hocąk are dependent on the animacy of the possessor and the ontological class of the possessum. If the possessor and the possessum are inanimate what is usually the case in part-whole relations, both nouns are simply juxtaposed in one noun phrase without any further marking. Recall that Hocąk has no nominal case marking at all, hence there is no genitive case marker nor a genitive marking particle or adposition. This holds also for part-whole relations with
animals where the possessor is animate, e.g. in the *leg of the dog* and the like. If the possessor is human and the possessum not a pet animal or a kin, the verb *hanf* 'to own sth.' has to be used. The verb *hanf* is also used with body parts, but a different strategy is possible here too. A different verb *nihf* 'to have as a pet' has to be used if the possessum is an animal (close to the household), and another verb *huf* 'to have as kin'\(^{17}\) if the possessum is a socially close person such as a friend or a kin person.

The possessive constructions in which *hanf* can be used are given in E 42b-e. E 42c gives an example of its usage as verbal predicate comparable to the usage of English verbs of possession such as *to have sth.*, or *to possess sth.* It is inflected like a normal transitive verb in Hocak.

E 42 Verb of possession: *hanf*  
(a) *hanf* 'to own sth., to possess sth., to have sth.'  
(b) *wažtire hanfina* 'my car'  
   /wažtire ha- ha- nj- ra/  
   car ST-1sg.A-have-Def  
(c) *wažtire-hižq hanfing* 'I have/possess a car'  
   /wažtire-hižq ha- ha- nj- nq/  
   car- Indef ST-1sg.A-have-Decl

In E 42b, *hanf* is at first glance used like the possessive pronoun in the English translation. The differences are crucial though. The possessor is marked with a pronominal prefix of the actor series to begin with. In addition, the possessum may have a pronominal reflex in *hanf* too. If the possessum is plural the 3pl.U prefix *wa-* appears on *hanf*. From a structural point of view, the Hocak "genitive construction" in E 42b resembles more a subordinate clause than a English type possessive noun phrase. Subordinated clauses in Hocak are nominalized by the definite article -*ra* that obligatorily appears after the last constituent of the subordinated clause, i.e. in almost all cases on the verb.

### 8.1 A non-actor is possessor of undergoer

There is another way to express possession than using the verb *hanf* as mentioned above, and this alternative way is often given preference in discourse. The benefactive argument

\(^{17}\)This verb is conjugated in exactly the same way as the causative verb *=huf* 'to cause' mentioned in section 3 above. This suggests that they are not homonyms but that the
introduced in the argument frame of the verb can be systematically interpreted as the
possessor of the undergoer, i.e. either possessor of the undergoer of the intransitive (inactive)
verb or the possessor of the undergoer of the transitive verb. The first possibility is illustrated
in E 43a-b, where the intransitive inactive verb šisré is derived by the benefactive applicative
gi-. The resulting verb can have two interpretations, in the first one 'sth. is broken for him' the
added argument is interpreted as being affected by the breaking, in the second one, the
benefactive argument is interpreted as the possessor of the undergoer 'his is broken'.

E 43 gi-derivation with intransitive inactive verbs
(a) šisré 'to break, to be broken'
(b) gišisré 'sth. is broken for him/ 'his is broken'

With transitive verbs, i.e. the second possibility, two interpretations are systematically
available. The added argument is either the benefactive of the action, or the possessor of the
patient of the action. This is illustrated in E 44a-c. The action is conducted in favor of the
benefactive who in turn may be taken as the possessor of the patient.

E 44 gi-derivation with transitive verbs
(a) hi'ë 'to find sth.'
(b) hígë 'to find sth. for someone'
(c) wažatíre-ra hjìgìšenìg 'he found the car for me/ 'he found my car'
/wažatíre-rahi-gi- o-naf/
\car-\ Def ST-1sg.U-Ben-find-Decl

The systematic interpretation of the benefactive as possessor is, however, not possible with
the gi-derivation of intransitive active verbs. Here, only the benefactive meaning is available,
cf. the example in E 45a-c. If the possessor of the 'younger brother' is someone else haara 'my
kin' (< =hi 'to have as a kin') has to be inflected for another person category. If haara 'my kin'
drops in E 45c the translation would be 'the younger brother cried for me'. The argument
introduced by gi- cannot be interpreted as possessor.

possessive usage could be a metaphorical extension of the causal usage, or vice versa.
E 45  gi-derivation with intransitive active verbs  
(a)  giáâk  
    'to cry'  
(b)  giáâkák  
    'to cry for someone, to yell for someone'  
(c)  hiisúk haárá hiğıgák-šanq  
    'my younger brother cried for me'  
  /hiisúk  haárá hi-  gi-  gák- šanq/  
  younger.brother my  1sg.U-Ben-cry- Decl

The possibilities of external possessor marking by means of the benefactive applicative gi- are summarized in Figure 5.

Figure 5: The argument structure of benefactive derivations II.

<table>
<thead>
<tr>
<th>Undergoer</th>
<th>Verb(intransitive)</th>
<th>Benefactive Possessor of Undergoer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actor</td>
<td>Verb(intransitive)</td>
<td>Benefactive</td>
</tr>
<tr>
<td>Actor</td>
<td>Verb(transitive)</td>
<td>Patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benefactive Possessor of Patient</td>
</tr>
</tbody>
</table>

The possessor interpretation of the benefactive in the first and the third line of Figure 5 can be blocked by explicit possessor marking of the undergoer noun phrase and the patient noun phrase. An example is given in E 46. The 2sg possessor of 'the car' contrasts with the 1sg benefactive in the verb, hence the 1sg benefactive can no longer be interpreted as the possessor of the patient noun phrase.

E 46  wažatíre-ra hašjíŋŋa hiği'eenq  
  /wažatíre- ra hašjíŋŋa hi- hi-  gi-  c-  na/  
  car-   Def  your   ST-1sg.U-Ben-find-Decl  
  'he found your car for me/ *he found my car'

8.2  The actor is possessor of undergoer

The second type of external possessor marking in Hocâk is indicated by the prefixes kara-/ k- 'one's own'. The choice between both forms that are functionally equivalent is determined by the conjugation type of the verb. Verbs that require the second conjugation take k-, verbs that require the first conjugation take kara-. In both cases the result is a verb of the first conjugation.
The prefix *kara-*/ *k* can be used only with transitive verbs. In general, it designates that the transitive actor possesses the transitive undergoer. Since *kara-*/ *k* - are possible only with transitive verbs they represent a highly reliable test for transitivity (syntactic valence) of verbs in the Hocsk lexicon. There are, however, also cases where *kara-*/ *k* - seems to have itself a transitrivizing function, cf. E 47a-b.

E 47  Transitrivizing function of *kara-*/ *k*-
(a)  *nqaž*j  'to stand, to stand up'
(b)  *nq-kāra-žj̄*  'to stand up for his own'

An example of the typical function of *kara-*/ *k* - is given in E 48a-c. The transitive verb *gigūs* 'to teach someone' changes its meaning to 'to teach one's own' with *kara-*/ *k* -, cf. E 48b. It is indicated that the undergoer of the transitive verb belongs to the actor. This relationship can be one of possession in the narrow sense, i.e. inanimate and animate entities may be in the possession of the actor, or it can be one of social closeness such as kinship relations or friendship.

E 48  A possesses U in transitive verbs: *kara-*/ *k*
(a)  *gigūs*  'to teach someone, to council someone'
(b)  *karagiγus*  'to teach one's own'
(c)  *njikj̄ak waakāragigūsšanā*  'I taught my children'


The external possessor marker *kara-*/ *k* - can be used with plain non-derived transitive verbs, but also with verbs that have received their second argument by way of some derivational processes. If verbs are transitrivized by means of one of the instrumental prefixes (see section 4 above), *kara-*/ *k* - indicates that the patient is possessed by the actor, cf. E 49a-b.

E 49  (a)  *bōoxūx*  'to break sth. by striking'
(b)  *bōo-kāra-xūx*  'to break his own by striking'

If the verb has received a new (second) argument by means of one of the locative applicatives (cf. section 5 above), *kara-*/ *k* - refers to this newly introduced argument, i.e. it indicates that the actor owns the place with regard to which the action is instigated. An example with the verb *hatųp* 'to jump on sth.' is given in E 50a-c. The clause in E 50c illustrates that the place
(locative) of the action which is the new argument is the possessum of the second person actor.

E 50  (a)  ha'táp  'to jump on sth.'
(b)  hakarat'áp  'to jump on one's own'
(c)  waarač-ra  harakárat'ápšaŋa
    /waarač-ra  ha-  ra-  kára-  táp-  šaŋa/  
You jumped on your table.

Ambiguities and uncertainties about the interpretation of kara-/-k- arise with ditransitive verbs and verbs that have received a third argument by means of some derivation. Both undergoer arguments are marked on the verb (if they are not 3sg) by pronominal prefixes of the undergoer series. As was already mentioned in section 2 above, there may be some uncertainty about the correct assignment of the semantic roles patient and recipient to the two undergoer pronouns. I assume that in these admittedly extremely rare cases in actual discourse animacy plays a decisive role, i.e. the human participant is assigned the recipient role, since this role is prototypically human, and consequently, the inanimate participant is assigned the patient role, since transitive patients are prototypically inanimate. The same uncertainty extends now to the usage of the external possessor marking with kara-/-k-. The transitive patient may be interpreted as being possessed by the actor as well as the recipient, cf. the examples in E 51a-c. The verb hok'iqi to give sth. to someone is has three arguments, the actor, patient and recipient, the latter two are expressed by pronouns of the undergoer series. As was already said it may be uncertain which one of the two undergoer participants is patient and recipient respectively, but this is not a problem here. The semantics of the two undergoer arguments make it clear that the "candies" are the patient (the object of giving) and the "children" are the recipient. A similar uncertainty holds with regard to kara-/-k-, either the patient or the recipient may be interpreted as possessed by the actor.

E 51  kara-/-k- in ditransitive verbs

(a)  hok'iqi  'to give sth. to someone'
(b)  ho-kara-k'iqi  'to give sth. (his own) to someone (his own)
(c)  njik'jágra  tanžú  kirikiriš  wookarák'yuŋa
    /njik'ják-ra  tanžú  kirikiriš  wa-  ho-  kára-  k'yu-  ná/  
    child-Def  sugar  striped (=candy) 3pl.U-ST-A.poss.U-give-Decl
He gave the candy to his children./
He gave his candies to the children.
The same ambiguity exists also for the verb *hożú 'to put sth. in sth.'* which has also three arguments. The expressions in E 52b and E 52c are from different Hocąk speakers, the former preferred the goal argument (i.e. the container) to be interpreted as possessed, the latter preferred the transitive patient (i.e. the papers) to be interpreted as possessed.

E 52  
(a) *hożú 'to put sth. in sth.'*
(b) *waďkarąžuŋ 'I put them in my (container)'
   /wa- ho- há- kara- ʒu- ną/
(c) *waagáxra waxupáŋa waďkarąžuŋ*
   /waagáx-ra waxupá- ra wa- ho- há- kara- ʒu- ną/
   I put my papers in the suitcase.

The same uncertainties arise in verbs which have an additional benefactive argument, here the transitive patient as well as the benefactive may be interpreted as possessed. All these cases are, however, rare and are rather problematic instances of elicitation than real problems of grammatical structure.

9. Reflexive/ reciprocal marking

Hocąk has a reflexive marker *kii-* which indicates coreference of the actor and the transitive patient, i.e. the prototypical meaning of a reflexive. There is in addition a reduplicated form *kiiki*- that indicates that the two participants of the action are actor and patient to the same degree, i.e. the prototypical reciprocal meaning.

Reflexivization is usually seen as a de-transitivizing operation, not necessarily in terms of a strict syntactic transitivity, but from the point of view of transitivity as a prototype notion (cf. Hopper & Thompson 1980). The action is less transitive, because the patient who is the goal of the action is the same as the actor, i.e. there is only one true independent participant. Reflexive verbs are therefore grammatically often treated as de-transitivized verbs in one way or the other in the languages of the world.

In Hocąk, the reflexive prefix *kii-* can, in principle, be used with every transitive verb if its semantics allows such a derivation, i.e. it must be possible that the action is exerted on an animate or human patient who happens to be the same participant as the actor. The reflexive marker *kii-* is hence not possible with the transitive verb *ruq 'to carry sth., to lift*
sth., because it is pragmatically not possible to lift or to carry oneself. The same holds for the transitive verb *hoki'q* to imitate sth./ someone'. This verb cannot receive a reflexive meaning, because it is pragmatically impossible to imitate oneself. However, this verb may receive a reciprocal meaning by adding *ki*- such that it becomes *hokiki'q* 'to imitate each other'. Note that in this case, the single *ki*- has reciprocal meaning which shows the close relationship between both forms. The middle syllable */ki-/ in *hoki'q* is part of the stem.

Further, the reflexive *ki*- derivation is generally not possible with intransitive active and inactive verbs. There are no such reflexive formations such as 'sth. breaks by itself' *kišlimë* or 'sth. is cooked for oneself' *kištuc.

An example for the typical use of *ki*- is illustrated with the verb *hajá* 'to see sth.' in E 53a-c. After the *ki*- derivation the verb is inflected like a intransitive active verb and requires the pronominal prefixes of the first conjugation. If reflexive *ki*- (that is always shortened to *ki*- in non-initial position) is reduplicated, a reciprocal relationship between the participants involved is indicated, cf. E 53d.

<table>
<thead>
<tr>
<th>E 53</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td><em>hajá</em></td>
<td>'to see sth.'</td>
</tr>
<tr>
<td>(b)</td>
<td><em>hakjá</em></td>
<td>'to see oneself'</td>
</tr>
<tr>
<td>(c)</td>
<td><em>haakícaang</em></td>
<td>'I see myself'</td>
</tr>
<tr>
<td></td>
<td>*/ha-ka- <em>ki</em>- ca- <em>náj</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ST-1sgr.A-Refl-see-Decl</td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td><em>ejá haakikiwiing</em></td>
<td>'We see each other there (in the mirror)'</td>
</tr>
<tr>
<td></td>
<td>*/ejá ha- *ha- *ki-ki- ca- wi- *ná/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>there ST-lexcl.A-Rec- see-pl-Decl</td>
<td></td>
</tr>
</tbody>
</table>

The reflexive marker *ki*- can appear also with derived transitive verbs such as transitive verbs with an instrumental prefix (cf. E 54a-b), or with transitive verbs which show some other kind of derivation such as the external possessor marker *kara/-k-* (cf. E 55a-c).

<table>
<thead>
<tr>
<th>E 54</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td><em>nqaté</em></td>
<td>'to hurt someone by foot'</td>
</tr>
<tr>
<td>(b)</td>
<td><em>nqakté</em></td>
<td>'to hurt oneself by foot'</td>
</tr>
</tbody>
</table>
E 55  (a)  ruẓ̌  'to wash sth'
(b)  kuruẓ̌  'to wash one's own'
(c)  waẓ̌ṭire waakúruẓ̌ągą  'I wash my (own) cars.'
\[/waẓ̌ṭire-ra wa- ha- kúruẓ̌- nų\]
car-  Def 3sg.U-1sg.A-wash.own-Decl
(d)  hakikúruẓ̌ągą  'I wash myself.'
\[/ha- ki- kúruẓ̌- nų\]
lsg.A-Ref1-wash.own-Decl

As is often the case in the Hocąk lexicon, otherwise productive derivational means are frequently found in words where they are fossilized as part of the stem. This holds for the reflexive marker kii- too. In these cases, the addition of kii- results in verbs with a morpheme sequence kii- which can be interpreted reflexive or reciprocal. For instance, in the transitive hikĩ́ ́ō 'to touch sth', the kii- form in the middle is part of the stem and cannot be interpreted as a reflexive marker. If the kii- is added as in hikĩ́ ́ō a polysemous verb emerges. The first meaning is – as one expects – 'to touch oneself', the second meaning is the reciprocal meaning 'to touch each other', and the third meaning is 'to touch sth. repeatedly'. Reduplication in Hocąk can be utilized to indicate frequentative, thus the addition of kii- may simply be interpreted as a mere reduplication of the middle syllable of the stem. In this case here, the reduplication of the reflexive marker kii- cannot be employed to distinguish between reflexive meaning and reciprocal meaning as demonstrated in E 53c-d.

There are also verbs that can take kii- but can receive only a reciprocal meaning, of course for semantic reasons. Such a verb is given in E 56a-b.

E 56  (a)  hatũąp  'to jump on sth'
(b)  hakitũąp  'to jump on each other'

Note here that the reflexive marker kii- is interpreted as reciprocal which again demonstrates the close semantic relationship between both forms. The semantic extension from reflexive to reciprocal is conceptually easy, the polysemous encoding of reflexive and reciprocal meanings is therefore widespread among the languages of the world.

10. Third person plural-ire as a passive marker?

The third person plural marker -ire can be used anaphorically to refer to a group of already mentioned individuals, but it can also be used for an unspecific and indefinite group of actors.
In this case the number distinction is neutralized, it does not matter anymore whether the indefinite actor is a single participant or a group of participants. The impersonal use of -iře is similar to the impersonal use of English they. If I say e.g. in English they stopped him before he entered the construction site with his car then it is likely that it was only one person who gave John the signal to stop. This inference is likely on the basis of our world knowledge. But this information is not important in this utterance, therefore the impersonal they was used. The alternative way to background the actor in this utterance is simply using a passive clause such as John was stopped before he entered the construction site with his car. It is the backgrounding of the actor what impersonal subjects and passive clauses have in common. A Hocąk clause like the one in E 57 with a definite and an impersonal reading of -iře has therefore two possible translations in English, one employing the definite and impersonal usage of they, the other employing the passive construction.

E 57  Johnga hojžineeną
       /John-ga hoj- iře- naŋ/
       J.- PN beat.up-3pl.A-Decl
       They beat John up.
       John got beaten up.

It is common knowledge in historical linguistics that passive constructions may develop out of impersonal passives, often on the basis of an original third person plural marking. Since there is no grammaticalized passive construction in Hocąk, it is worth looking whether the impersonal pronoun -iře could be analyzed as an incipient passive marker. There are some examples which hint to this direction. The verb čųŋ ‘to have many, to give birth’ is inflected for the third person plural actor -iře in the expression for ‘birthday’, i.e. the time when someone is born’ cf. E 58a. The undergoer pronoun refers to the person who is born, hence the actor suffix must refer to the person who gave birth which cannot be a 3pl group. The same problem of interpretation is met in the definition hocųjnera ‘birthday’ in White Eagle’s dictionary given in E 58b. Compare also the examples in E 59a-b with the verb giwe ‘to sting (of bees)’ which are translated by means of a passive in English.

E 58  (a)  hocųjnēra
       /ho-ŋį- čųŋ- iře- raŋ/
       Loc-2sg,U-give,birth-3pl/Pass?-Def
       your birthday (lit. ‘time when you were born’)

      (b)  Haąpra hįžą eįja čųŋiřegi
Examples such as the ones in E 58 and E 59 lead Miner (cf. Miner 1992b) to the conclusion that -IRE has also a passivizing function. This is, however, too far fetched. First of all, as I said above, -IRE can be used impersonally which implies that number distinctions are neutralized. If an actor is irrelevant and unimportant to the expression of an event its number is it too. In the case of the birth and birthday, it is the person born who is relevant, not the identity of the mother. The impersonal usage of -IRE simply means that someone gave birth to the undergoer, it is not necessary to refer to a passive interpretation of -IRE. Since CYY is a normal transitive verb, the actor (mother) can be brought in in the regular way, cf. E 58c.

The same holds for the verb GIWE 'to sting'. Again, the nature of the actor is strongly implied in this verb (i.e. there are quite specific selectional restrictions for the semantics of the actor in CYY 'to give birth' and in GIWE 'to sting'). And again, it is the undergoer of stinging who is more relevant to the speakers than the insects which are usually not individualized and counted. The impersonal reading of -IRE seems therefore appropriate, and no passive interpretation is necessary. I assume that it is a special feature of the semantics and pragmatics of both verbs discussed here that they force a backgrounderd of the actor. The way to impersonalize the actor and neutralize the number category of the actor is to use -IRE.

There is, however, more evidence that -IRE should not be analyzed as an incipient passive marker. It is not possible to elicit pairs of clauses which exhibit a passivization relation. Consider the examples in E 60a-b. The first one (E 60a) has a definite and a
indefinite/ impersonal reading such as 'they (mentioned already) borrowed the book',
'someone borrowed the book' and 'the book was borrowed'.

E 60 (a)  
wağáxra ครอบครัว
/wağáx-ra ครอบครัว - นี่- นั้น/ 
book-  Def borrow-3pl./Pass?-Decl  
'they borrowed the book/ someone borrowed the book/ the book was borrowed'

(b)  
*Peterga wağáxra ครอบครัว
/Peter-ga wağáx-ra ครอบครัว - นี่- นั้น/ 
P.- PN book-  Def borrow-3pl./Pass?-Decl

*the book was borrowed by Peter'

If the clause in E 60a would be a passive clause, it should be possible to add an oblique actor phrase to the clause. This is not possible, there is no way to attach a noun phrase expressing the actor, cf. E 60b. There is no possibility to interpret Peter-ga as actor, the actor is always the 'third plural' or the 'someone' of the pronominal suffix -irc.

11. Third plural patient marker wa-

The third person plural prefix wa- is prototypically used to indicate the person category of the transitive patient. It is a pronoun of the undergoer series. Its reference is not restricted with regard to animacy, i.e. it may refer to 3pl inanimate, animate, and human referents. Its obligatory occurrence, however, interacts with the definiteness of the anaphoric target noun phrase, i.e. if the lexical patient noun phrase is definite and plural, wa- is obligatorily used. If the noun phrase is not definite, wa- may be dropped. This rule is illustrated in E 61. The first clause E 61a shows that wa- is used together with the definite noun phrase wažtirera 'the cars'. Note that wa- is the only marker of plurality in this clause. If the patient noun phrase is not definite, wa- is usually dropped, cf. E 61b. wa- becomes obligatory if the noun phrase is again marked definite with the article -ra, cf. E 61c.

E 61 (a)  
wažtirera waajánaq  'he sees the cars'  
/wažtiré-ra ว่าจ้าง- นี่- นั้น/  
car-  Def 3pl.U-see- Decl

(b)  
wažtiré jööp hajaaq  'he sees four cars'  
/wažtiré jööp ว่าจ้าง- นี่- นั้น/  
car four see- Decl

(c)  
wažtiré jööp hajaanaq  'he sees the four cars'  
/wažtiré-jööp-ra ว่าจ้าง- นี่- นั้น/
As is the case with all the pronominal prefixes of the undergoer series, they are somewhat ambiguous in three place verb (e.g. ditransitive verbs) with regard to the semantic role of the two undergoer arguments. In ditransitive verbs of giving, they may either refer to the patient or to the recipient. The same is true for 3plU wa-, as is shown in E 62. The clause in E 62b has two readings depending on the assignment of the semantic role to wa-. In the first case, wa-refers to the transitive patient, in the second case, to the recipient or location. wa-covers the same range of undergoer roles as all the other undergoer pronouns, except that it is not allowed with intransitive verbs. Intransitive inactive and active verbs do not take wa- which makes this form of personal inflection a reliable test for transitivity in the lexicon of Hocąk.

E 62  (a) božú 'to put sth. in sth.'
(b) kóokra wooražuuną
/kóok-ra wa- ho- rá- źu- ng/
box-Def 3pl.U-ST-2sg.A-put.in-Decl
You put them into the box
You put it in the boxes

It has occasionally been claimed that wa- has also a detransitivizing or intransitivizing function\(^{18}\), and there are indeed some examples which allow this conclusion. One of these is warúc 'to eat', cf. the examples in E 63. The transitive verbal root ruuc 'to eat sth.' (cf. E 63a) may receive the wa- prefix (cf. E 63b), deriving an intransitive active verb. That warúc is not a transitive verb with a 3pl.U can be seen from the following examples in E 63c-d. No lexical noun phrases expressing the transitive patient ('meat', 'apples') are possible here, there is no agreement relation between wa- and the noun phrases in these cases

\(^{18}\) Cf. Lipkind 1945:17. He called wa- a modal prefix which is definitely a misnomer. There is no modal meaning associated with this prefix.
E 63  (a)  *kščnu ruč-sáŋa  'he eats an apple'
       apple eat-Decl
 (b)  waruncŋkšŋa   'he is eating (sitting)'
       /wa- ruć-nąk- sâną/  3pl.U-eat- be.sitting-Decl
 (c)  *wake waruncŋkšŋa  '*he is eating meat'
       /wake wa- ruć-nąk- sâną/  meat  3pl.U-eat- be.sitting-Decl
 (d)  *kščnu-ra waruncŋkšŋa  '*he is eating apples'

There are some other cases in the Hocak lexicon which are analog to the waríć example, e.g. wa'į to be' (< įintestinal y to do, to make sth.'). However, the usage of wa- as a detransitivizer is as far as I can see not a productive process. If it is used with plain or with derived (e.g. instrumental prefixes) transitive verbs, it fills the undergoer argument slot and may in every case be interpreted as agreeing with an optional lexical noun phrase.

The general characterization of the productive usages of wa- does not mean that there are no intransitive verb stems in the lexicon which begin with wa-. Indeed, there are plenty of them, but in all these cases the roots cannot be identified as free transitive verbs. Often, the root does even not exist as a independent word at all. For instance, wašošč 'to be brave' is an inactive intransitive verb, but there is no independent *šošč which could be analyzed as the transitive basis of this derivation. Many cases which are glossed in Zeps' dictionary (cf. Zeps 1996) as intransitive such as wahokų to minister, to preach; or even as nouns such as wagigis 'teacher' and wahokų'minister' are in fact transitive verbs with a patient pronoun, cf. hokų 'to preach someone' and gigis 'to teach someone'.

The fact that many nouns (words expressing nominal concepts in the translation) in the Hocak lexicon begin with wa- was taken as evidence for the detransitivizing function of this prefix (cf. Lipkind 1945:17). This conclusion is justified if there is a set of (plain or derived) transitive verbs which can be turned to intransitive verbs by means of wa-. I have argued that this is rarely the case. However, it was also claimed that wa- has also a nominalizing function which is a different claim. Here it would be necessary to have a set of verbs (transitive or intransitive) which may be turned into nouns (words designating nominal concepts)\(^1\). In order to qualify as nouns, the words derived by wa- should fulfil the criterion a) not to be able to receive verbal inflection (person inflection) and hence b) not being able to be used as clausal predicate without any auxiliary support. These criteria are not fulfilled in e.g. by wagigis 'teacher' and wahokų'minister' mentioned above. However, there are many words on wa-
which could be analyzed as nouns. One of these would be waagáx 'paper, book, journal' which is derived from transitive wagáx 'to write sth'. The deriving wa- could be glosses in this case as 'thing, something' leading to a literal translation 'the thing/ something one writes'. Another example would be warecûj anything ripe such as corn, pumpkins, vegetables etc.' which is derived from roceč 'to be ripe, to ripen'. The literal translation of warecûj would be 'the thing/something ripened'. The amount of nouns which are derived in this way are not too numerous in the dictionary. It is not clear to me, whether this type of derivation is productive and to what degree. A brief glance into Zeps' dictionary reveals that the majority of words beginning with wa- are lexicalized to some degree no longer showing a derivational relation between the base form, i.e. the verbal root and the derived form. The discussion so far can be summarized as follows: if one would not like to propose two or three different but homonymous wa-, one is obliged to describe wa- as a polyfunctional prefix. First of all, the really productive usage of wa- is its being a 3pl pronominal prefix indicating the transitive patient. By far less productive (if at all) is the usage of wa- as intransitivizer (only a few instances) and as nominalizer (probably more productive than as intransitivizer).

The nominalizing function of wa- seems to be much more evident with regard to the prefixes woo-, wa-, and wii-. Susman (1943:44f and 72f) and Lipkind (1945:25f) analyze these prefixes as contractions of wa- plus the stem initial syllables ho-, ha-, hi- which can be synchronically either one of the locative/ instrumental applicatives (cf. section 5 and 6 above) or simply a syllabic part of the stem which happen to be phonetically identical to the locative prefixes, cf. Figure 6. The contracted forms with the long vowel thus arise (/h/ regularly drops in these intervocalic positions) from the prefixation of wa- to a verb with one of these locative or instrumental applicatives or from the prefixation of wa- to a verb that begins with a syllable homophonous to these applicatives. This rule is productive and it is therefore correct to analyze the contracted prefixes woo-, wa-, and wii- as derived prefixes.

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20 I am not talking about the derivations with the instrumental prefix wa- 'by pressure, by pushing' that can easily be distinguished from the 3pl.U/ Indef.U. pronoun wa- with regard to the pronominal inflection type. Words with the instrumental prefix wa- always take the second conjugation.
Figure 6: Morphophonemic contractions with 3pl.U/ Indef. prefix wa-.

<table>
<thead>
<tr>
<th>3pl.U/ 'Indef.'</th>
<th>combined with stem initial form or locative/ instrumental applicative</th>
<th>contracted form</th>
</tr>
</thead>
<tbody>
<tr>
<td>wa-</td>
<td>+ ho-'in'</td>
<td>woo-</td>
</tr>
<tr>
<td></td>
<td>+ ha-'on'</td>
<td>waa-</td>
</tr>
<tr>
<td></td>
<td>+ hi-'with'</td>
<td>wii-</td>
</tr>
</tbody>
</table>

The Zeps dictionary glosses many of these formations as nouns, more on semantic grounds than on distributional analyses. One might argue that these types of noun formation are the results of the nominalizing function of wa-. However, there are some observations which shed some doubt on such a simple solution. First of all, there are formations on woo- which have no derivational basis on ho-. If these cases were numerous, one would rather have to posit a proper single non-derived woo- prefix instead of assuming a secondarily derived prefix [wa-+ ho-]. For instance, there is a form woogús 'creation' but no derivational basis *hogús. Another example is wooxé 'grave' which has no derivational basis *hoxé. Furthermore, many derivations on woo- that are glossed as nouns in the Zeps dictionary – probably based on semantic grounds – can also be used verbally, i.e. can receive verbal inflection and do therefore not fulfill one of the criteria for nounhood mentioned above. For instance, woogús 'creation' can be personally inflected and used as a verbal predicate, cf. E 64a-b. Another example is given in E 65a-b. However, there are also examples of derivations which fulfill the criteria for nounhood, this is e.g. the case in wooxé 'grave', cf. E 66a-b.

E 64  
(a) woogús 'creation'
(b) woorágúsšqaŋ ‘you have created things/ sth.’
/woo- ra- gús- šqaŋ/ sth./them- 2sg.A-create-Decl

E 65  
(a) woohā ‘kettle, stew, soup'
(b) woorág qaŋ ‘you boiled them'
/woo- ra- hā- qaŋ sth./them-2sg.A-boil-Decl

E 66  
(a) wooxé ‘grave'
(b) *woor-rā-xe ‘you bury them in it'

The functional and distributional properties of the derivation on waa-, woo-, and wii- cannot be discussed here in an appropriate and satisfying fashion and goes beyond the scope of the
present paper. What can be said with regard to the argument structure is this. The intransitivizing and nominalizing function of \textit{wa}- has been largely over estimated in the previous literature. As I tried to show, cases which show an unambiguous derivation of intransitives verbs from transitive ones, and nouns from verbs are not very numerous. It was claimed that this holds for the derivations with simple \textit{wa}-, as well as for the derived prefixes \textit{waa}-, \textit{woo}-, and \textit{wii}-. It was shown that at least for some \textit{woo}- derivations, there is no reduction of the argument frame of the underlying verb observable. It is this reduction of the number of arguments one would expect from a detransitivizing or nominalizing morpheme. This effect is however not as prevailing as one would assume on the basis of the grammatical glosses in the Zeps dictionary. That the \textit{wa}- prefix has to be glossed as 'something, thing, stuff' in many cases suggests that we have a similar polysemy as in the third plural actor suffix \textit{--in}, namely a definite 3pl and an indefinite/ impersonal reading (without a number specification) in one form.

12. Noun incorporation

Noun incorporation is a valence reducing process. The verb is combined on the phonological and morphological level with a noun filling the patient, instrument, and locative (preferably in this order) argument slot of the verb. This morphosyntactic process can be very productive, e.g. in Nahuatl and other polysynthetic languages. In Hocąk productive noun incorporation is possible only to a limited degree. There are numerous mostly monosyllabic nouns designating general concepts such as water, metal, wood, and other substances, body parts such as arm, mouth, head, etc., natural phenomena such as fire and artifacts such as boat etc. which are used to form compounds with verbs. If the resulting expression can be used as verbal predicate – and this is the case in practically all cases – than one can speak of noun incorporation.

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\(^{21}\) The reader is referred to Helmbrecht 2002 and in prep.
The relevant property of noun incorporation within the present exposition of the argument structure of the Hoĉk̓e verb is that the incorporated noun fills an argument of the verb. In Hoĉk̓e nouns can fill the patient argument of a verb, the instrument argument of a verb and the locative argument of a verb. E 67 and E 68 are examples of the incorporation of the noun nág 'wood' filling the patient argument. Note that nág 'wood' does not fill the instrument argument introduced by the instrumental applicative hí in E 68b. This is the case, however, in E 69c where the body part term šaaḵ 'fingernails' occupies the instrument argument of hígcaš.

E 67  
(a) ružíp    'to carve with a sharp knife'
(b) nág-ružíp    'to shave wood for kindling'

E 68  
(a) wačgis    'to cut sth. with a knife using pressure, to saw sth.'
(b) nágwačgis 'a saw, one saws wood with it'

E 69  
(a) cášš    'to tap, to make a tapping sound'
(b) gicaš    'to knock, to type sth.'
(c) šaaḵgicáš    'to type with the fingernails'

The locative argument of the verb hožú 'to put sth. in sth.' is filled with an incorporated noun in E 70a-b. That the incorporated noun has indeed argument status can be demonstrated as in E 70c. If the locative argument is added to the clause as a free noun phrase an unacceptable clause emerges. A clause such as the one in E 70d with a free nominal locative argument would be perfectly fine.

E 70  
(a) 'iižú 'put in the mouth' (< 'ii'mouth' + hožú 'to put sth. in sth.')</n
(b) wanj 'iýážu    'I put meat in the mouth'

(c) *'iiéjá wanj 'iýážu    *'I put meat in the mouth'

(d) *'iiéjá wanj hoažú    *'I put meat in the mouth'

It has been observed that incorporated nouns may eventually fuse with the incorporating verb is such a way that they form a new concept together with the verb functioning more like a nominal classifier for a new nominal argument than filling the argument position itself. Such a
process would imply that a free lexical noun phrase may fill the argument position of the noun-verb compound which was filled by the incorporated noun historically. The fact that the incorporated noun no longer fills this position can be interpreted as the result of the stronger grammaticalization of the incorporated noun. I could not find cases in Hocąk that illustrate this process. Even if one takes complex words which could be assumed to be an instance of such a grammaticalization, it quickly turns out, that the incorporated noun indeed fills the argument position. An example is given in E 71a-e. The verb *gihî 'to pick sth.' is often used with the incorporated noun *hás 'berry' such that one could hypothesize a closer connection than just a productive noun-verb compound. If the incorporated noun would be grammaticalized to a kind of nominal classifier, clauses such as the ones in E 71d-e should be possible. However, they are not, i.e. the noun still occupies the patient argument of the verb *gihî.

E 71  (a)  *gihî  
(b)  *hás-rí *wagihî  
/haas-rá  wa- *gihî  
berry-Def 3pl.U-pick  
'we went to pick berries' (White Eagle 1988:9)  
(c)  *hás-gihî *hahwii‘înq  
/haas-gíhi  ha- hi· wi-nq/  
berry-pick 1 excl.A-go-pl- Decl  
(d)  *kšrá *hás-gihî‘înq  
'he picked apples'  
(e)  *házîvucke *hás-  ha- *gihî‘înq  
raspberries  berries-lsg.A-pick-Decl  
1 picked raspberries (lit. 1 berry-pick raspberries)

There is a principle restriction with regard to noun incorporation in Hocąk. Intransitive verbs of motion cannot incorporate a noun designating the instrument of the motion such as the vehicle, or animal. The verbs have to provide an argument position for the instrument of moving in order to be capable of incorporating a noun in Hocank. Since motion verbs are not licensed to receive an instrument argument position (by means of a *hi- derivation, cf. section 6 above) they cannot incorporate a noun filling this slot.

13. Conclusions

Starting from the argument structure of the plain verbs, the major morphological mechanisms of the verb to manipulate the argument structure of the clause have been illustrated. Among them are processes that increase the valence of the plain verbal stems, others reduce the
valence of the verb and a third group reorganizes the arguments of the verb or adds secondary relations between the core participants (possession). It turned out that Hocánk is a language that prefers the strategy to integrate oblique participants into the clause either by means subordinate verbs or clauses, or by means of applicatives and other verbal derivations. In addition, it has been demonstrated that these processes are better described in terms of semantic roles, i.e. in terms of the semantic macro-roles actor and undergoer than ion terms of grammatical relations. No evidence could be adduced that there is a passive construction available in the Hocánk syntax. A final decision whether the Hocánk syntax employs grammatical relations has to wait for the investigation of the complex clause.

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