The Spatiotemporal Dimensions of Person

A Morphosyntactic Account of Indexical Pronouns

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The Spatiotemporal Dimensions of Person

A Morphosyntactic Account of Indexical Pronouns

De spatio-temporele dimensies van Persoon

Een morfosyntactische verklaring van indexicale pronomina

(met een samenvatting in het Nederlands)

Proefschrift

ter verkrijging van de graad van doctor
aan de Universiteit Utrecht
op gezag van de rector magnificus, prof. dr. G.J. van der Zwaan,
ingevolge het besluit van het college voor promoties
in het openbaar te verdedigen op
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door

Bettina Gruber

geboren op 17 mei 1975
te Gmunden, Oostenrijk

Promotores:	Prof.dr. N.F.M. Corver Prof.dr. L.C.J. Barbiers
Co-promotor:	Dr. J.M. van Koppen

Für meine Mama
und meinen Papa

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Sie sind so jung, so vor allem Anfang,
und ich möchte Sie, so gut ich es kann,
bitten, lieber Herr, Geduld zu haben
gegen alles Ungelöste in Ihrem Herzen
und zu versuchen, die Fragen selbst *liebzuhaben*
wie verschlossene Stuben und wie Bücher, die in
einer sehr fremden Sprache geschrieben sind.
Forschen Sie jetzt nicht nach den Antworten,
die Ihnen nicht gegeben werden können,
weil Sie sie nicht leben könnten.
Und es handelt sich darum, alles zu leben.
Leben *Sie jetzt die Fragen.*
Vielleicht leben Sie dann allmählich,
ohne es zu merken,
eines fernen Tages in die Antwort hinein.

Rainer Maria Rilke
Briefe an einen jungen Dichter
Vierter Brief, 1903

You are so young; you stand before beginnings. I would like to beg of you, dear friend, as well as I can, to have patience with everything that remains unsolved in your heart. Try to love the *questions themselves*, like locked rooms and like books written in a foreign language. Do not now look for the answers. They cannot now be given to you because you could not live them. It is a question of experiencing everything. At present you need to *live* the question. Perhaps you will gradually, without even noticing it, find yourself experiencing the answer, some distant day. [Translated by Joan M. Burnham, Novato: New World Library, 2000]

Acknowledgements

manchmal denkst du:
nur noch der nächste schritt geht.
wenn du das oft genug gedacht hast,
hast du's auf einmal geschafft!

my ever so wise niece Mirjam

Quite likely, these pages will be the most read part of the entire dissertation. So their content should be smart, complete, coherent, witty, and fun to read. Pretty much what is also expected from the rest of the book. But as opposed to the dissertation itself, I am trying to accomplish this task while my one year old is banging on my screen and without those numerous people who provided inspiration, help, support, feedback, encouragement, and distraction along the way. Therefore, please accept my apologies if you find the acknowledgements none of the above and, more importantly, if your name ought to be there but isn't. I assure you, this has everything to do with terrible forgetfulness and nothing with ungratefulness.

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A little further into the project, during my visit at the University of British Columbia in Spring 2010, I was extremely lucky to meet Heather Bliss. I'll never forget when you came up to me after my talk in Vancouver and said: "I think Blackfoot does exactly what you argue for." Never could I have imagined the consequences of this short statement. Our collaboration was the most exciting, inspiring (and possibly intense) experience I have had in linguistics so far. Your impact on this thesis goes well beyond the Blackfoot chapter which evolved from our joint work. *Nitsikóhtahsi'taki.*

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Utrecht, September 2013

Abbreviations

1/2/3	first/second/third person
1:2	direct: first acts on second person
2:1	indirect: second acts on first person
AGR	agreement
AN	animate
AI	animate intransitive
AUX	auxiliary
CONJ	conjunction
COP	copula
DEM	demonstrative
DIR	direct
ET	eventuality time
EXCL	exclusive
F	feminine
FUT	future
GEN	genitive
IMPF	imperfective
INAN	inanimate
INCL	inclusive
INV	inverse
II	inanimate intransitive
LOC	locative
M	masculine
MOD	modal
NEG	negation
N	neuter
NOM	nominative

OBV	obviative
PART	participle
PRES	present
PREP	preposition
PRIV	privative
pro-SIT	pronominal situation variable
PROX	proximate
POSS	possessive
PERF	perfect
PL	plural
PREF	prefix
REL.PRO	relative pronoun
SG	singular
SUBJ	subjunctive
TA	transitive animate
TI	transitive inanimate
UT	utterance time
ZP	zeit phrase

CHAPTER I

Introduction

– Have a seat, T.J. Give me a beer. Listen, T.J.!
Liz wasn't talking to you when she was saying all that stuff.
She was talking to herself.
– I'm pretty sure she was talking to me. She kept saying my name.
– No, when she said you were gonna mess up the baby,
she was saying something else.
Just take out the you. *Make it an* I.
– She meant you're gonna screw up the baby?
– No, she meant she was.
– And I was.
– No, just her.

Gilmore Girls, episode 06.21

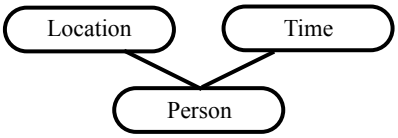
1 What This Thesis Is About

First and foremost, this thesis is concerned with the deictic and grammatical category *person* and its associated linguistic expressions, *indexical pronouns*. These are first and second person pronouns, such as English 'I' and 'you', denoting the speaker and hearer of an utterance, respectively. The main goal of this thesis is to show that PERSON is derivative: Firstly, I argue that temporal information plays a crucial role in the interpretation of PERSON. It will be demonstrated that this information is also represented morphosyntactically in indexical pronouns. Secondly, I propose that spatial information constitutes the second vital part of the make-up of PERSON. Thus, I argue that the deictic

space, which is traditionally taken to consist of the atoms LOCATION, TIME, PERSON as schematized in (1a), actually corresponds to the schema in (1b) where PERSON is represented as a non-atomic entity dependent on TIME and LOCATION.

(1) a. Traditional atomic view

b. Non-atomic view



1.1 The Main Research Questions

Under the hypothesis that sentence meaning is computed from how words and their associated lexical information combine with each other, indexical pronouns present an interesting challenge: their actual referent can only be determined once interpreted with respect to the utterance context they are being used in: in other words, they do not constantly refer to the same person but vary depending on who is using them, as illustrated in (2).

(2) a. Natalie: "$\mathbf{I}_{[Natalie]}$ really need a cup of coffee. Do $\mathbf{you}_{[Alexis]}$ want to join me?"

b. Alexis: "$\mathbf{I}_{[Alexis]}$ would love to. Can $\mathbf{you}_{[Natalie]}$ just give me 10 minutes?"

As these examples show, the same lexical items, 'I' and 'you', respectively, have different referents depending on who is using them. They constantly change their referent depending on the extralinguistic context.[1] At the centre of any investigation of indexical items thus lies the question where, when, and how the relevant contextual information comes in that ultimately allows us to arrive at the contextually correct interpretation of such expressions.

While this topic already has a long-standing tradition within various subfields of linguistics and philosophy, the present work seeks to offer a new angle starting with a reexamination of our understanding of the linguistic category PERSON. This thesis explores PERSON from a morphosyntactic point of view by focussing on those elements that refer to it, namely indexical pronouns. The main research question guiding this investigation, stated in (I), is based on the widely held view that pronouns are internally complex (cf. among many

[1] Jakobson (1971) therefore dubbed them "shifters". The term is, however, no longer used in this sense.

others Postal 1966; Abney 1987; Cardinaletti and Starke 1999; Déchaine and Wiltschko 2002; van Koppen 2005):

I. What does the internal structure of linguistic expressions denoting PERSON, i.e. indexical pronouns, look like?

Theoretically, the topic is investigated within the generative framework and driven by the hypothesis that humans are endowed with an innate cognitive predisposition for language. Under this approach, it is assumed that there is a common core to all languages that can be uncovered by detailed studies of specific linguistic phenomena and their crosslinguistic variation (e.g. Chomsky 1959, 1986, 1995, 2007). Within these parameters, this dissertation investigates the variation in indexical pronouns primarily from a morphosyntactic point of view, with a tight connection to the issue of the interface between syntax and discourse. Two subquestions directly related to the research question in (I) are stated in (II) and (III):

II. Is there a universal structure of indexical pronouns that can account for crosslinguistic variation with respect to their morphosyntax, syntax and semantics, and if so, what does it look like?

III. What is the connection between the pronominal structure of indexical pronouns and their indexical nature?

Empirically, these questions will be examined primarily on the basis of crosslinguistic data from English, German, and Dutch (Indo-European), as well as data from Blackfoot (Algonquian); additionally, this thesis includes discussions of data from Classical Armenian, and Italian (Indo-European).

1.2 The Hypothesis

The hypothesis that this thesis is based on is stated in (A)[2]:

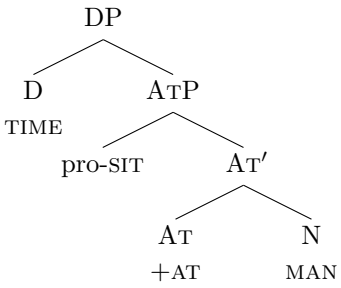
A. The category PERSON is derivative and dependent on temporal and spatial parameters that are present in the morphosyntactic structure of its linguistic exponents, indexical pronouns.

Syntactically, I argue that the maximal internal structure of an indexical pronoun contains both a temporal and a spatial component. Specifically, I propose that the temporal component is responsible for specific interpretations linked to certain moments in time of the individual denoted by the structure. Further, I hypothesize that the spatial component is responsible for identifying the speaker or the hearer.[3] The maximal structures I argue for are depicted in (3).

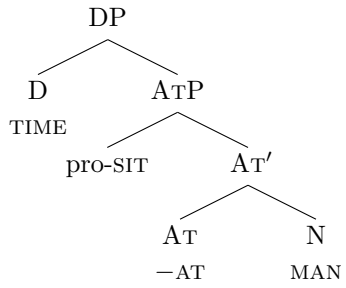
[2]For ease of exposition, the claim in (A) is slightly simplified and will be further refined later on in the thesis.

[3]The issue of the so-called third person will be taken up later on in this chapter.

(3) a. First Person Pronoun



b. Second Person Pronoun



Very briefly explained, TIME in D represents the temporal component whose function is to restrict the interpretation to a specific temporal stage of the individual denoted by the pronoun.[4] Pro-SIT is a pronominal situation variable, ultimately representing the utterance location. The head-feature ±AT is a relational feature in the sense of Ritter and Wiltschko (2009), putting the content of its complement (MAN) in relation to the content of its specifier (pro-SIT); in the case at hand, this relational head is represented as an abstract preposition reflecting the fact that the relation is essentially spatial. MAN stands for an entity that is specified for [+sentient]. In other words, the lower part of the structure gives us the interpretation of a sentient being either located AT the utterance location or *not* located AT the utterance location.[5]

This approach allows us to address all previously mentioned research questions, and sheds new light on the various intricacies of indexical pronouns that will be discussed in detail throughout. In a nutshell, the analysis argued for is based on the idea that first and second person pronouns need to get syntactically anchored to the utterance context in order to get their respective interpretation. Ultimately, the above structure will serve as a guide throughout the thesis: the chapters to follow will each discuss one component of the structure in detail and step by step present empirical evidence for this proposal.

Here, it should be noted that this account has several consequences that go well beyond the realm of indexical pronouns and concern syntax, morphosyntax and semantics alike. I will not be able to discuss all ramifications in satisfactory theoretical and empirical depth within this thesis. I will concentrate on detailing the main claims and seek to support each step with empirical data. Some issues that will form part of a future research programme will be taken up at the end of this thesis.

This chapter is organized as follows: First, we will take a closer look at the notion and significance of *indexicality*. Then the notion PERSON will be scrutinized. It will be argued that first and second person pronouns are the only true instances of the category PERSON and that they depend on spatial and

[4] In my proposal, TIME in D is crucially different from the uninterpretable tense-feature on D proposed by Pesetsky and Torrego (2001, 2004b), which they identify as case.

[5] For expository reasons, I depict the silent nominal MAN simply as N throughout this thesis.

temporal coordinates of the utterance context. The final section summarizes the core points and provides a brief overview of this thesis.

2 Person, Deictic Space, and Indexicality

First and second person pronouns fall into the class of context-sensitive expressions: elements whose interpretation is directly dependent on the utterance context. 'Today', 'there', or 'you' only become meaningful relative to the *here* and *now* of the utterance. Terminologically, these expressions are referred to as either *deictic* or *indexical*, a point that I will return to in the next section. These elements have received a fair amount of attention from a wide range of linguistic subdisciplines:[6] philosophy of language (most prominently Kaplan 1989a,b; Nunberg 1993; Perry 1997; Higginbotham 2003), semantics (e.g. Lyons 1977; Schlenker 2003; Rullmann 2004; Heim 2008; Higginbotham 2010), pragmatics (e.g. Levinson 1983; Lenz 2003), typology (e.g. Forchheimer 1953; Fillmore 1997), and syntax (e.g. Ritter 1995; Kratzer 2006; Déchaine and Wiltschko 2010); not to forget early day linguistic theory such as von Humboldt (1830), Jespersen (1924), Bühler (1934) and Benveniste (1966).

It has long been noticed that first and second person share an important characteristic: Neither of them has an inherent denotation unlike a standard noun phrase such as 'table'. Both of them depend entirely on the context as they are only assigned a referent once they are used in a conversation (cf. among many others Bühler 1934; Forchheimer 1953; Benveniste 1966; Jakobson 1971; Lyons 1977; Kaplan 1989a). But whereas this is also true of third person pronouns[7], first and second person pronouns constantly change their referent within a conversation depending on who is using the respective pronoun. A third person pronoun, however, can have a fixed referent once it has been assigned, as illustrated by the brief dialogue in (4):

(4) a. Natalie: "$\mathbf{I}_{[Natalie]}$ really need a cup of coffee. Do $\mathbf{you}_{[Alexis]}$ want to join me?"

b. Alexis: "$\mathbf{I}_{[Alexis]}$ would love to. Can $\mathbf{you}_{[Natalie]}$ just give me 10 minutes?"

c. Natalie: "Sure. Do $\mathbf{you}_{[Alexis]}$ want to ask Bettina if $\mathbf{she}_{[Bettina]}$ wants to come along, too?"

d. Alexis: "Oh, $\mathbf{she}_{[Bettina]}$ is not in yet."

This difference in behaviour not only unites first and second person, but it also puts them in the same class as several other lexical items. Benveniste (1966), in his well-known chapter on pronouns, describes this characteristic as follows:

[6] I am using these categories for expository reasons; the lines between them are naturally not as clear-cut as my presentation might suggest but intertwined to varying degrees.

[7] But see chapter II, section 4 for further discussion.

> Cette référence constante et nécessaire à l'instance de discours constitue le trait qui unit à *je/tu* une série d' "indicateurs" [...] de classes différentes, les uns pronoms, les autres adverbes, d'autres encore locutions adverbiales. [Benveniste 1966:253]
>
> This invariable and necessary reference to the moment of utterance constitutes the characteristic that unites *I/you* with a series of "indicators" of different classes, one being pronouns, another adverbs and yet another adverbial locutions. [translation: BG]

This quote reflects the important observation that 'I' and 'you' belong to a class of elements that Benveniste refers to as *indicators* ("indicateurs") and that includes certain adverbs and adverbials. The lexical items he is talking about are expressions such as 'here', 'now', 'tomorrow', or 'present' whose interpretation depends entirely on the utterance context in which they are being used. Before proceeding with the specific issues these items present us with, I first need to dedicate some space to the terminology and clarify how it will be employed throughout the thesis.

2.1 A Few Notes on the Terminology

Expressions like 'here' or 'now' are called *deictic elements* and considered part of the phenomenon referred to as *deixis*. The terms *deixis* and *deictic* derive from the Ancient Greek verb δείκνυμι (deiknumi) meaning 'to point', 'to indicate'; as such, deictic expressions are defined as pointing to something that is part of the utterance context. The ancient Greek grammarians already used the term for expressions that pointed to something, specifically for what we now call *demonstratives*, the Latinate version with the same underlying meaning (Lat.: demonstrare – to point, to indicate). However, in its present-day use, deixis is commonly understood to comprise spatial, temporal and personal categories, a definition which Lyons (1995) attributes to Karl Bühler (1934). As such, the class of deictic elements cuts across lexical categories: they appear as pronouns (e.g. 'I', 'this'), adverbs (e.g. 'here', 'now'), affixes (e.g. tense), et cetera. They can only be interpreted once set in relation to the *here* and *now*, or the so-called *deictic space* or *sphere*: it is defined by the TIME, LOCATION and traditionally also the PERSONs of the utterance context (cf. Fillmore 1997). Once these parameters are known, a deictic expression becomes meaningful.

Another commonly used term for these items is *indexicals*. Derived from Latin 'index' (forefinger, pointer, sign)[8], the roots of its linguistic use are to be found in philosophy. It was first introduced by the philosopher and logician Charles Sanders Peirce in the early 20^{th} century in work on semiotics and logic; from there the term found its way into philosophy of language and semantics where it received its current definition as referring to single expressions whose interpretation is directly dependent on the utterance context. As

[8]Latin 'index' derives from the same etymological source as 'deixis'.

such, *indexicals* are so-called *context-sensitive* expressions, which also include complex expressions such as, e.g. 'the niece I visited' (cf. Braun 2010).

In this thesis, I will use both terms, *deictic* and *indexical*. I will employ the first to refer to the components of the utterance context, i.e. primarily the atomic categories LOCATION and TIME, and sometimes also for PERSON in its traditional sense. The term *indexical* will be reserved for linguistic expressions linked to those categories, e.g. first and second person pronouns, tense, or spatial adverbs.

2.2 Some Traditional Issues of Indexicality

While the focus of the present thesis primarily lies on the morphosyntax of indexical pronouns and will hence largely set aside the vast philosophical and in parts also the semantic literature on indexicality, reference, and context, a few notes on some core issues are still in order: The most influential work in this respect is certainly Kaplan's theory of indexicality from the late seventies, published as Kaplan (1989a,b), which has inspired the debate ever since. He discusses context-sensitive expressions and divides them into "demonstratives" and "pure indexicals", a division that I will follow throughout this thesis. Demonstratives involve some kind of speaker intention, i.e. an actual act of *demonstration* like pointing to an item that is being referred to with an expression such as 'that'. In contrast, pure indexicals solely depend on the actual speech act context. He describes the latter as follows:

> For [pure indexicals], *no associated demonstration is required, and any demonstration supplied is either for emphasis or is irrelevant.* [...] The linguistic rules which govern *their* use fully determine the referent for each context. No supplementary actions or intentions are needed. The speaker refers to himself when he uses 'I', and no pointing to another or believing that he is another or intending to refer to another can defeat this reference. [Kaplan 1989a:491]

This quote already hints at a point crucial to Kaplan's view: indexical pronouns can never take on a referent other than the actual speaker or hearer. This goes hand in hand with the property of being "directly referential" (Kaplan 1989a:493): The referent of an indexical is a "propositional component" in the sense that the referent itself is part of the proposition of the sentence, as opposed to, e.g. a description of the referent such as 'the person who is speaking'.[9] Or, as Nunberg (1993:6) puts it in his discussion of direct-reference-theories,

[9]Note at this point also that 'I' and 'the person who is speaking' are not equivalent to each other. To this effect, Nunberg (1993:1) compares the following two statements:

i. Oh, it's you.

ii. ?Oh, it's the addressee of this utterance

He points out that "[o]ne can be surprised to learn that one's addressee is who he is, but not that one's addressee is one's addressee." See also Lyons (1977:645f.) for a similar point.

"indexicals contribute individuals, rather than properties, to the interpretation." As further discussed by Nunberg (1993), direct-referentiality-approaches, even though very prominent in the field, hold a number of complications, many of which go beyond core linguistic questions. I will refrain from delving deeper into these issues and content myself with focussing on the second vital point of such an analysis, which also directly bears on questions raised in this dissertation. As already mentioned, Kaplan's theory strongly relies on the idea that an indexical will have the same referent in all circumstances: whereas the referent may change in a different context, once the referent is evaluated "in a given context, only a single object will be relevant to the evaluation in all circumstances" (Kaplan 1989a:494). This is sometimes also referred to by Kripke's (1980) "rigid designator", a term that he coined for proper names: they designate the same object in every possible world.[10] Put differently, in Kaplan's view a second person pronoun 'you' could never take on a referent other than the addressee in a given context and could always only take the given addressee as its referent.

Particularly this last point of Kaplan's theory has inspired a lot of discussion in the literature, mostly based on data that show that indexicals do not always and in all contexts necessarily carry an indexical meaning, that is they do not universally always relate to the immediate utterance context.[11] One such phenomenon plays a central role in the analysis put forward here and constitutes the core of chapter IV: If, as argued by Kaplan, an indexical such as 'you' can always only refer to the addressee of the utterance, we do not expect statements such as (5):

(5) In the twenties, you had to wear a hat.

Clearly, this sentence is not a statement about the current addressee but a general statement about people in the 20ies, thereby refuting a strict direct-referentiality treatment of 'you'.

Most discussions disputing Kaplan's theory primarily pursue semantic accounts of these phenomena, largely leaving aside the details of the syntactic side. Whereas the semantics undoubtedly cannot be ignored, recent years have seen more and more attention being devoted to the syntax, as well (e.g. Kratzer 2006; Shklovsky and Sudo 2009; Déchaine and Wiltschko 2011; Delfitto and

[10] Kaplan (1989a) discusses the notion "rigid designator" and explicitly refrains from using it; instead, he employs "directly referential". Informally, the basic idea is the same; the details of these arguments go far beyond the scope of this thesis.

[11] The most famous examples in this respect are given in (i) and (ii). The first piece of data comes from Amharic (Semitic): the embedded indexical can refer to the matrix subject rather than to the speaker of the whole utterance, as indicated by the indices. The second piece of data comes from English and involves bound variable readings of indexical pronouns.

i. *Amharic* (lit.): John$_i$ says that I$_i$ am a hero. [Schlenker 2003:31]

ii. Only I got a question that I understood. [Kratzer 1998]

These data will not play a central role in this thesis and will hence largely be set aside for now.

Fiorin 2011; Sundaresan 2012).[12] The present work is another contribution along these lines as it seeks to integrate pronominal morphosyntax and clausal syntax in order to explain various interpretational ranges of indexical pronouns in different languages. I will show that the morphosyntax plays a crucial role as different morphosyntactic structures lead to different interpretations of these pronouns. Therefore, these sometimes fine-grained details need to be incorporated in any account of indexical pronouns. This thesis has the explicit goal to add to the existing picture that has emerged from research in semantics; it is intended as a contribution advocating the incorporation of the two perspectives ultimately resulting in a more complete picture of the uniquely human capacity for language.

2.3 Deictic and Grammatical Person

Returning to the core of this thesis, namely the category PERSON, I will briefly recapitulate what we have seen so far: PERSON is a deictic category and as such includes only the speech act participants, speaker and hearer; a non-participant, per definition, cannot be part of the utterance context, is not deictic and therefore not part of the category PERSON.

What has not been considered up to now is that *person* is also a grammatical category. Note at this point that throughout the thesis, I will use small caps to denote the deictic category and italics to denote the grammatical category. The grammatical category *person* goes beyond first and second person and extends to third person.[13] To the best of our knowledge, it is a universal category present in all languages (cf. Greenberg 1963; Siewierska 2004); this is reflected in Greenberg's (1963) universal 42: "All languages have pronominal categories involving at least three persons and two numbers."[14] Morphosyntactically, *person* minimally appears on pronouns but in many languages also on the verb, as illustrated in the German sentences in (6):

(6) a. Ich lieb-**e** Wien.
*I.1*SG *love-1*SG *Vienna*
'I love Vienna.'

[12] Another line of discussion of indexical elements is situated within the field of pragmatics. Lenz (2003:vii) for instance says that "there is no doubt that the study of deixis genuinely belongs to pragmatics". Essentially, the same point as made with respect to semantics also applies to pragmatics: for a complete picture, an approach that takes all relevant faculties into account is most desirable and no discipline should claim sole ownership of the topic.

[13] Some languages are argued to also have a so-called fourth person, of which there is no standard crosslinguistic definition. As Siewierska (2004:7) notes, the term can be found with respect to the French first person plural, with respect to logophors, or as reference to an Algonquian obviative. However, in any case a fourth person is never part of the speech act. Therefore, the specifics do not bear on the issue at hand and are set aside.

[14] But see Bhat (2004:30f.) for a discussion of some languages that are sometimes analyzed as not having personal pronouns; in any case, even these potential counterexamples have means to refer to the speaker and hearer, respectively. Whether or not these are analyzed as pronouns does not bear on the current discussion.

b. Du lieb-**st** Wien.
*you.2*SG *love-2*SG *Vienna*
'You love Vienna.'

c. Sie lieb-**t** Wien.
*she.3*SG *love-3*SG *Vienna*
'She loves Vienna.'

In all these examples, the verb shows an inflectional morpheme that is marked for the same person as the subject pronoun; however, it not only agrees with the 'I' and 'you', the two pronouns instantiating the deictic category PERSON, but also with 'she', which is a *third person* pronoun; and, the verb not only agrees for *person*, but also for *number*.

2.3.1 Person from a Minimalist Perspective

As a grammatical property, *person* is on par with e.g. *gender*, *number*, *animacy* or *class*; it is often discussed as part of the set of ϕ-features, a term standardly used in the generative linguistic tradition for those features participating in agree-relations, namely *gender, number, person.*[15] As such *person* has received a fair amount of attention from typologists (e.g. Forchheimer 1953; Silverstein 1976; Cysouw 2001; Siewierska 2004), morphologists (e.g. Bonet 1991; Noyer 1992; Bobaljik 2008), syntacticians (e.g. Poletto 2000; Chomsky 2001; Béjar 2004; Nevins 2007) and semanticists (e.g. Heim and Kratzer 1998; Schlenker 1999). Within the generative Minimalist framework, these features are standardly assumed to simultaneously belong to the categories of so-called *formal* and *semantic* features. Formal features are defined as being accessible for syntactic operations (Chomsky 1995:230): *person* is therefore a formal feature as it participates in agree-relations, i.e. a core-syntactic operation. Purely semantic features, on the other hand, do not have any effect on syntax but are merely necessary for the interpretative component. Chomsky (1995:230) names *artifact* as a purely semantic feature of the lexical item 'airplane' as one such example.[16] However, in this framework the grammatical feature *person* cannot just be a purely formal feature as it clearly has effects beyond syntax and

[15] According to Adger and Harbour (2008), it can also include features related to honorifics and definiteness. Given that there are also languages that express, e.g. class or animacy and also show agreement with these features, I assume that the definition of ϕ-features varies from language to language and will have to be determined individually. The discussion presented here is mostly based on the eurocentric literature that still underlies much of syntactic terminology. See Corbett (2006:125ff.) for a similar viewpoint and related discussion.

[16] Personally, I do not see how the feature *artifact* significantly contributes to the interpretation of an expression like 'airplane'. Under the assumption that there is a set of features that is universally available to languages, using, e.g. *animacy* as an example with respect to the English word 'airplane' seems to have the same effect: (in)*animacy* does not affect syntactic computation in English, however, arguably it is still relevant for semantics. We do know though that there are languages in which animacy is both a formal and a semantic feature, much like *person* or *number* in English. Whether there are languages that have a formal feature *artifact* is an empirical question.

an incontestable impact on the semantics of a sentence. According to standard assumptions, *person* is thus both a formal and a semantic feature.[17]

Formal features are taken to be of two types: interpretable and uninterpretable, the latter of which are argued to drive syntactic computation (Chomsky 1995). Agreement, for instance, is the result of uninterpretable features on one item entering a relation with matching interpretable features on another item; one typical example is subject-verb agreement, as already exemplified in (6) and repeated here for convenience.

(6) a. Ich lieb-**e** Wien.
*I.1*SG *love-1*SG *Vienna*
'I love Vienna.'

b. Du lieb-**st** Wien.
*you.2*SG *love-2*SG *Vienna*
'You love Vienna.'

c. Sie lieb-**t** Wien.
*she.3*SG *love-3*SG *Vienna*
'She loves Vienna.'

In all these cases, the verb agrees with the pronominal subject in both *person* and *number*. Hence, whether or not a feature is purely formal or also semantic depends on the lexical item a feature is associated with. The grammatical feature *person* on a pronoun is both a formal and a semantic feature, whereas *person* on a verb is only formal: it does not have any impact on the interpretation of the verb. The technical implementation of this intuitive observation is that once the relevant relation between an uninterpretable feature and its interpretable counterpart is established, the previously uninterpretable features are taken to be deleted and hence have no further impact on either syntactic or semantic computation. If we look at the ϕ-features *gender, number,* and *person* and the syntactic categories that they typically associate with as either interpretable (i) or uninterpretable features (u), the picture given in table I.1 unfolds.

This table shows that the grammatical feature *person* is highly restricted in its distribution and as such only appears on personal pronouns and verbs; it is only interpretable on and lexically inherent to the former, whereas it is uninterpretable on the latter and only arises on verbs due to syntactic agreement. Importantly, this table also implicitly states that I do not assume nouns to carry a third person feature, although of course we know that nouns trigger third person agreement on verbs. First of all, such an encoding would be highly redundant as all nouns would then carry the same feature. Second, it raises the question what kind of contribution to the interpretation such a nominal third person feature would make. One could assume that it is a purely formal feature with no impact on the interpretation, but note that this still sets it apart from

[17] But see Zeijlstra (2011) for an approach suggesting that no such intersection exists.

	person	*number*	*gender*	type
nouns	–	iN[a]	iG	lexical (inherent)
adjectives	–	uN	uG	syntactic (agreement)
determiners	–	uN	uG	syntactic (agreement)
verbs	uP	uN	uG	syntactic (agreement)
personal pronouns	iP	iN	iG	lexical (inherent)

[a]In most cases, *number* on a noun is arguably not of the same type as *gender*. Crucially, however, it also does not result from syntactic processes.

Table I.1: ϕ-features across syntactic categories

first and second person features. These never appear on nouns and always make a crucial contribution to the interpretation. One can even take this a step further and assume that third person pronouns also do not carry a person feature at all. This is in fact a type of analysis that explicitly has been pursued for years by several scholars (e.g. Corver and Delfitto 1999; Kayne 2000; Harley and Ritter 2002; Panagiotidis 2002; Anagnostopoulou 2005; Bobaljik 2008) and can be traced back to at least Benveniste (1966).[18] It is interesting to note though that, since personal pronouns are a closed class, the grammatical feature *person* in its traditional sense inherently only appears on a highly limited number of elements;[19] this is yet another trait that sets it apart from other members of the set of ϕ-features. This highly restricted appearance of the grammatical feature *person* as an inherent lexical feature leads to the reconsideration of the status of *person* in this thesis and to the question: is it really a primitive of language or could it be dependent on other, more prevalent features of the system?

But before we can turn to this core issue, the empirical domain needs to be defined first: So far we have seen that there is a difference between the concept of deictic PERSON and grammatical *person*. Despite the fact that the same term is used to refer to them, there appears to be some unclarity as to the actual members of the second group. The next section addresses this issue in greater detail and presents support for restricting the empirical domain to indexical pronouns.

2.3.2 The Person Paradigm

From the perspective of grammatical *person*, as outlined above, first, second and third person pronouns are traditionally seen as belonging to the same paradigm. However, as already discussed earlier and illustrated in (4), the crucial difference

[18]There is also researchers who explicitly argue against this view and for a syntactic third person feature, e.g. Sigurðsson (2004); Bianchi (2006); Nevins (2007).

[19]Note that this point also remains valid under an analysis that attributes interpretable person features to verbal inflection, as for instance in Jelinek's (1984) Pronominal Argument Hypothesis (see also Baker 1996) or as also proposed in Alexiadou and Anagnostopoulou (1998) with respect to the EPP-licensing capacity of verbal inflection in Greek and Romance.

between first/second and third person pronouns is that the former but not the latter are dependent on the utterance context.

Of course, this is not a new observation; in fact, numerous scholars concluded from this crucial difference between first/second on the one hand and third person on the other hand, that third person does not belong to the same paradigm as first and second (among others von Humboldt 1830; Jespersen 1924; Bühler 1934; Forchheimer 1953; Benveniste 1966; Jakobson 1971; Lyons 1977; Harley and Ritter 2002; Speas and Tenny 2003; Bhat 2004; Siewierska 2004). In his well-known chapter "La nature des pronoms" (The nature of pronouns), Benveniste (1966) for instance says:

> Il faut voir que la définition ordinaire des pronoms personnels comme contenant les trois termes *je, tu, il*, y abolit justement la notion de "personne". Celle-ci est propre seulement à *je/tu*, et fait défaut dans *il*. [Benveniste 1966:251]
>
> One has to see that the regular definition of personal pronouns as comprising the three terms *I, you, he* itself denies the notion "person". It is only suitable for *I, you* and is lacking in *he*. [Translation: BG]

The sometimes mentioned indexical uses of third person pronouns still do not fall into the same category as first and second person pronouns: a third person is indexical when used with ostension, i.e. the act of pointing to someone (he, she) or something (it).[20] In the sense of Kaplan (1989a), these then fall under the indexical category of demonstratives and not, as first and second person, under the category of pure indexicals. One might object, however, that third person pronouns are still crucially dependent on the context: one cannot attribute meaning to an out-of-the-blue utterance with a third person pronoun. Crucially, the relevant context in these cases is the *linguistic* context, as opposed to the *utterance* context, which is essential for interpreting any pure indexical. Note that an indexical pronoun can also be interpreted in out-of-the-blue utterances since the relevant utterance context is still present (in fact, it is impossible to *not* have an utterance context). Third person pronouns are therefore called *anaphoric*, as they can only receive a referent based on the previous discourse. I take this to be the core of the distinction between first and second versus third person, also expressed in the following quote from Lyons (1977):

> That there is a fundamental, and ineradicable, difference between first-person and second-person pronouns, on the one hand, and third-person pronouns, on the other, is a point that cannot be emphasized too strongly. [Lyons 1977:639]

[20] For a different view, see Heim and Kratzer (1998). However, they also have a slightly different definition of *utterance context* than employed here, as they also include individuals that are not part of the actual speech act in it; further, they do not make Kaplan's (1989a) distinction of pure indexicals and demonstratives, as discussed earlier.

A slightly different angle, which complements the previously discussed facts in an interesting way, is presented in Erteschik-Shir (1997) and part of a larger framework proposed for the analysis of focus structure. The general idea is based on a few fundamental assumptions that can be summarized as follows: In any given conversation there is a common ground between the speaker and the hearer. Based on ideas developed in Reinhart (1981), Erteschik-Shir (1997) argues that this common ground is represented by "file cards"[21] whose entries are common-ground propositions. In other words, these cards contain propositions that are properties of referents both interlocutors are able to identify. The cards are ordered with respect to each other with potential topics being at the top of the file. Crucially, at the beginning of any given conversation, the very top of the file always consists of the same cards: the ones representing the speaker, the hearer and the here-and-now of the discourse (Erteschik-Shir 1997:18). In other words, speaker, hearer and the here-and-now are always available to be used by the interlocutors in any given discourse. Note that these cards remain at the top of the file throughout the whole conversation, although additional cards will be constantly added. In this system, the crucial difference between first and second person on the one hand and third person on the other lies in the fact that first and second are always available whereas a third person needs to be introduced to the discourse for it to become available to the interlocutors. It may then very well be added to the top of the file; however, whether or not the third person card stays at the top of the file is governed by the same principles as the addition of any other card.[22]. Speaker and hearer cards, on the other hand, are not only always part of the file but also always among the highest ranking cards at the top of the file.

Another note-worthy difference between first/second and third person lies in the fact that the former but not the latter necessarily refer to a sentient being. We can observe this also in the syntactic behaviour of third person pronouns: they generally agree with the gender of their antecedent, irrespective of whether it is sentient or even animate as shown in the German examples in (7):

(7) a. Der **Tisch** gefällt mir hier nicht. **Er** passt besser dort hin.
*the table.*M *pleases me here not* *he.*M *fits better there* PRT
'I don't like the table here. It fits better over there.'

b. Die **Lampe** gehört nicht in die Küche. Ich stelle **sie** weg.
*the lamp.*F *belongs not in the kitchen I put her.*F *away*
'The lamp doesn't belong in the kitchen. I'll put it away.'

[21] This notion is more prominently associated with Discourse Representation Theory (DRT) (Kamp 1981; Heim 1982). However, there are a few crucial differences, of which the following are relevant for the discussion at hand: DRT does not make use of the notion "top of the file"; DRT attributes only one card to one sentence; DRT is a theory of semantics that takes the discourse level into account, whereas Erteschik-Shir's (1997) system is a theory of discourse (cf. Erteschik-Shir 1997:56f.).

[22] See Erteschik-Shir (1997, 2007) for details.

c. Dieses **Zimmer** wird das Kinderzimmer. **Es** ist am hellsten.
*this room.*N *becomes the nursery* *it.*N *is at brightest*
'This room will become the nursery. It is the brightest.'

In all three examples we see non-sentient entities – table, lamp, and room – that are referred to by a third person pronoun in the following clause, showing that there is no restriction on what kind of entity a third person pronoun can refer to. As for indexical pronouns, there is one caveat that needs to be mentioned: this does not necessarily mean that one can never use them to address non-sentient individuals. For instance, people who have pets often address them, and in some cases we might even talk to objects: if the car won't start, one might be heard saying "Why are you doing this to me?". However, I suggest that in these cases we accommodate the addressee as being sentient, i.e. acting consciously and capable of understanding our utterance; I hypothesize that this accommodation is what makes us address them in the first place.

I suggest that one way to think about the difference between first/second versus third person is to take *deictic* PERSON as a concept rather than a linguistic entity; *grammatical person* then is a linguistic entity that can appear on multiple lexical categories and additionally also expresses the deictic concept by means of indexical pronouns. If this is indeed the way to think about it, then we expect to find asymmetries between the exponents of the deictic category and the exponents of the non-deictic, purely grammatical category. In other words, we expect grammatical domains in which first and second person pattern together but behave different from third person. Indeed, there is an abundance of morphosyntactic phenomena that reflect precisely this bipartition, some of which are listed subsequently:

(8) Italian oblique clitics for first and second person plural are derived from spatial adverbs (Cortelazzo and Zolli 1999; Ferrazzano 2003), whereas third person pronoun clitics are derived from their strong counterparts. This is illustrated in table I.2 and will be discussed in greater detail in chapter V, section 3.4.

PLURAL	*oblique clitic*	*non-clitic*	*spatial adverb*
First	ci	noi	ci
	us	*us*	*here/there*
Second	vi	voi	vi
	you	*you*	*here/there*
Third m./f.	li/le/gli	loro	–
	them	*them*	–

Table I.2: Italian oblique pronouns and spatial adverbs

(9) In many languages, third person pronouns are identical to demonstrative pronouns, whereas first and second person pronouns follow a dif-

ferent pattern (cf. Cysouw 2003; Bhat 2004; Siewierska 2004). One such case is Turkish, which is illustrated in table I.3.

personal pronouns	*demonstrative pronouns*
ben	bu
I	*this*
sen	şu
you	*that*
o	**o**
he/she/it	*that (further away)*

Table I.3: Turkish personal pronouns and demonstratives

(10) French ethical datives are restricted to first and second person, as illustrated in (a).[23] (Leclère 1976; Jouitteau and Rezac 2007)

a. Elle (te / te me / te me nous / *leur) **lui** a
*she 2*SG */ 2*SG *1*SG */ 2*SG *1*SG *1*PL */ 3*PL.DAT *3*SG.DAT *has*
attrapé trois rhumes cet hiver.
caught three colds this winter
'She caught three colds this winter on her (sic!), you know.'
[Jouitteau and Rezac 2007:example 12]

(11) Person-Case-Constraint: First and second person direct object clitics are ungrammatical when combined with an indirect object clitic, as illustrated for first person in (11a) and (11b). (Perlmutter 1971; Bonet 1991)

a. En Josep, me'l va recomanar la Mireia.
the Josep 1.DAT-*3*.ACC *recommended the Mireia [sic!]*
'She (Mireia) recommended him (Josep) to me.'

b. * A en Josep, me li va recomanar la Mireia.
to the Josep 1.ACC *3*.DAT *recommended the Mireia [sic!]*
'She (Mireia) recommended me to him (Josep).'
[Catalan; Bonet 1991:178]

(12) Possessor doubling is excluded for first and second person in German and Dutch dialects, as illustrated below. (Weiß 2008)

a. eam sei Haus
him his house

b. * mia mei Haus
me my house

[23] Whether this and the subsequent phenomena, i.e. (8)–(13), can all be traced back to a different underlying structure of first and second person pronouns remains to be investigated individually. The proposal outlined in this thesis offers a new angle from which they can be approached, but addressing every single one of them has to be left for further research.

c. * dir dei Haus
you your house

[Bavarian; Weiß 2008:387]

(13) Present perfect tense auxiliary selection in a number of central-southern Italian dialects associates first and second person with 'be' and third person with 'have', irrespective of the main verb's argument structure, as illustrated below. (D'Alessandro and Ledgeway 2010)

a. So magnate (tutte) / 'rrevate.
BE.1SG *eaten*.SG *(everything) / arrived*.SG
'I have eaten (everything)/arrived.'

b. Si magnate (tutte) / 'rrevate.
BE.2SG *eaten*.SG *(everything) / arrived*.SG
'You have eaten (everything)/arrived.'

c. A magnate (tutte) / 'rrevate.
HAVE.3SG *eaten*.SG *(everything) / arrived*.SG
'S/he have eaten (everything)/arrived.'

[Abruzzese]; D'Alessandro and Ledgeway 2010:202]

As this (incomplete) list shows, morphosyntactic phenomena that group first and second person together appear across all languages and language families.[24]

This is little surprising as it seems safe to assume that the basic function and nature of indexical pronouns are the same across all languages: their primary role is to denote the speaker and the hearer, respectively, and hence they are always expected to be context-dependent.

Accordingly, third person is often taken to not instantiate PERSON, and, as already mentioned, many researchers take third person pronouns not to contain a grammatical person-feature at all (among others Corver and Delfitto 1999; Kayne 2000; Harley and Ritter 2002; Panagiotidis 2002; Anagnostopoulou 2005; Bobaljik 2008). This is also the line pursued in the present work: although I do not make use of a person-feature in the traditional sense, I take the structures of indexical and of third person pronouns to be fundamentally different. In chapter II, section 4, I will briefly present some ideas about the structure and content of third person compatible with the analysis argued for here. However, for the reasons just outlined the focus of this thesis lies entirely on developing an account for indexical pronouns and their related issues.

[24]This is not to deny the existence of phenomena that group first and third or second and third person together. For example, it is often the case that these persons trigger homophonous verbal agreement, e.g. German modals group first and third person together:

i. ich soll-Ø – du soll-st – er/sie/es soll-Ø
I should-Ø – you should.2.SG – *he/she/it should-Ø*

However, I do not take these to defeat the validity of the basic dichotomy of first/second versus third person; rather, I hypothesize that agreement patterns like the ones in (i) are mere morphological reflexes that do not reflect the underlying syntax of the arguments that these modals agree with.

2.4 Reconsidering the Category Person

Up until now we have established that there is a crucial difference between the deictic category PERSON and the grammatical category *person*: the former only comprises first and second person, i.e. indexical, pronouns, whereas the latter comprises the entire person paradigm, first, second, and third, and can appear on linguistic expressions other than pronouns. In what follows, I will mostly concentrate on the deictic category and the related linguistic expressions, i.e. indexical pronouns.

As already mentioned earlier, besides PERSON, the other two core-deictic categories are standardly taken to be TIME and LOCATION of the utterance context, in other words the *here* and *now*. In his 1971 lectures on deixis (published as Fillmore 1997), Fillmore describes these three as follows:

> [...] (1) the identity of the interlocutors in a communication situation, covered by the term *person deixis*; (2) the place or places in which these individuals are located, for which we have the term *place deixis*; (3) the time at which the communication act takes place [...] under the heading of *time deixis* [...] [Fillmore 1997:61]

As becomes obvious from Fillmore's description, all three types of deixis crucially depend on the utterance context and are taken to be of the same type, i.e. atomic components of the context. Also note that he takes first and second person to be distinct from third person, as the latter can never be an interlocutor.

If, for a moment, we turn away from PERSON and look at spatial and temporal features, the following can be observed: First, both appear across a number of different types of expressions: adpositions ('in', 'after'), directionals ('towards'), adverbs ('here', 'now'), verbal inflection ('-ed'), and demonstratives ('this', 'that'), on all of which both spatial and temporal features also necessarily need to be interpretable. Second, without any relation to the *here* and *now*, i.e. LOCATION and TIME of the utterance context, no sentence can become meaningful. In other words, it is the *here* and *now* that we need to relate the utterance to, not necessarily the speech act participants. Take for instance the sentence in (14):

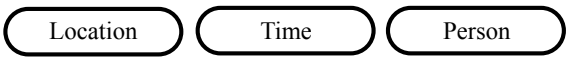
(14) Flights to Austria were cheap yesterday.

The truth conditions of this sentence only rely on the *here* and *now*: For the prepositional phrase 'to Austria' to become fully meaningful, we need to know where the sentence was uttered, e.g. in Utrecht; for the temporal adverbial 'yesterday' and the tense on the verb 'were' to become meaningful, we need to know when the sentence was uttered. What is irrelevant, though, is who uttered the sentence.[25] Details about the speech act participants only become relevant once we come across indexical pronouns.

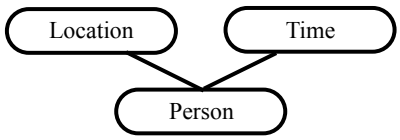
[25] One might object that if, for instance, a notorious liar uttered the sentence, it would contribute to our willingness to believe the utterance. This, however, is not part of the linguistic information and has nothing to do with deixis.

I therefore argue for a view of deixis which is slightly different from the traditional picture as for instance painted in Fillmore (1997) and represented by the previous quote. I propose that PERSON is not of the same type as the other two deixis: Whereas LOCATION and TIME are coordinates independent of other deixis, I will show that PERSON is not. In this thesis, I will outline in detail how TIME plays a crucial role in the interpretation of indexical pronouns. Developing this idea further, I suggest that LOCATION is equally involved in PERSON. Specifically, I propose that PERSON is not just defined by the participants of the conversation, but rather that these participants are defined by where within the conversation context they are situated, i.e. their respective LOCATION. In a standard, face-to-face conversation context, the speaker's and the addressee's location are crucially different from each other and their respective location further defines them within the utterance context. As opposed to the traditional atomic view of the deictic space (1a), mine thus looks as depicted in (1b).

(1) a. Traditional atomic view



b. Non-atomic view



Most importantly, I argue that this dependency on other coordinates of the speech act is reflected in the morphosyntactic structure of the pronouns. I will show that we can uncover the underlying primitives by careful case studies of individual languages.

As it turns out, the basic idea that indexical pronouns have a spatial component that is crucially responsible for distinguishing between first and second person is not entirely new. In one of his talks at the Prussian Academy of Sciences in Berlin, Wilhelm von Humboldt (1830) speculates about the origin of personal pronouns, in particular first and second person pronouns. His basic idea was that personal pronouns evolved from spatial expressions; this, he says, is the one domain that allows us to express basic oppositions such as they exist between 'I' and 'you', that can be applied to all individuals, and even allows us to group them together and oppose them to a third entity. From a broader perspective, Humboldt ventures in the realm of the old tradition of *Localism*: a school of thought that dates back to the Byzantine grammarians and was repeatedly picked up later, most notably at the beginning of the 19th century in Germany (Fortis 2011). Localism pursues the idea that "spatial expressions are more basic, grammatically and semantically, than various kinds of non-spatial expressions." (Lyons 1977:718) This line of thinking has been explicitly explored

in the domain of case and taken up by linguists in the second half of the 20th century (Gruber 1965; Anderson 1971; Talmy 1971)[26], although according to Fortis (2011) these do not necessarily refer to the Localists of the previous century. I do not wish to make any claims about whether or not LOCATION is a more basic notion in general, but explicitly want to restrict myself to its significance for the category PERSON. Wilhelm von Humboldt's (1830) essay points towards a few languages that may give us some interesting clues; I will return to this issue in more detail in chapter V where I specifically address the issue of LOCATION in the internal of first and second person pronouns.

As for the temporal component in pronouns, the idea is less unfamiliar in modern-day linguistics than taking LOCATION as an underlying category. On the one hand, the descriptive literature has regularly reported on languages with tense, aspect or mood markers on nouns, and theoreticians have been taking it up in various studies, e.g. the crosslinguistic study by Nordlinger and Sadler (2004), or the detailed study on Guaraní by Tonhauser (2006). On the other hand, the issue of temporal interpretation of noun phrases has also been approached from a purely theoretical perspective, primarily based on English and German, most notably by Enç (1981) and slightly later by Musan (1995). I will return to the latter in more detail in the discussion of the temporal component in indexical pronouns in chapters II, III and IV, as Musan's view plays a crucial role in the analysis put forward in this thesis.

Finally, I want to add a note on the terminology as applied in this thesis: as outlined above, I propose that the deictic category PERSON is not atomic but dependent on LOCATION and TIME. This is not to deny the existence of "person" as a linguistically relevant category. The main goal is to show that the deictic category is complex and that indexical pronouns, which are the linguistic exponent of this category, reflect this non-atomicity in their morphosyntactic structure. Further, even though there is a long list of phenomena that reflect the dichotomy first/second versus third person, we also cannot deny the existence of the grammatical category *person* consisting of all three persons; for instance, all three respective pronouns appear in the same syntactic slots, or all three persons equally trigger verbal agreement. I will therefore continue using the term "person" as a descriptive term whenever I refer to the respective pronouns or the grammatical category; I will distinguish PERSON from it, which I exclusively employ to refer to the deictic category.

3 Summary and Outlook

In this chapter, I introduced the main topic of this thesis: the deictic category PERSON and the linguistic expressions referring to it, i.e. first and second person pronouns. The core of this chapter was dedicated to the discussion of the relevant background, including issues of indexicality and the distinction between

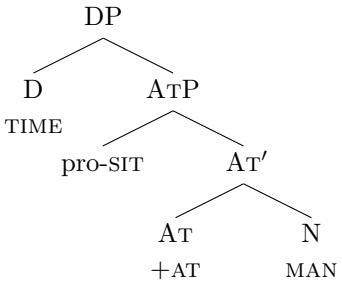
[26] References taken from Fortis (2011).

the grammatical category *person* and the deictic category PERSON. Further, I motivated my recognition of a basic split between first/second person on the one hand and third person on the other hand: whereas the first two are crucially dependent on the immediate utterance context and constantly change their actual referent depending on who is using it, the latter is dependent on the linguistic context and can have a constant referent once it has been assigned. Lastly, I provided a first motivation for the main hypothesis that will be explored in this thesis and that is repeated below:

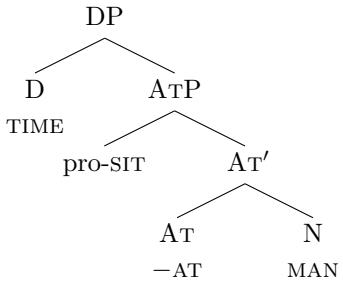
(A) The category PERSON is derivative and dependent on temporal and spatial parameters that are present in the morphosyntactic structure of its linguistic exponents, indexical pronouns.

The respective morphosyntactic structure is proposed to look as in (3).

(3) a. First Person Pronoun



b. Second Person Pronoun



This structure will serve as a guide through this thesis, starting with a first detailed discussion of the proposed analysis in chapter II by introducing the individual ingredients step by step. It thereby addresses the first research question as stated in (I) and repeated here:

(I) What does the internal structure of linguistic expressions denoting PERSON, i.e. indexical pronouns, look like?

In a nutshell, I propose that indexical pronouns of all languages include a temporal and a spatial component: I claim that the temporal component is the source of crosslinguistic variation. Its actual value is determined syntactically and can either stem from UTTERANCE TIME or EVENTUALITY TIME; languages differ parametically in whether they relate their indexical pronouns to one or the other. Further, I propose that indexical pronouns are also syntactically related to the UTTERANCE LOCATION via a pronominal situation variable (pro-SIT), ultimately resulting in the difference between first and second person.

Throughout the thesis I will then provide empirical evidence for the individual components of the indexical structure, starting with the pronominal D layer addressed in chapters III and IV. Both chapters directly relate to the research question stated in (II):

II. Is there a universal structure of indexical pronouns that can account for crosslinguistic variation with respect to their morphosyntax, syntax and semantics, and if so, what does it look like?

I argue that crosslinguistic variation is associated with the D-layer of indexical pronouns, which is proposed to contain a TIME-feature. This feature's specific value is proposed to parametrically differ from language to language, thus giving rise to variation as shown in chapters III and IV.

Chapter III presents evidence for the idea that some languages encode EVENTUALITY TIME in their pronominal structure. The data come from Blackfoot (Algonquian) and concern its two sets of person proclitics. These appear as long and short forms, which can be shown to be morphologically related to each other. Both can encode arguments on verbs as well as possessors on nominals, as exemplified in (15).

(15) a. nítsspiyi
nit-ihpiyi
1-dance
'I danced.'

b. Nikááihpiyi
n-ikaa-ihpiyi
1-PERF-*dance*
'I have danced.'

c. kitááattsistaama
kit-aaattsistaama
2-rabbit
'your rabbit'

d. kiksíssta
k-iksíssta
2-mother
'your mother'

[Bliss and Gruber 2011b]

It will be shown that the distribution of the long and short forms corresponds to the type of relation that holds between the individual denoted by the proclitic and the respective eventuality. In cases in which this relation is temporally restricted the proclitic is argued to contain a D-layer that encodes EVENTUALITY TIME, whereas in cases, in which this relation is temporally unrestricted, no such layer is present. For instance, the long form proclitics appear as possessors on nouns in all cases of alienable, i.e. temporally restricted, possession; the short forms, on the other hand, appear as possessors in inalienable, i.e. temporally unrestricted, possession. Additionally, I will present data from the verbal domain, specifically concerning the choice of proclitic with respect to past tense (long forms) and perfect (short forms) morphology as well as some preliminary evidence from the domain of modality.

Next, chapter IV presents a set of languages that are argued to encode UTTERANCE TIME in the D-layer of their indexical pronouns. These are the Germanic languages English, German, and Dutch. The core data concerns generic uses of second person pronouns, as exemplified in (16):

(16) In the 19th century, you would often encounter famous artists in Viennese cafés.

I argue that only pronouns that lack the D-layer and hence the parameter UTTERANCE TIME can appear in generic contexts, whereas pronouns that contain

a D-layer are necessarily interpreted indexically. Whereas Standard English and Standard German do not exhibit this structural distinction overtly in their pronouns, it will be argued that Dutch pronouns reflect the structural difference morphologically: only the weak pronouns can be used in generic contexts, whereas the strong pronouns will always give rise to an indexical interpretation. Correspondingly, I propose that only the former but not the latter contain a D-layer associated with UTTERANCE TIME.

Chapter V then addresses the third research question:

III. What is the connection between the pronominal structure of indexical pronouns and their indexical nature?

The chapter's focus lies on the spatial component, which I assume to be responsible for anchoring the pronoun to the utterance context and for rendering the distinction between first and second person. I will first discuss the lower part of the structure, i.e. AtP and below, in greater detail, and address the issue of spell-out rules. I will then proceed with some potential morphological evidence for my claims, in particular data from Classical Armenian and Italian.

Finally, in chapter VI I conclude. Besides a concise summary of the main points of this thesis, this last chapter will also offer some avenues for future research.

CHAPTER II

Analysis: a First Outline

Time is what prevents everything from happening at once,
space is what prevents everything from happening to me.
John Wheeler

1 Setting the Stage

As introduced in chapter I, the primary focus of this thesis lies on the deictic category PERSON and the linguistic expressions associated with it: indexical pronouns, i.e. pronouns referring to the speaker and hearer of an utterance. In this chapter, I will address the main research question stated in (I) in the preceding chapter and repeated here:

(I) What does the internal structure of linguistic expressions denoting PERSON, i.e. indexical pronouns, look like?

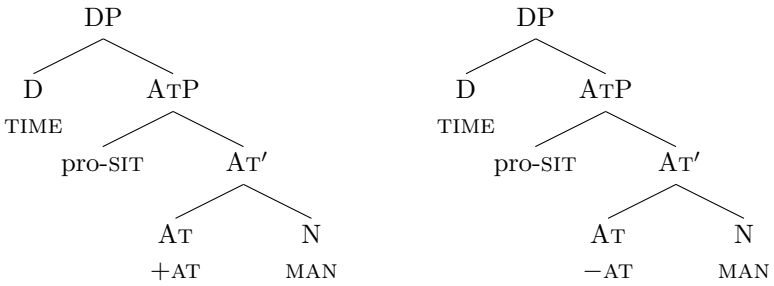
I will present a first outline of the main claims argued for throughout this dissertation proceeding as follows: First, I introduce my analysis of the internal structure of indexical pronouns and discuss insights from the literature it draws on. Then I proceed with the discussion of the individual subcomponents. After the discussion of the internal structure, I summarize my view of the clausal syntax and outline its interaction with indexical pronouns. The main focus of this chapter lies on the introduction of the core ingredients of my analysis. The subsequent chapters of this thesis will then discuss each part in greater detail, provide empirical evidence for each component of the internal syntax,

demonstrate the interaction with the external syntax, and show how the interpretation of indexical pronouns is affected by the specific type of information encoded in their structure.

2 The Internal Structure of Indexical Pronouns

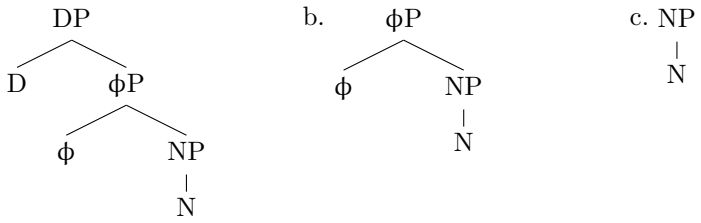
The maximal indexical structure I argue for in this thesis looks as already introduced in chapter I and repeated in (1).

(1) a. First Person Pronoun b. Second Person Pronoun



The overall analysis follows the basic insights of Déchaine and Wiltschko (2002). The general idea of their proposal is that pronouns cannot only map onto a whole DP structure but also to subparts of the pronominal tree.[1] They suggest that pronouns come in three different guises: DP, ϕP, or NP, as schematized in (2):

(2) a. b. c.



In order to be able to determine which pronominal structure one is dealing with, Déchaine and Wiltschko (2002) introduce a set of syntactic, morphological and semantic diagnostics, which are summarized in table II.1 on the facing page.

[1] This basic idea concurs with Cardinaletti and Starke (1999). But whereas Cardinaletti and Starke draw a strict parallel between the type of pronoun, i.e. clitic, weak, or strong, and the respective structure they map onto, Déchaine and Wiltschko (2002) argue that different structures may cut across different types. Throughout this thesis, I follow Déchaine and Wiltschko (2002), since their set of diagnostics for identifying the individual types best fits the empirical data that I investigated. However, my basic insights can most likely also be accommodated in Cardinaletti and Starke's (1999) system. See also a similar note in Déchaine and Wiltschko (2002:438).

	Pro-DP	*Pro-ϕP*	*Pro-NP*
Internal syntax	D-syntax, morphologically complex	neither D nor N syntax	N-syntax
Distribution	argument	argument or predicate	predicate
Semantics	definite	–	constant
Binding-theoretic status	R-expression	variable	–

Table II.1: Pronoun type diagnostics (Déchaine and Wiltschko 2002:410)

Comparing the structures in (2) with the indexical structures proposed in (1), two issues need to be addressed. First, I am not adopting Déchaine and Wiltschko's (2002) ϕP as the relevant intervening functional projection between NP and DP. While I maintain that their basic insights and diagnostics, as given in table II.1, are essentially correct, I argue that indexical pronouns contain a functional projection AtP specifically dedicated and limited to indexical pronouns and replacing ϕP. As such, pro-AtPs conform to the same distributional, semantic, and binding-theoretic criteria as pro-ϕPs; however, in my analysis the specific content of the projection is not tied to ϕ-features as proposed by Déchaine and Wiltschko (2002). Therefore, I suggest that indexical pronouns contain the dedicated functional projection AtP which hosts the spatial component specific to indexical pronouns. The details of this projection will be introduced further on in this chapter and discussed in greater detail in chapter V.

Second, throughout this thesis we will only be dealing with pro-DPs and pro-AtPs[2] as the indexical pronouns of the languages that will be discussed all correspond to these structures. In other words, we will not encounter any pro-NPs in the sense of Déchaine and Wiltschko (2002). However, given that we are primarily dealing with indexical pronouns this is expected under both Déchaine and Wiltschko's (2002) and my account, even without looking at any further details yet: First of all, indexical pronouns identifying the speaker and hearer of an utterance, respectively, are expected to be able to function as syntactic arguments and possibly also as syntactic predicates.[3] Second, given that the distinction between first and second person is associated with the AtP-layer, this minimally has to be present as long as the overt morphological forms also distinguish two forms. From this it follows that an indexical pronoun must minimally be a pro-AtP, and can maximally be a pro-DP. But in addition to these

[2]Given that for most of the thesis I will only be talking about pronouns, I will mainly refer to them simply as DPs and AtPs.

[3]This is not to say that there may not be languages that have dedicated indexical forms that can only appear in predicate position, i.e. NPs in Déchaine and Wiltschko's (2002) sense; however, under my account I predict that these pronouns have identical first and second person forms, as the distinguishing layer, i.e. AtP, would then be missing. So far, I have not come across a language that exhibits indexical pronouns meeting this description.

arguments, we will see further empirical support for this analysis throughout the thesis. For now, I will limit the discussion to the introduction of the individual components of the structures in (3) starting at the bottom and working my way up the individual nodes. The remainder of the thesis will then address the individual components in a top to bottom fashion.

2.1 The Nominal Component: MAN

(3) N
|
MAN

The nominal component at the base of the structure, as illustrated in (3), is the silent noun MAN. It stands for an entity specified as [+sentient].[4] *Sentience* refers to consciousness, or the ability to think, reflect, feel, or being "capable of internal experience" (Speas and Tenny 2003:328). Speas and Tenny explicitly describe first and second person as sentient: "[They] refer to the unique sentient individuals that are the participants in the discourse." (Ibid.:330)

The silent noun MAN is similar to Elbourne's (2005) silent noun ONE, which he defines as follows:

> [L]et ONE be a phonologically null noun with interpretation $[\lambda x : x \in D_e . x \in D_e]$, which can appear in the argument slot for a[n] [...] NP provided by a pronoun. [Elbourne 2005:124]

In other words, Elbourne's (2005) ONE denotes an individual of type $<e,t>$. Correspondingly, I propose that the silent noun MAN that occupies the nominal component of an indexical pronoun has the interpretation in (4):

(4) $[\lambda x : \mathit{sentient}(x) . x \in D_e]$

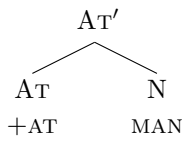
This function maps sentient individuals to the truth value 1 (true) whenever the input is a sentient individual, since only entities of type e can be sentient; otherwise, the function is undefined. In that case the utterance containing the indexical pronoun cannot be interpreted due to presupposition failure, in the sense of Heim and Kratzer (1998:81f.).

I discuss the silent nominal further in chapter V, section 2.2. In the next step, the nominal component combines with an AT-head, which will be discussed in the following section.

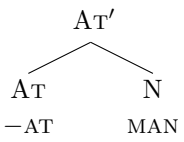
[4] MAN is a purely terminological choice and bears no connection to the Germanic impersonal 'man'.

2.2 The Spatial Component I: Relational Head ±AT

(5) a.



b.



Loosely put, the basic idea is that the AT-head establishes whether or not MAN is *at* the location that will be encoded in the specifier of ATP.[5] Formally, I propose that the head of the ATP-projection is a relational predicate that fulfills an anchoring function in the sense of Ritter and Wiltschko (2009). Specifically, I suggest that AT is an abstract spatial preposition constituting a spatial anchor. Essentially, *anchoring* refers to a relation to either the utterance context or some preceding linguistic context, which then constitutes the parameter in whose context the utterance is to be interpreted (cf. Enç 1987). Technically, *anchoring* is defined as a relation between the content of the specifier and the content of the complement, which is established and defined by the content of the intervening relational head (Ritter and Wiltschko 2009).[6] In the case at hand, we are dealing with a spatial relational predicate, the abstract preposition ±AT, that relates a sentient being to a certain location; and rather than setting the parameters in whose respect the entire sentence is to be interpreted – as it is the case in the previously mentioned references –, it sets the parameters in whose respect the indexical pronoun is to be understood.

The underlying concept that I am adopting, following Demirdache and Uribe-Etxebarria (2000) and Ritter and Wiltschko (2009, To appear), goes back to Hale (1986) who suggested that universally languages make use of the "semantic theme coincidence".[7]

> Briefly, the theme can be articulated in informal prose as follows: it is the definition of spatial, temporal and identity relations in terms of 'central' versus 'non-central' (or 'terminal') coincidence.
>
> [Hale 1986:238]

Hale illustrates this concept on the basis of the Austronesian language Warlpiri. He argues that in this language coincidence overtly manifests itself in specific morphemes across different grammatical domains such as case, complementizers, tense, and aspect. To illustrate both central and non-central coincidence, I

[5] See chapter V, section 2.3 for a discussion of this specific choice of terminology.

[6] The idea of a relational head is by no means new: it has already been explored extensively in the temporal literature (cf. among many others Zagona 1990; Stowell 1993, 2007; Demirdache and Uribe-Etxebarria 1997, 2000), which I will turn to in section 2.4; and den Dikken (2006) employs it in his analysis of small clauses and refers to it as a "relator".

[7] Demirdache and Uribe-Etxebarria (2000, 2007) and recently Ritter and Wiltschko (2009, To appear), explicitly link a relational head located in the inflectional phrase IP (as well as the aspectual phrase AspP) to Hale's (1986) coincidence-theme.

will take one example each from Hale's discussion. First, the locative case ending, which indicates coincidence of a "figure" with a "ground" (Hale 1986:239).[8] This is shown in (6):

(6) Yapa ka karri-mi pirli-**ngka**
person PRES *stand*-NONPAST *stone*-LOC
'The person is standing on the stone (or hill).'
[Hale 1986:239; glosses and highlighting adapted by BG]

In this example, 'the person' corresponds to the *figure* and 'the stone' to the *ground*. Given the meaning of the locative suffix, the former centrally coincides spatially with the latter, hence the translation into English with the preposition 'on'. However, in different contexts the English equivalent might also be 'in', or 'at', both of which indicate that a figure coincides with a certain ground. The next example (7) illustrates non-central coincidence.

(7) Nyampu-ngurlu ngurra-**ngurlu** parnka-ja jakuru-pi-nja-wangu.
this-EL *place*-EL *run*-PAST *leave.taking-do*-INF-PRIV
'He (just) cleared out from this place without taking his leave.'
[Hale 1986:240; glosses and highlighting adapted by BG]

In this example, the elative marker '-ngurlu' is analyzed as encoding non-central coincidence, i.e. the figure does not spatially coincide with the ground. Crucially, the spatial relation is still defined via a given ground. This also accounts for the use of the term *non-central* as opposed to simply *non-coincidence*: the figure still stands in a relevant relationship to the ground. In the case at hand, non-central coincidence translates into 'out from', but depending on the context, English translations could also be 'out of, off of' (Hale 1986:240).

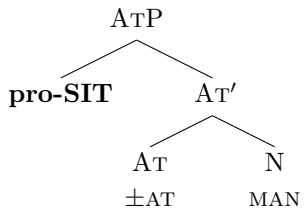
This spatial manifestation of the coincidence-theme is also what I propose to be relevant in indexical pronouns: the sentient individual (MAN, see preceding section 2.1) centrally coinciding with a location (UTTERANCE LOCATION, see following section 2.3) results in a speaker-interpretation (first person pronoun), non-central coincidence leads to an addressee-interpretation (second person pronoun). I assume that the indexical pronoun is lexically endowed with this information, i.e. 'I' has an +AT head-feature, whereas 'you' has a −AT head-feature.[9] Essentially, ±AT is a relational head whose specific function is expressed by means of an abstract preposition. I will return to these ideas in greater detail in chapter V, section 2.3, and now turn to the next component in the pronominal structure, the content of the specifier of ATP.

[8] The terms "figure" and "ground" go back to the Gestalt-tradition of psychology; for their use in linguistics see for instance Talmy (1975); Jackendoff (1983).

[9] The question of the content of third person pronouns will be taken up in section 4.

2.3 The Spatial Component II: Situation Variable

(8)



So far we have established two components of the indexical structure: the nominal component MAN, denoting a sentient individual; and the relational head ±AT, which establishes a spatial relationship between its complement MAN and its specifier. I propose that this specifier contains a *pronominal situation variable* (pro-SIT) in the sense of Ritter and Wiltschko (To appear). In the absence of a proper antecedent, this pronominal variable gets interpreted deictically, i.e. it refers to the utterance context. This will always be the case in all matrix clauses, since the variable is pronominal in nature and hence needs to be free in its domain (cf. Chomsky 1981).[10] Following Ritter and Wiltschko (To appear), I propose that the relational head in whose specifier the variable is located determines the situational parameter with respect to which the variable gets interpreted: Since situations are taken to minimally consist of a spatial, a temporal, and a participant-related dimension, all three are in principle available as a referent for the variable; in order to determine which parameter is relevant, the nature of the head that is responsible for establishing the relation to the situational context is crucial.[11] In the case of indexical pronouns, pro-SIT will therefore be interpreted as a location, since the indexical's head is proposed to be the abstract spatial preposition ±AT. Due to the absence of a proper syntactic antecedent for pro-SIT, the variable will be interpreted as UTTERANCE LOCATION.

Here a note on the specific terminology is in order: It is a well-known fact that natural languages contain various lexical items whose interpretation depends on the spatial coordinates of the utterance context. Examples include locative adverbs such as 'here' and 'there' or 'right' and 'left', demonstratives such as 'this' and 'that', or directional adpositions that indicate movement towards the location of the utterance. The terminology that is usually applied

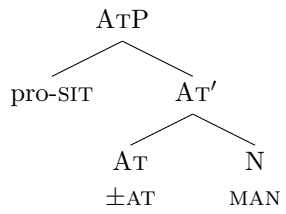
[10]The discussion in this dissertation focusses on matrix clauses. However, see chapter VI, section 2.1 for some speculations on indexical pronouns in embedded clauses which might have a suitable antecedent that could give rise to non-deictic interpretations.

[11]Ritter and Wiltschko (To appear) discuss this variable in the context of a much broader framework that is concerned with the issue of how languages relate utterances to the context. They argue that languages differ in which situational parameter is relevant, i.e. whether the relation is temporal, spatial, or participant-based. Whereas in the analysis put forward here, the nature of the head is already lexically determined (AT), their system essentially relies on the specific (morphological) content that gets associated with the relational head. Their entire analysis goes well beyond the scope of this thesis, however, I will briefly return to it in this chapter in section 3.1 and again in chapter III, section 3.2.2.

with respect to such elements generally uses the term *speaker* rather than simply *utterance location*. However, since all these elements are about spatial locations, we can raise the following question: What is really meant by 'speaker' in the context of spatial expressions? It seems obvious that what is actually relevant is not the speaker himself but his location in space. The location indicated by the adverb 'here' is not merely the speaker himself detached from the spatial dimension but crucially the specific location. Recall that the deictic space is traditionally defined by LOCATION, TIME and PERSON, i.e. the participants, suggesting that they can also act as elements independent of each other. However, I suggest that PERSON is in fact dependent on LOCATION: such an account straightforwardly allows us to bring the key factor in spatial deictic expression into play, namely LOCATION; in the view presented throughout the thesis, LOCATION but crucially not PERSON is an atomic category of deictic space, since the latter depends on said spatial parameters. Consequently, I propose to also adapt the terminology accordingly and refer to UTTERANCE LOCATION instead of speaker's location. Naturally, UTTERANCE LOCATION will also be the location of the speaker, but this is merely a logical consequence of the fact that we are dealing with the utterance context.[12]

Given the individual nodes of the indexical structure discussed so far, we arrive at the following interpretation of the structure in (8): a sentient being AT or not AT the location of the utterance. Consequently, this representation, repeated below, is also the minimal structure of an indexical pronoun.[13]

(8)



Under this view, a first person pronoun is defined by central coincidence (+AT) with UTTERANCE LOCATION, whereas a second person pronoun is defined by

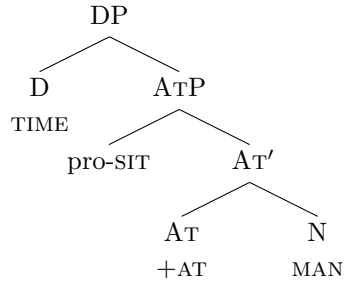
[12] Also note at this point that no one contests the use of UTTERANCE TIME although temporally it also coincides with the speaker uttering a sentence.

[13] As already briefly introduced earlier, the relation expressed by prepositions is often referred to as a relation between a "figure" and a "ground" where the location of the former is defined with respect to the latter. Typically, we find structures in which the figure is located in the specifier whereas the ground is located in the complement. Svenonius (2007) even argues that this is the universal configuration for all adpositional phrases. In the pronominal structure put forward here the configuration is, however, reverse: the ground is located in the specifier whereas the figure is located in the complement. For one, there is a crucial interpretational difference between regular spatial prepositional phrases and indexical pronouns: the semantic output of the former always results in a location, whereas the latter gives us a sentient individual. This is the primary reason why I propose to locate the nominal MAN in the lowest head of the pronominal structure. Additionally, there is evidence that even in regular PPs the ground need not always appear in the complement, as in "The room slowly filled with smoke." (Talmy 2000) See also the related discussion in Zwarts (2010).

non-central coincidence (−AT) with UTTERANCE LOCATION. This approach gives rise to the question of how a third person pronoun is defined, an issue I will return to in section 4. Next, I conclude the discussion of indexical pronouns with the final component, the DP-layer.

2.4 The Temporal Component: TIME in D

(9)



The final component of the indexical structure is TIME, which I analyze as located in the head of the DP. Building on proposals by Musan (1995) and Gillon (2006), I argue that this temporal component picks out a specific temporal stage of the individual denoted in the AtP. Figuratively speaking, it allows us to zoom in on an individual at a specific moment in time and only consider that part of the individual for the interpretation of the utterance.

The first crucial assumption concerns the basic function of D. In this, I follow Gillon (2006): she argues on the basis of data from the Salish language Sḵwx̱wú7mesh (Squamish), which has an elaborate system of determiners, that D is universally associated with *domain restriction*. To briefly illustrate domain restriction in general, consider the sentence in (10):

(10) The girls are exceptionally smart.

Even though this sentence does not contain any explicit restriction on the girls that are being talked about, it is still not about every single girl in the whole world. Rather, it is about a contextually salient set of people, for instance, all my nieces. Essentially, this is due to domain restriction as extensively discussed in e.g. Barwise and Cooper (1981); Westerståhl (1984); von Fintel (1994); Martí (2003); Etxeberria Otaegi (2005). In short, domain restriction ensures that only the contextually relevant set is interpreted. Based on her detailed discussion of the determiner system of Sḵwx̱wú7mesh, Gillon (2006) argues that universally the semantic function of domain restriction is strictly tied to a specific syntactic position: "Domain restriction is only introduced by D-determiners." (Gillon 2006:3). In particular, she proposes that

> D-determiners always introduce domain restriction over their NP, regardless of what other properties they may have. Their function is to constrain the set introduced by the NP to a set of contextually salient individuals. [Gillon 2006:53]

The universal semantic core of D is thus to restrict the interpretation to the contextually relevant set of entities. Other functions that are often discussed in connection with determiners, such as familiarity (e.g. Heim 1982) or uniqueness (e.g. Kadmon 1992), are taken to arise for independent reasons and not because they are a property of D. For instance, Gillon (2006:59ff.) argues that English familiarity effects are due to the combination of domain restriction and the language-specific assertion of uniqueness of determiners.

If we now accept both the universal association of D with domain restriction and the idea that pronouns can be full DPs, this immediately raises the question how domain restriction could possibly apply to personal pronouns, in particular to indexicals: there does not seem to be a domain that needs restricting as their actual referents are directly context-dependent and there is no need to pick them out from a potentially larger set of individuals. I propose that what allows us to maintain Gillon's (2006) basic analysis of D and also apply it to personal pronouns is an ontology that contains both *individuals* and *stages of individuals*[14], as proposed by Carlson (1980) and applied to the interpretation of noun phrases by Musan (1995).[15] In what follows, I will briefly illustrate the difference between the two basic types of entities:

Musan (1995) discusses the temporal interpretation of noun phrases and how they interact with the temporal interpretation of the main predicate of a clause. As an illustration, first witness the sentence in (11):

(11) The college student invented a time travel machine. [Musan 1999:621]

Under one reading, someone who is a college student invented a time travel machine while being a college student. However, under a different reading someone who is a college student *now* may have invented a time travel machine before going to college. There seems to be some sort of temporal component involved that limits the interpretation of the noun phrase 'the college student'. Assuming that the interpretation can also be limited to specific stages of individuals, we get the desired effect of a particular temporal slice that is being discussed: either the stage of being a college student overlaps with the invention of the time machine or it is an entirely different temporal slice. In contrast, consider the example in (12):

(12) Gregory was from America. [Musan 1995:18]

This sentence is clearly not considering a specific period or stage of Gregory, as Gregory will not just have been from America at one point in his life but not at another. Rather, the noun phrase is interpreted as covering his entire time of existence, i.e., the individual in his entire temporal extendedness.[16]

[14]This topic pertains to the long-standing discussion of temporal stages of individuals in philosophy; an excellent related overview is given by Hawley (2010).

[15]Both Carlson (1980) and Musan (1995) consider *kinds* to be a third type of entity in their ontology. However, this is irrelevant for the issue at hand and hence set aside.

[16]The distinction between stage-level and individual-level predicates interacts with the interpretations that are available in a given context in several different ways. For the related details, the interested reader is referred to Musan (1995).

These two sentences merely serve to illustrate the phenomenon. By no means do they cover the whole range of examples and intricate effects that are connected to the issue of temporal interpretations of noun phrases as discussed in Musan (1995). The main point for the discussion at hand is the following: Assuming that both *individuals* and *stages of individuals* are part of the set of available entities, Musan argues that

> determiner quantification is not quantification over individuals in their whole temporal extendedness but quantification over STAGES OF INDIVIDUALS. [Musan 1995:94]

But whereas Musan suggests a purely semantic analysis to account for how the relevant restriction is achieved, I propose that syntax is crucially involved in the process. Applying her basic insight to indexical pronouns allows us to also take stages of speaker and hearer into consideration. Combining this with Gillon (2006) as well as with my proposal that indexical D encodes TIME consequently leads to the following result: the stage of the individual denoted in AtP that D picks out gets determined by the temporal specification located in D.

We now need to take one final step in order to be able to know which temporal stage gets picked out: we need to determine how and from where TIME in pronominal D gets its specification. I propose that the specification is provided by the syntax. But before turning to the technical details, I will take a moment to reflect on the differences between the spatial and the temporal component of an indexical pronoun: The functions of the two with respect to the interpretation of the pronoun differ fundamentally. Whereas the spatial component establishes the relation to the extralinguistic context and thereby anchors the pronoun to the utterance, the function of the temporal component is domain restriction over stages of individuals. Importantly, and as discussed in more detail below as well as throughout this thesis, the temporal component may but need not refer to the utterance context, i.e. it is not necessarily deictic. The spatial component, on the other hand, exclusively links the pronoun to the utterance context, i.e. it is proposed to be responsible for the indexical nature of an indexical pronoun. Its function is essentially relational, a fact that is reflected in its syntactic implementation, as introduced earlier in section 2.2: the link between the pronoun and the discourse is established by means of a specific type of head that has been argued for independently in the literature (cf. e.g. den Dikken 2006; Demirdache and Uribe-Etxebarria 2007; Ritter and Wiltschko 2009) and that is proposed to fulfill precisely the function of establishing a relationship. The function of the temporal component, on the other hand, is entirely different: it does not establish a relation between two entities but it selects one type of entity (a stage) on the basis of another (an individual). Technically it does this by introducing domain restriction over stages of individuals. Consequently, its syntactic implementation differs from that of the spatial component: I propose that D is associated with an interpretable but unvalued TIME-feature in the sense of Pesetsky and Torrego (2004a); as

discussed in more detail subsequently, the specific value that this feature gets during the course of the derivation ultimately determines the temporal stage of the individual that is relevant in each case. Additionally, the analysis of TIME as a D-head will be supported by empirical evidence from Blackfoot in detail in chapter III. To sum up, the differences between the spatial and the temporal component within indexical pronouns is that D functions as a restrictor whereas AT functions as a relator.[17]

Having established the differences between the spatial and the temporal component, I now turn to the technical aspect of TIME in D. As already mentioned above, I analyze it as an interpretable but unvalued feature in the sense of Pesetsky and Torrego (2004a). *Unvalued* refers to the fact that the lexical entry of the pronoun has a predefined slot for TIME but no predefined content: since the actual TIME differs from utterance to utterance, the specific value of the feature can only be known once the pronoun is used, i.e. enters syntactic derivation. It is thus akin to, e.g. a gender feature on an adjective as argued in Pesetsky and Torrego (2004a): an adjective that bears a gender feature typically agrees with the gender feature of the noun it modifies, as in the Latin example in (13):

(13) Haec puella Romana ambulat.
this-NOM.FEM.SG *girl*-NOM.FEM.SG *Roman*-NOM.FEM.SG *walk*-3.SG
'This Roman girl is walking.' [Pesetsky and Torrego 2004a:1]

Here, the adjective 'Roman' agrees in gender (and number) with the noun 'girl'. Crucially, the actual gender value of the adjective can only be assigned once the noun-adjective combination has taken place, i.e. in the syntax. Prior to this combination the adjective cannot bear a concrete gender feature: the lexical entry of the adjective is taken to be specified for requiring gender, but not for any specific gender. The gender only gets defined once the adjective is used and combined with a noun phrase. Put in the terminology of Pesetsky and Torrego (2004a), its lexical entry contains an unvalued gender feature, whose value gets assigned syntactically.

As already discussed in section 2.3.1, the dichotomy of interpretable versus uninterpretable features refers to whether a specific feature has any impact on the semantics (cf. Chomsky 1995):[18] interpretable features are relevant for

[17] I use these terms loosely as mnemonic aids. Particularly the term 'relator' is not to be understood in its narrow sense as introduced by den Dikken (2006) who restricts it to small clauses. However, as already pointed out earlier, den Dikken's (2006) relator also serves to establish a relation and is hence another example of a relational head from the literature.

[18] For Chomsky (2000, 2001) the notions of (un)interpretable and (un)valued features are crucially intertwined: if a feature is uninterpretable, it is also unvalued; once it has been valued, it gets deleted since uninterpretable features have no impact beyond core syntax, i.e. they do not influence the semantics. This holds, for instance, for person features on verbs: the verb must agree with the subject, but a person feature has no impact on the interpretation of the verb itself. Following Pesetsky and Torrego (2004a), I depart from Chomsky's definitions and adopt a feature system that assigns independent functions to interpretability and valuation.

semantic computation, e.g. number on a noun, whereas uninterpretable features are argued to have no influence on the semantics, e.g. number on a verb. Since in the analysis of indexical pronouns put forward here, TIME makes a crucial contribution to the interpretation of the indexical, it is necessarily interpretable and thus available for semantic computation.[19]

Given these ingredients, only TIMEs that are encoded syntactically are suitable candidates for providing the necessary value. Following assumptions from research on temporal interpretation of clauses, which I will introduce in more detail in section 3 on the external syntax, I minimally take UTTERANCE TIME and EVENTUALITY TIME to be encoded syntactically (cf., e.g. Enç 1987; Zagona 1990; Stowell 1993, 1995, 2007; Demirdache and Uribe-Etxebarria 1997, 2000, 2007). Consequently, these two TIMEs are potential candidates for defining the specifications of TIME in the indexical's D-position.[20]

In this thesis, I argue that this is the origin of crosslinguistic variation in indexical pronouns: a language uniformly draws on either EVENTUALITY TIME (associated with VP) or UTTERANCE TIME (associated with TP) to restrict the interpretation of an indexical.[21] This is expected to lead to interpretational differences as indicated in (14):

(14) a. Languages that restrict their pronouns by means of EVENTUALITY TIME will show effects reflecting the temporal relation between the individual denoted by the pronoun and the **eventuality**.

b. Languages that restrict their pronouns by means of UTTERANCE TIME will show effects reflecting the temporal relation between the individual denoted by the pronoun and the **utterance**.

These two points form the basis of one chapter each: In chapter III, it will be argued on the basis of the distribution of two forms of personal proclitics that Blackfoot (Algonquian) employs EVENTUALITY TIME. In chapter IV, it will be argued on basis of data involving second person pronouns in generic contexts that English, German, and Dutch (Indo-European) use UTTERANCE TIME to restrict their indexical pronouns.

2.5 Pronominal Spell-Out

One last question that should be addressed with respect to the structure of indexicals outlined so far concerns their spell-out. Following Weerman and Evers-Vermeul (2002); Neeleman and Szendröi (2007); Barbiers et al. (2009), I assume

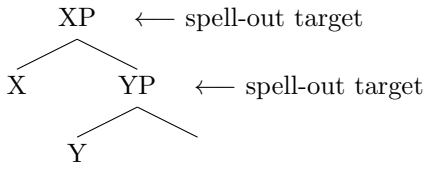
[19] In that sense, the relational feature ±AT is both interpretable and valued.

[20] In a series of papers, Demirdache and Uribe-Etxebarria propose that the aspectual projection between TP and VP hosts a third TIME, namely the assertion time in the sense of Klein (1995). So far, I have not come across a language that restricts its indexical pronouns by assertion time. However, if the authors are correct in their analysis, I expect such a language to exist. What exactly such a language would look like remains an open issue that is left for future research.

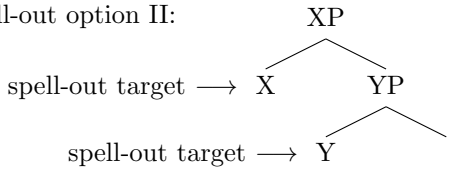
[21] For the time being, I will simply assume that the choice is a matter of parametric variation. In chapter IV, I will briefly return to this issue and offer some further thoughts.

that spell-out has two different options: it either targets the phrasal level or it targets the terminals. Crucially, the two are mutually exclusive, i.e. if the spell-out of a pronoun corresponds to a larger piece of structure, no terminals can be spelt-out; conversely, if the spell-out contains the spell-out of a terminal, no phrasal projections can be spelt-out. This is schematized in (15).

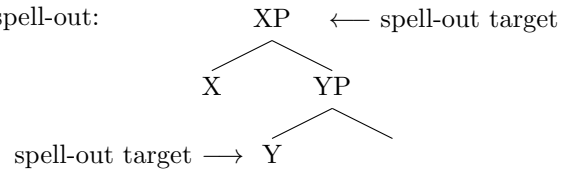
(15) a. Spell-out option I:



b. Spell-out option II:



c. Illicit spell-out:



This leads us to expect pronouns that morphologically mark the respective terminals, as well as pronouns that are morphologically opaque. Throughout the thesis there will be examples of both types: for instance, German, English, and Dutch (chapter IV) are claimed to correspond to option I, i.e. they spell out whole phrases, whereas Blackfoot (chapter III) is argued to correspond to option II, i.e. it spells out the individual terminals.[22]

For now, this concludes the discussion of the analysis of indexical pronouns argued for in this thesis. The following chapters will each have a subpart of the structure at their respective cores and specifically aim at providing empirical evidence for the claims. Next, before turning to the issue of third person, I will summarize my view of the clausal spine, which has so far been scattered across the individual subsections.

3 The External Structure of the Clause

So far in this chapter, different assumptions about the specific content of the clausal spine have been introduced gradually as required by the individual ingredients of the indexical structure. In order to give a concise picture of my view of the external syntax, I will now summarize the core issues regarding

[22] See also chapter V, section 3 for further discussion.

the external syntax in (16), present a complete clausal spine and add some additional information regarding the clausal structure and its interaction with the internal structure of indexical pronouns. Regarding the external syntax of matrix clauses, I am assuming the points summarized in (16).

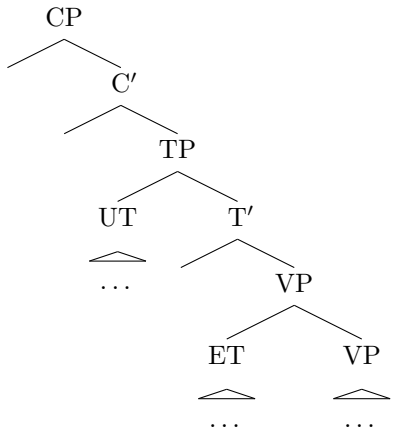
(16) a. EVENTUALITY TIME is encoded in Spec-VP. Throughout, I will depict it as ET.

b. UTTERANCE TIME is encoded in Spec-TP. Throughout, I will depict it as UT.

c. In order to allow for XP-movement into TP, I assume the existence of multiple specifiers. However, for ease of exposition I will mostly abstract away from this assumption.

The clausal spine that I will assume throughout this thesis is schematized in (17).

(17)



3.1 TIMEs as Referential Arguments

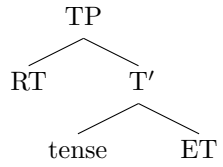
With respect to the syntactic encoding of UTTERANCE TIME and EVENTUALITY TIME in the clause, I follow several researchers in assuming that they are represented as referential expressions (e.g. Enç 1987; Zagona 1990; Stowell 1995; Demirdache and Uribe-Etxebarria 2000).[23] Specifically for the purposes of this thesis, I adopt Stowell (1995, 2007): he proposes that TIMEs are encoded as fully-fledged Zeit Phrases (ZPs) and that their syntactic behaviour is entirely parallel to regular DP-arguments in the clause. I adopt this particular implementation since it is the most explicit proposal with respect to the encoding of

[23]The idea that temporal interpretations can be expressed as relations between TIMEs goes back to Jespersen (1924). Its most influential version was proposed by Reichenbach (1947) who argued that tenses can be stated as relations between three different TIMEs: event time, speech time, and reference time. Stowell (1995, 2007), and many others (Klein 1994; Demirdache and Uribe-Etxebarria 2000), depart from this view and analyze tense as a dyadic ordering predicate.

times and it straightforwardly combines with the notion of coincidence as outlined earlier.[24] In what follows, I will introduce his proposal in greater detail. Throughout this thesis, I will abstract away from some of these details for ease of exposition, all of which I will point out subsequently.

Essentially building on Zagona (1990), Stowell derives the temporal interpretation of clauses from syntactic principles by analyzing TIMEs as referential arguments introduced by a tense-head. The tense-head is a dyadic predicate that takes two time-denoting arguments: These two TIMEs are "reference time" (RT) and "event time" (ET), where the first "refers to a time relative to which the Event Time [...] is ordered." Stowell (1995:280)[25] They represent the external and internal argument, respectively, as schematized in (18).

(18)



The temporal interpretation of a clause is then derived from how these two TIMEs relate to each other; this relation is essentially defined by the content of the T-head: for instance, present tense expresses that RT is simultaneous with ET, or, contained by ET, as illustrated in (19).

(19) Kim lives in Paris. [Stowell 2007:439]

In this case, RT is identical to UTTERANCE TIME, an issue I will return to shortly, and the present tense expresses that the event, namley Kim's living in Paris, takes place at the same time as the uttering of the sentence. Notice at this point the important difference between *time* and *tense*: *tense* refers to the morphological marker as well as to the semantic relation it expresses; *time* simply refers to one specific interval. Hence, present tense does not simply equal UTTERANCE TIME; rather, it indicates that UTTERANCE TIME and EVENTUALITY TIME coincide. The analysis of indexical pronouns put forward in this

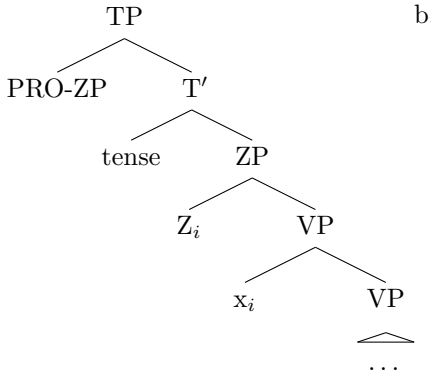
[24] This is essentially the approach taken by Demirdache and Uribe-Etxebarria (2000, 2007) which is also based on Stowell's basic insights but addresses a different angle of temporal interpretations, namely the interaction with aspect. Since this does not bear on the topic of this thesis, I limit the discussion to the original proposal by Stowell. Another proposal in the same spirit but with a different focus is that of Ritter and Wiltschko (2009, To appear), which I also appeal to at various points in this thesis. The main reason for not entirely adopting their system is the following: while I attribute crosslinguistic variation in indexical pronouns to the interaction with different TIMEs, Ritter and Wiltschko are concerned with alternatives to TIME. Therefore, for the purposes of my proposal, I adopt a system that solely relies on TIMEs as is the case with Stowell (1995, 2007).

[25] Note that Stowell's use of RT is thus also distinct from Reichenbach's (1947) who implements it alongside speech time and event time. Further, even though Stowell uses the term "event time" he assumes that both events and states have a temporal event argument (pace Kratzer 1995). This is also the line pursued in this work.

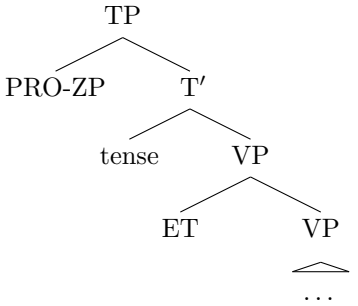
thesis does not depend on clausal tense but on TIMEs; the latter only refers to either UTTERANCE TIME or EVENTUALITY TIME.

Stowell analyzes reference time and event time as ZPs proposing that they present a category parallel to DPs. Consequently, they are R-expressions and expected to select a complement: where D selects an NP as a complement, Stowell suggests that Z selects a VP as a complement. And again parallel to DPs, in some cases ZPs are expected to appear as pro-forms. In his proposal, Stowell argues that RT is one such example: it is encoded as a PRO-ZP and subject to control theory. Further, Stowell (2007) suggests that the head of ZP is an operator that binds a temporal argument variable (x) in the VP in the sense of Kratzer (1995). The revised version of (18) then looks as in (20a); for ease of exposition, I will depict it as in (20b) throughout.

(20) a.



b.



The next question then is what controls the PRO-ZP in Spec-TP. As for embedded clauses, this is fairly straightforward: it is known that embedded tenses are interpreted relative to the matrix event rather than relative to the utterance event.[26] Compare the matrix clause in (21a) to the embedded clause in (21b).

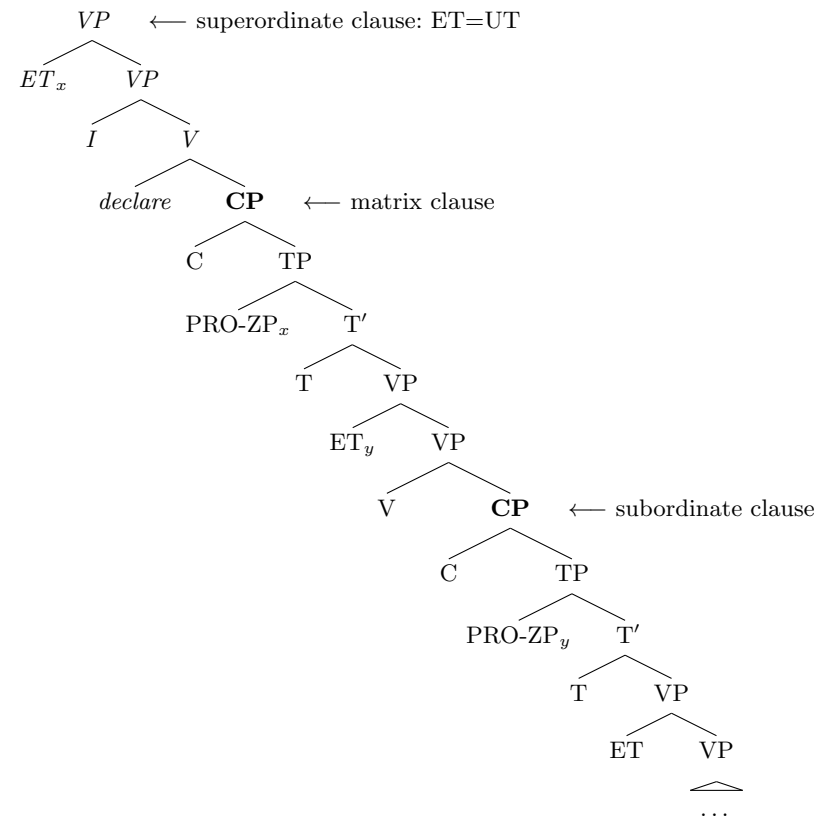
(21) a. Kim lived in Paris.
b. Max said that Sam left.

[Stowell 2007:439,444]

In (21a), the time of utterance takes place after Kim living in Paris (past). In (21b), however, the situation is different: the matrix event of saying is again ordered with respect to the time of utterance, in this case the utterance time is again after the event of Max saying something, but the embedded event of Sam leaving is not simply ordered with respect to the utterance time of the whole clause; rather, it is located with respect to the matrix predicate, namely the time of Max's saying: Max's saying takes place after Sam's leaving

[26]The details of the interpretation of embedded tenses is by far more complex than suggested here (cf., e.g. Enç 1987; Zagona 1990; Stowell 2007; Giorgi and Pianesi 1997; Giorgi 2010); since these details do not immediately bear on the present discussion and would lead too far afield from the current topic, they are set aside.

(22)



(cf. Stowell 2007:444). This can be naturally accounted for in the system of temporal arguments outlined above: the embedded RT, i.e. PRO-ZP, is syntactically controlled by the time of the matrix predicate, i.e. ET of the VP. This is the closest c-commanding TIME-argument that can function as a controller, as shown in the tree structure in (22). How then does the matrix PRO-ZP receive its interpretation as being identical to UTTERANCE TIME? Stowell (1995, 2007) draws on a proposal by Ross (1970): he argued that every declarative contains a silent superordinate clause, e.g. 'I declare . . . ', that encodes the event of speaking. Accordingly, Stowell (2007) suggests that the matrix PRO-ZP is controlled by a silent superordinate ET that references the time of utterance as the event time and is part of a simple VP whose silent arguments are interpreted deictically (Stowell 2007:447). Abstracting away from all the details, the structure of a matrix clause with a subordinate clause underlyingly thus looks as schematized in (22) on the current page, with all the relevant control-relations indicated by indices.

The sentence in (21b) (Max said that Sam left) is now naturally accounted for: The main clause verb 'said' is ordered with respect to the PRO-ZP in the main clause TP that is controlled by the event time in the silent performative.

Therefore it equals the UTTERANCE TIME of the entire clause. Since the head of TP contains a past tense ('said') the resulting ordering locates UTTERANCE TIME after the event of Max's saying. As for the embedded PRO-ZP, it gets bound by the matrix event time (Max's saying): since the embedded tense is also past ('left'), it orders the event of saying (matrix) after the event of leaving (embedded).

One issue that this structure immediately brings to mind concerns the status of the subject: it is standardly assumed that subjects move to Spec-TP during the course of syntactic derivation. Stowell (2007:442) suggest two different possible solutions: either allowing for multiple specifiers, or assuming that the subject bypasses Spec-TP altogether, which is what Stowell (2007) adopts for his paper. Primarily for expository reasons only, I adopt Stowell's (2007) approach; clausal spines depicted throughout therefore contain only one Spec-TP position that hosts UTTERANCE TIME.[27]

For the purposes of this thesis, I depart in two ways from Stowell's analysis: First, I do not assume the existence of a silent superordinate performative clause in the sense of Ross (1970). From this follows the second difference, namely that I do not appeal to control theory. Instead, I assume that the temporal argument in Spec-TP is in fact a pronominal situation variable (pro-SIT) in the sense of Ritter and Wiltschko (To appear), which was already introduced as also being part of the indexical pronominal structure. In their system, they locate the variable in the same syntactic position[28] and describe it as follows:

> As a pronoun, it can be interpreted either deictically, i.e. with reference to the extra-linguistic context, or anaphorically, in which case it is dependent on another situation argument. The particular interpretation depends on the syntactic context. In root clauses, where no suitable antecedent is available the pronominal situation argument is interpreted deictically and hence the temporal interpretation is anchored to the utterance. In contrast, in embedded clauses, the pronominal situation argument is anaphoric on the closest c-commanding situation argument, which is the event argument associated with the embedding predicate. Consequently, the embedded event is ordered relative to the matrix event argument.
>
> [Ritter and Wiltschko To appear]

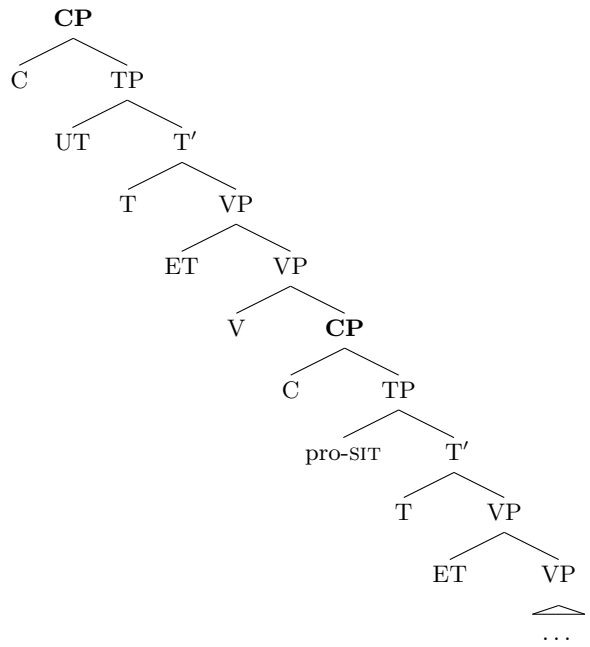
Recall that the interpretation of pro-SIT is proposed to depend on the specific content of the head in whose specifier it appears. Therefore, if the head

[27] There is one exception to this point, namely chapter III, which is concerned with Blackfoot (Algonquian). Since this language is argued to restrict its pronouns by EVENTUALITY TIME, UTTERANCE TIME is not a relevant factor for the topic at issue in this chapter; therefore, Spec-TP is depicted as the landing site of the subject. Again, this is a purely illustrative choice which is not to imply that I take UTTERANCE TIME not to be encoded in Spec-TP.

[28] However, they do not refer to the projection as TP but as INFL; this follows from their idea that languages can differ with respect to the specific category that they encode in this projection. For reasons already mentioned earlier in footnote 24, I do not fully adopt their system in this thesis.

is temporal in nature, pro-SIT will be interpreted as a time. Consequently, if it appears in Spec-TP of a matrix clause, its referent is UTTERANCE TIME. This is still similar in spirit to Stowell's proposal since it allows for the embedded TIME-argument to be dependent on the matrix event, but also circumvents the problems raised by positing a covert superordinate clause.[29] The interpretation of a sentence like (21b) will then be exactly the same as described earlier on page 42, the only difference being that the reference to the silent performative is no longer needed.

(23)



As already mentioned, I am abstracting away from several details of Stowell's analysis for clarity of exposition: First, I will depict UTTERANCE TIME as located in TP in matrix clauses.[30] Also, as already pointed out, I will depict EVENTUALITY TIME in the specifier of the highest VP-projection throughout this thesis.[31] The modified structure then looks as given in (23) on this page.

[29]Some of the arguments that have been raised against Ross (1970) concern the claim that these silent performatives contain a specific speech-act predicate depending on the content of the utterance (e.g. ask, say, tell, order) and the fact that sentences with overt speech-act predicates are also claimed to contain a silent performative. For a summary of arguments against Ross (1970) see chapter 5 in Newmeyer (1986).

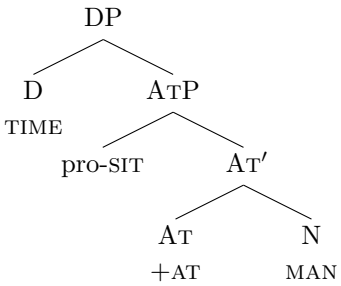
[30]I will primarily be dealing with matrix clauses. The issue of embedded clauses will be further addressed in chapter VI, section 2.1.

[31]This mode of depicting UTTERANCE TIME and EVENTUALITY TIME is not uncommon. See for instance Demirdache and Uribe-Etxebarria (2000, 2007) for the same practice.

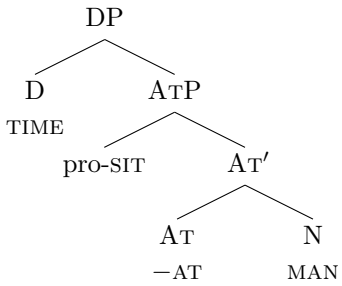
3.2 Putting the Pieces Together

Up until now I have introduced the basic ingredients of the internal structure of indexical pronouns, repeated below, as well as the basic ingredients of the external clausal structure. What remains to be discussed is how the two are proposed to interact with each other.

(3) a. First Person Pronoun



b. Second Person Pronoun



As already pointed out earlier, the functions of the spatial and the temporal component within the pronoun are crucially different: whereas the spatial component anchors the pronoun to the utterance context, the temporal component restricts the interpretation of the pronoun. Therefore, their implementation also differs.

Starting with the spatial component, recall that the pro-SIT in the specifier of AtP is always interpreted with respect to UTTERANCE LOCATION. As for the TIME in D, I argued earlier that it is an interpretable but unvalued TIME-feature. This feature depends on a syntactic valuation process for full specification. Following Wurmbrand (2012a,b), I assume that valuation takes place under Reverse Agree: under this analysis, the probe is syntactically lower than the goal, i.e. probing takes place upwards rather than downwards as standardly assumed within the Minimalist Program (cf. Chomsky 2000). It is thus defined as in (24).[32]

(24) A feature F:__ on α is valued by a feature F:val on β, iff
   i. β asymmetrically c-commands α AND
   ii. There is no γ, γ distinct from β, with a valued interpretable feature F such that γ commands α and is c-commanded by β.

As can be seen from the structure in (17), both UTTERANCE TIME and EVENTUALITY TIME asymmetrically c-command a subject pronoun in its base-position Spec-VP. Recall at this point that I propose that whether the indexical requires UTTERANCE TIME or EVENTUALITY TIME to value the TIME-feature in D is subject to parametric variation. The relevant TIME can therefore value the unvalued

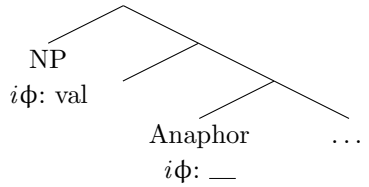
[32]Other proposals in a similar spirit are for instance Adger (2003); Baker (2008); Aelbrecht (2009); Hicks (2009); Haegeman and Lohndal (2010); Zeijlstra (2010). But see van Koppen (2011) for arguments against upward agreement.

TIME-feature in the pronoun under Reverse Agree since in a given language there is no intervening category carrying another relevant TIME-feature that could potentially provide the desired value.[33] Once the subject pronoun is valued, it then moves further up in the structure to its final position. Importantly, the same configuration holds for object pronouns which get base-generated in the complement of V.[34] Wurmbrand (2012a) also explicitly assumes that a valued feature can value more than one unvalued feature: again, configurations such as (25), in which two indexical pronouns appear and which both have an unvalued TIME-feature, therefore do not pose a challenge for this account.[35]

(25) I love you.

Note that the syntactic configuration of an indexical pronoun with an unvalued feature and the referential temporal expression ZP with a valued feature is very much alike to what Wurmbrand suggests for anaphor binding as illustrated in (26).

(26) [Wurmbrand 2012a:15]



Here there are also two XPs that both carry interpretable features, but only in the higher one is this feature also valued and it can thus provide the necessary value for the lower one.

Up until now, I have introduced the core of this thesis, namely the analysis of indexical pronouns as involving spatial and temporal parameters. In chapter I, I started out with the main hypothesis in (A):

(A) The category PERSON is derivative and dependent on temporal and spatial parameters that are present in the morphosyntactic structure of its linguistic exponents, indexical pronouns.

[33] This is a simplification of the matter since I assume, following Stowell (2007) and Ritter and Wiltschko (2009), that the argument in Spec-TP is not actually fully referential by itself. This issue will be taken up in chapter IV, which discusses indexical pronouns that are proposed to be restricted by UTTERANCE TIME.

[34] This entails that the time slice of a subject and an object pronoun will always be the same in cases in which both have a D-layer. In languages in which indexical pronouns are restricted by UTTERANCE TIME this is expected since all indexical pronouns are argued to be temporally anchored to the utterance context; this also applies to sentences in which a separate temporal argument provides additional information, such as 'I loved you 10 years ago'. I will not discuss these cases here. As for languages that restrict their pronouns by EVENTUALITY TIME matters are more intricate. Some of the related issues will be discussed in chapter III.

[35] For the purposes of this thesis, I abstract away from phase theory. The object pronoun is thus free to enter a syntactic relation with an element outside vP.

Having outlined the main ingredients of the analysis, it became obvious that only the spatial component needs to be present in order to derive the distinction between first and second person pronouns. The temporal component, on the other hand, adds an extra layer of information that need not necessarily be present. The above stated main claim can therefore be refined as follows:

(A′) The category PERSON is derivative and dependent on spatial and *in certain cases* also temporal parameters that are present in the morphosyntactic structure of its linguistic exponents, indexical pronouns.

Providing empirical support for this view will be the primary focus of the remainder of this thesis. However, before concluding this chapter I will address the issue of third person pronouns in the next section.

4 A Note on Third Person and Related Issues

Even though this thesis is explicitly concerned with first and second person pronouns, the question of how the third person fits into this picture cannot be entirely ignored. Here, I therefore present some preliminary thoughts on this issue. In the discussion up to now, the essential differences between first and second person on the one hand, and third person on the other hand, have been pointed out and used as arguments in favour of a different structural analysis of the two categories. To briefly recapitulate the essential differences, consider the list in (2):

(2)
i. Third person pronouns do not refer to a speech act participant.
ii. Third person pronouns need to be introduced: they either require a discourse antecedent or an ostensive act.
iii. Third person referents depend on the linguistic context, not on the utterance context. Thus they are anaphoric, not indexical.
iv. Once introduced, the referent of a third person pronoun can remain constant, independently of which interlocutor is using it.
v. Third person pronouns can refer to both sentient and non-sentient individuals.

These characteristics led to the exclusion of third person from the unified proposal for first and second person pronouns. Furthermore, it has been argued that those two are the only real cases of the category PERSON; in the terminology employed here, PERSON is the category that depends on spatial, and in certain cases also temporal coordinates. Consequently, the so-called "third person" is not actually an instantiation of this category as it does not depend on the utterance context and is hence not taken to consist of deictic components.[36]

[36]Third person pronouns of some languages have additional deictic features that put them in specific spatial relations to the utterance context, e.g. Malayalam (Dravidian) distinguishes

However, the lack of these specifications does not necessarily imply that the morphosyntactic structure needs to be different. I therefore assume that the internal structure is still subject to the tripartite system proposed by Déchaine and Wiltschko (2002); however, the content of the structure is different and crucially, does not rely on spatial anchoring to the utterance context. Before I offer some speculations on what a third person pronoun could look like, I will summarize my point of view regarding the individual nodes that I discussed in my analysis of indexical pronouns: First, the nominal complement of a third person pronoun will not contain the silent nominal MAN, most importantly because third person pronouns are not confined to sentient individuals.[37] Next, given that the pronoun does not need to be anchored to the utterance context, there is no relational head inducing a spatial relation. Consequently, LOCATION is also not an inherent part of the pronoun's content. I therefore propose that third person pronouns lack the functional projection AtP altogether; instead, I assume for the purposes of this thesis that they contain a ϕP as originally proposed by Déchaine and Wiltschko (2002).[38] As for TIME in D, there are two different scenarios: recall that I claim D to be the locus of crosslinguistic variation; it can either correspond to UTTERANCE TIME or to EVENTUALITY TIME. As for the first, I do not assume UTTERANCE TIME to play any role in the interpretation of third person pronouns; as already discussed extensively, third person individuals are not part of the utterance context and hence I hypothesize that they also cannot be restricted by an utterance parameter.[39] As for EVENTUALITY TIME, the situation is slightly different: whereas a third person individual is, per definition, not part of the utterance context and hence cannot be restricted by UTTERANCE TIME, it is just as likely to be part of an eventuality as a first and second person individual. I therefore expect that EVENTUALITY TIME may in fact be the content of D in such a language. As we will see in chapter III in the discussion of Blackfoot (Algonquian), empirical facts confirm this claim.

The idea that the content of first and second versus third person is different is also by no means novel: Harley and Ritter (2002), for instance, propose a feature hierarchy that derives first and second person by means of a "participant"-feature, and third person via the lack thereof. It appears that

between third person proximal and distal referents (Jayaseelan 1999). I take these to be additional specifications that get added on top of the basic underlying pronominal meaning, rather than them defining the basic interpretation of the pronominal structure as I argue they do in indexical pronouns.

[37]It is very well conceivable that there are languages that have dedicated third person pronouns that only refer to sentient individuals. In such a case, MAN could then also form part of their internal structure.

[38]As discussed earlier, I do not take third person pronouns to contain a person feature at all. From this point of view, ϕP in third person pronouns therefore still does not contain the category *person*.

[39]This still leaves open the question of the specific content of third person D (and also non-pronominal D) in languages that restrict their indexical pronouns by means of UTTERANCE TIME. Since this dissertation's primary focus is on indexical pronouns, I will leave this issue open for future research.

such an approach is easily compatible with the analysis put forward here: third person may structurally look the same as first and second person pronouns, but simply lack the content of the indexical pronouns.

One proposal that fits with the analysis put forward here is assuming that third person pronouns are hidden definite descriptions as argued for by Elbourne (2005).[40] In the spirit of Postal (1966) and based on Heim and Kratzer's (1998) analysis of pronouns, he argues for a unified syntactico-semantic analysis of pronouns, proper names, and definite descriptions. Under his view, the structure of a pronoun like 'she' is identical to the structure of a DP like 'the girl'. Anaphoric uses of third person pronouns then have a silent NP-complement that contains the noun phrase they are referring to. Underlyingly, 'she' then corresponds to [[she] girl] with 'girl' being subject to NP-deletion.[41] This is immediately compatible with my proposal that the nominal component of an indexical pronoun is occupied by a silent noun MAN, specified +sentient. In fact, as already discussed in section 2.1, this silent noun is modelled after Elbourne's (2005) silent noun ONE, which simply denotes individuals.

What remains to be worked out is the following: just like Postal (1966), Elbourne (2005) explicitly assumes all pronouns to be DPs, i.e. 'she' corresponds to 'the' and hence sits in D. However, as I subscribe to the analysis of pronouns by Déchaine and Wiltschko (2002), I assume that pronouns can also come as ϕPs (and NPs), i.e. they can lack the D-layer entirely. But whether all third person pronouns are DPs (contra Déchaine and Wiltschko 2002) or whether ϕPs can also contain a nominal, which is subject to deletion, is an empirical question that is left open for future research. Also, Elbourne's account is almost entirely based on English, with the exception of some Japanese data, and it needs to be seen whether his analysis can withstand crosslinguistic scrutiny. For instance, as will become evident in chapter III, Blackfoot person proclitics immediately pose a problem for the view that all third person pronouns are DPs, as it will be shown that some are clearly ϕPs. Whether or not this can still be reconciled with a hidden definite description approach remains to be investigated.

Finally, there is one more question that begs addressing: How can we exclude that a second person pronoun, which is defined as a sentient individual not being located at UTTERANCE LOCATION, refers to some other sentient third person? There are at least two straightforward solutions to this question. First, the denotation of the silent nominal MAN could be slightly changed to restrict its reference to speech act participants only. While this would not have any impact on the analysis of all strictly indexical interpretations of first and second

[40] The book is based on his dissertation, Elbourne (2002). See also Evans (1977, 1980); Cooper (1979) and the discussion of these proposals in Elbourne (2005).

[41] For ease of exposition, I also abstracted away from the fact that Elbourne (2005) argues that all DPs take two arguments: the NP argument, as discussed, and a lexical index modelled after Heim and Kratzer's (1998) numerical subscript index. The full structures thus look as follows: [[the i] NP] and [[she i] NP]. The lexical index is a variable that gets mapped onto an individual via a variable assignment function; the mappings are created by the context and a specific Predicate Abstraction Rule (Elbourne 2005:94ff.).

person pronouns, it would prevent us from deriving a significant benefit of this approach: a straightforward explanation for generic uses of second person pronouns. Recall that second person pronouns can also be used to refer to people in general rather than to just the addressee. While this issue and its details will form the core of chapter IV, the phenomenon was already illustrated in chapter I with the following sentence:

(27) In the twenties, you had to wear a hat.

If we assume that the second person pronoun contains the information that it refers to a sentient individual that is not located at the utterance location, it already leaves open the option to refer to other sentient individuals when used in a corresponding context. Further, since I claim that the part of the pronominal structure responsible for this interpretation, i.e. AtP, is identical across languages, this also provides a straightforward explanation for the fact that second person pronouns in generic contexts are crosslinguistically fairly common. However, if we restrict it to a speech act participant, this correlation will be lost altogether. A second option should thus keep the content of the indexical pronoun as suggested so far but still ensure that in all its indexical uses the second person pronoun still only refers to a speech act participant. A possibility would be to employ a mechanism similar to sentence-level existential closure (Kamp 1981; Heim 1982): it is conceivable that as a last resort mechanism any sentence is subject to discourse closure; like existential closure is taken to unselectively bind any remaining open variables in a sentence, discourse closure might do a similar job with indexical pronouns. But instead of binding a variable by an existential quantifier, it binds it to the current utterance context. The indexical pronominal structure would then have to contain a variable in the AtP layer that is susceptible to discourse closure. But under certain circumstances, this variable could be bound by, e.g. a generic operator that is applied before discourse closure; then the variable would not be open anymore and discourse closure would not apply to it.[42]

Postulating a variable at the level of AtP is desirable in any case. Recall that I propose that pro-AtPs are the indexical equivalent of Déchaine and Wiltschko's (2002) pro-ϕPs. Crucially, they claim that mere pro-ϕPs are essentially variables. However, they do not address the issue of what binds this variable in cases in which ϕPs do not behave as actual variables; this must for instance be the case in Shuswap (Salish), which they introduce as a language whose independent pronouns are all ϕPs. They present several cases supporting such an analysis, one of which concerns the fact that they can appear together with a determiner as illustrated in (28):

(28) [Wíwkten] [re ntsétswe7.]
see DET 1.SG
'I saw him.' [Déchaine and Wiltschko 2002:415]

[42] I owe this idea to Alexis Dimitriadis.

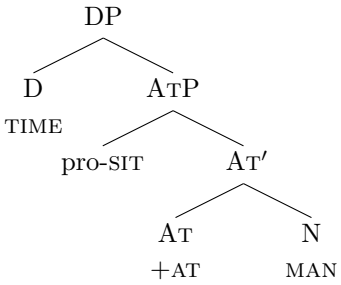
As already pointed out, it remains open where exactly the variable is located within the pronoun and how it gets bound cases like (28) in which the pronoun clearly refers to the speaker.

I content myself with the conclusion that there are ways to ensure the correct interpretation of second person pronouns, the precise semantics of which remain open for future research; further, I hope to have shown that there are ways to analyze third person pronouns that are compatible with the theory outlined in this thesis while still reflecting the crucial difference to first and second person pronouns. With this, I will conclude this section on third person pronouns, and return to the core issue of this thesis.

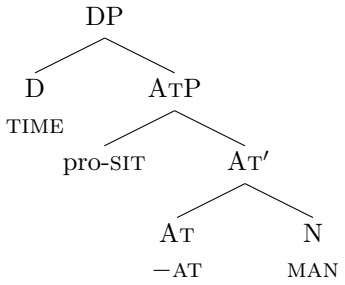
5 Summary

In this chapter, I outlined my analysis of indexical pronouns, introducing the individual ingredients step by step. To sum up the main point, I argue that the deictic category PERSON is dependent on spatial and in some cases also temporal coordinates. I hypothesize that this complexity is reflected in the morphosyntactic structure of indexical pronouns. Specifically, I propose that indexical pronouns of all languages are syntactically anchored to the UTTERANCE LOCATION by means of a pronominal situation variable. Further, the specification for the TIME-feature in D is provided by the syntax: it can either stem from UTTERANCE TIME or EVENTUALITY TIME, and languages differ in whether they relate their indexical pronouns to one or the other. Hence, the temporal component is the source of crosslinguistic variation in indexical pronouns. The respective structures look as depicted in (3) and repeated here:

(3) a. First Person Pronoun



b. Second Person Pronoun



Throughout the thesis, I will provide empirical evidence for the individual components of the indexical structure, starting with the temporal component in the next chapter. Specifically, I will discuss data from Blackfoot (Algonquian) and propose that the person proclitics of this languages reference EVENTUALITY TIME.

CHAPTER III

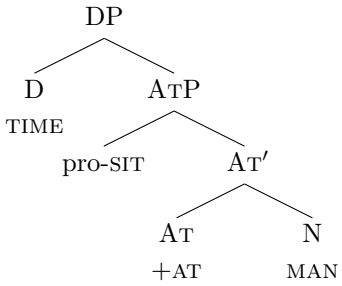
Restriction by EVENTUALITY TIME: Blackfoot[1]

Die Zeit verwandelt uns nicht.
Sie entfaltet uns nur.
Tagebuch 1946-1949, Max Frisch

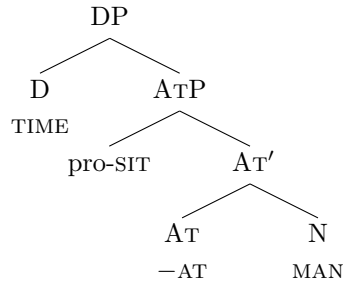
1 Setting the Stage

This chapter's focus lies on the person proclitics of the Algonquian language Blackfoot. The approach is guided by my analysis of pronouns according to which PERSON is a complex deictic category dependent on spatial and temporal coordinates. Crucially, I claim that this dependency is reflected in the morphosyntactic structure of indexical pronouns, as in (1).

(1) a. First Person Pronoun



b. Second Person Pronoun



[1]This chapter would not have been possible without Heather Bliss who generously shared her fieldwork data and expertise with me.

As introduced in the previous chapter, I assume that the spatial coordinates are uniform across languages in that they are responsible for anchoring the pronoun to the extralinguistic context. The temporal component, on the other hand, is proposed to be the locus of crosslinguistic variation and constitutes the centre of this chapter. It therefore addresses the second research question stated in chapter I:

II. Is there a universal structure of indexical pronouns that can account for crosslinguistic variation with respect to their morphosyntax, syntax and semantics, and if so, what does it look like?

I argue that TIME is encoded in D as an interpretable but unvalued feature in the sense of Pesetsky and Torrego (2004a) which is subject to syntactic valuation. Following Wurmbrand (2012a,b), I propose that this valuation takes place under Reverse Agree as will be detailed later on in this chapter. It naturally follows from these assumptions that the relevant value needs to be provided by the syntax. As detailed in chapter II, section 3.1, I propose that there are two possible sources for this value: UTTERANCE TIME and EVENTUALITY TIME. UTTERANCE TIME is taken to be associated with TP whereas EVENTUALITY TIME is taken to be associated with VP. The main focus of this chapter lies on restriction by EVENTUALITY TIME and its primary goal is as given in (2):[2]

(2) Provide empirical evidence that indexical pronouns of Blackfoot (Algonquian) employ EVENTUALITY TIME as their temporal restrictor.

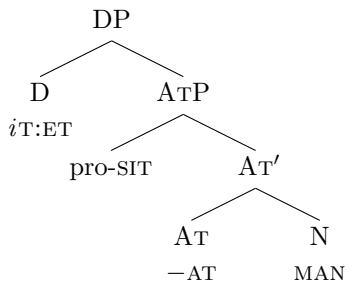
I propose that the function of the temporal component in D is to restrict the interpretation of the pronoun to a specific temporal stage of the individual denoted by it. As introduced in detail in chapter II, section 2.4, I assume an ontology that not only consists of individuals but also contains stages of individuals in the sense of Carlson (1980); Musan (1995). I combine this view with Gillon's (2006) claim that universally the core semantic function of D is domain restriction. This results in the following function of D in indexical pronouns: D restricts the interpretation of the pronoun to a specific temporal stage of the individual that is denoted in AtP. I propose that the specific temporal stage that is picked out is defined by TIME that is encoded in the pronoun's D-head. Specifically, in this chapter I argue that the temporal stage that is picked out in Blackfoot is restricted to the stage associated with EVENTUALITY TIME. Adopting Déchaine and Wiltschko's (2002) pronominal structures, I assume that pronouns do not always consist of an entire DP-structure, but that the DP-layer can be missing. This implies that certain pronouns only map onto an AtP-structure and hence do not contain a D-head that restricts the interpretation to a specific temporal stage.[3] Combining this with the idea

[2]The issue of restriction by UTTERANCE TIME is the focus of chapter IV, which discusses the Germanic languages English, German, and Dutch.

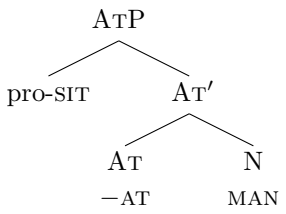
[3]I am abstracting away from a third pronominal type argued for in Déchaine and Wiltschko (2002), i.e. an NP, since this third type is irrelevant for the present discussion. See the corresponding discussion of this issue in chapter II, section 2.

that crosslinguistically AtP in indexical pronouns is associated with a spatial component, as introduced in chapter II and discussed in greater detail in chapter V, leads to the two structural options shown in (3), exemplified for second person pronouns:[4]

(3) a.



b.



This analysis predicts that we find interpretational differences between pronouns that map onto DPs and those that map onto AtPs. Only DPs should show effects in which the interpretation of the pronoun is limited to that stage of the individual that is or was involved in the eventuality under discussion, as illustrated in figure III.1.

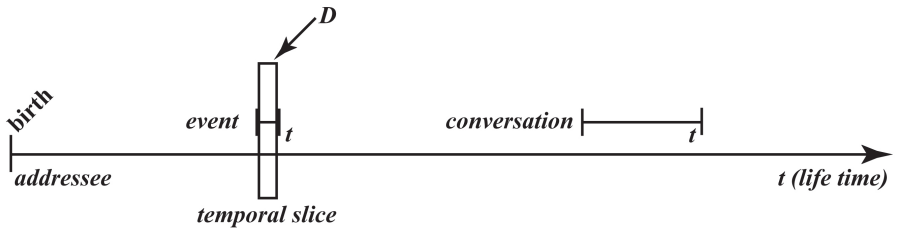


Figure III.1: Domain restriction by EVENTUALITY TIME

I will evaluate this claim against the empirical domain of a specific set of personal expressions in Blackfoot (Algonquian). Blackfoot has two different forms of person proclitics, i.e. dependent person markers that require a host to their right that they can attach to. Both forms are exemplified in (4)[5]:

(4) a. nítsspiyi
nit-ihpiyi
1-dance
'I danced.'

b. Nikááihpiyi
n-ikaa-ihpiyi
1-PERF-*dance*
'I have danced.'
[Bliss and Gruber 2011b]

[4]For expository reasons, I mostly depict the temporal feature in D as interpretable (*i*T) and valued (ET). However, the actual value will only be filled in during the course of the syntactic derivation as discussed in greater detail in section 3.2.

[5]In (4a), the 's' following the proclitic results from a phonological t-affrication rule in Blackfoot (Frantz 2009:26). It does not belong to any of the morphemes and is consequently not part of the morpheme breakdown.

In (4a) the first person proclitic 'nit-' attaches to the intransitive verbal stem 'dance' resulting in the referent of the proclitic being interpreted as the agent of the event; in (4b) we see the proclitic appearing as 'n-' attaching to a perfect marker which itself is attached to the verbal stem 'dance' and again the proclitic is interpreted as the agent of the event. Besides the verbal domain, the proclitics also appear in the nominal domain, expressing the possessor as illustrated in (5):

(5) a. kitááattsistaama
kit-aaattsistaama
2-rabbit
'your rabbit'

b. kiksísta
k-iksísta
2-mother
'your mother'
[Bliss and Gruber 2011b]

In these two examples the second person proclitic attaches to the nominal stem as either 'k-' or 'kit-', both times denoting the addressee as the possessor of the noun.

Across all three persons, the Blackfoot person proclitics appear in two different shapes independent of which syntactic argument they encode.[6] The two forms, which I will refer to as long and short forms throughout, are given in the table III.1.[7]

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*ot-*

Table III.1: Blackfoot proclitics I

Based on Bliss and Gruber (2011b), I argue that the long and short forms are morphologically related throughout all three persons and that underlyingly they map onto a DP and an AtP (first and second person) and a ϕP (third person), respectively.[8] Combining this with the analysis of indexical pronouns argued for throughout this thesis results in the structures shown in (6), exemplified for first person:[9]

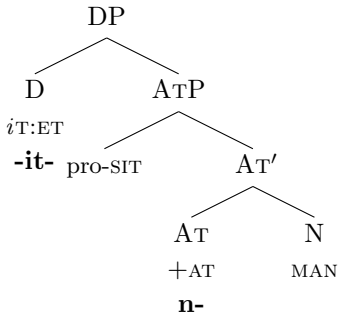
[6] I will return to this issue in the detailed discussion of the person proclitics in section 2.

[7] The paradigm will be slightly revised later on in the chapter.

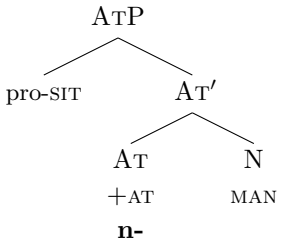
[8] Bliss and Gruber (2011b) claim that all three person proclitics map onto either a DP or a ϕP. I adopt all their main insights, but in light of the theory outlined in this thesis first and second person proclitics are analyzed as containing an AtP rather than a ϕP.

[9] As for the linearized surface string, I hypothesize that it is subject to postsyntactic linearization in the sense of Embick and Noyer (2001). They suggest that string-adjacent items can move post-syntactically if the movement is sensitive "to properties that are supplied at Vocabulary Insertion." (Embick and Noyer 2001:565) I tentatively suggest that '-it-' requires to have a host that encodes event-participation and that this property is lexically encoded.

(6) a. First Person Long Form



b. First Person Long Form



The main purpose of this chapter is to provide evidence for a temporal component within a pronominal structure; the issue of the spatial component will hence be largely left aside. I should note, though, that currently I do not have independent evidence that the morphological content of the short forms in Blackfoot is indeed a spatial marker. This assumption merely follows from the following two claims: first, it has been shown by Bliss and Gruber (2011b) and will be discussed in detail throughout the chapter that the short forms behave like ϕPs; applied to the theory outlined in this thesis, these proclitics thus behave like mere ATPs. Second, combining this with the overall analysis of indexical pronouns put forward in this thesis leads to the conclusion that the first and second person markers 'n-' and 'k-' are the spell-out of the spatial component. Accordingly, the third person marker is taken to not be related to the spatial component but to correspond to the absence of spatial features, as discussed in chapter II, section 4.[10] Throughout this chapter, I will therefore largely abstract away from the detailed internal structure of the ATP .[11]

The two structures in (6) raise the question of what conditions the distribution of these two forms. As has been shown by Bliss and Gruber (2011b) and will be discussed in more detail in this chapter, the distribution follows distinct underlying rules linked to the type of relationship that holds between the referent denoted by the proclitic and the predicate it appears with: whereas the short forms only appear in contexts in which this relation is temporally unrestricted, the long forms appear in cases in which the relation is temporally restricted. Thus the key factor that governs their distribution is the relation between the individual and the eventuality under discussion. In line with the proposal put forward in this thesis, I claim that temporal restriction located in D will be provided by EVENTUALITY TIME. Based on data from both the nominal and the verbal domain, I will demonstrate that the distribution of the long and short form proclitics follows directly from this analysis.

This chapter is organized as follows: I will first provide a general background on Blackfoot and give a brief introduction to the relevant basics of the grammar. Second, I will introduce the core data that illustrate the distribution of the long

[10] I will return to the issue of third person proclitics in greater detail in section 3.1.2.

[11] For details regarding the content of ATP in the present proposal see chapter V, section 2.

and short form proclitics: I argue that they map onto pro-AtPs and pro-DPs, respectively, and I introduce the basic mechanisms of how they interact with the external syntax. Subsequently, I will turn to the nominal and the verbal domain: Starting with the former, I show how the distribution of the long and short forms corresponds to alienable and inalienable possession and thus to the distinction between temporally restricted and unrestricted relations. With respect to the verbal domain, I will discuss the distribution of the two forms with the simple past tense and the perfect: based on the idea that a perfect eventuality is permanently attributed to an individual, I claim that the choice of a short form proclitic in these cases directly follows from the analysis outlined throughout. Accordingly, the simple past tense appears with the long form. I will also present some preliminary evidence from the domain of modality that further supports my analysis. Lastly, I will conclude.

1.1 Some Background on Blackfoot

Blackfoot is an Algonquian language spoken in Southern Alberta, Canada and in some parts of Northwestern Montana, USA. According to Russell and Genee (2006), the population is below 10.000 and decreasing; there are only few monolingual speakers and hence very few, if any, first language learners. In what follows, I offer a brief introduction to some of the characteristics of Blackfoot. The main purpose of this section is to give an impression of the basic workings of the language; it is by no means exhaustive. The interested reader is referred to Uhlenbeck (1938) for the first descriptive grammar, subsequent work by Taylor (1969) and most notably Frantz (1991, 2009) who provided an in-depth study of the grammar; furthermore, there is a steadily increasing body of literature within the framework of modern generative linguistic theory due to a number of researchers in western Canada and Montana. A considerable part of the corresponding references will be mentioned at various points throughout this chapter.

1.1.1 Genealogy

The Algonquian language family spreads from North America's northeast all the way to the west as far as Alberta, Canada. Algonquian constitutes the majority of the Algic languages and is divided into three subgroups: Eastern, Central and Plains Algonquian, where Blackfoot is associated with the latter. Some general characteristics of Algonquian are polysynthetic morphology, animate/inanimate noun classification as well as an elaborate obviation and direct/inverse marking system, all of which will be introduced in more detail later on in the chapter.

Blackfoot itself is divided into four major dialects spoken on four different reserves: Siksiká (also: Blackfoot), Kainaa (also: Blood), Aapátohsipiikani (also: Peigan) and Aamskáápipiikani (also: Blackfeet), of which only the latter reserve is situated in the US.

1.1.2 Characteristics

Blackfoot displays all of the above mentioned general characteristics of Algonquian languages. First of all, its noun stems are divided into two groups: animate and inanimate. This notion of *animacy* is more of a grammatical than a semantic type, much like gender in Indo-European languages (Frantz 2009:9)[12]; specifically, inanimate entities of the actual world may be referred to by a noun belonging to the class of animate stems. Second, nominal arguments are marked as either *proximate* or *obviative*:[13] this marking is generally taken to be associated with discourse prominence, i.e. it is related to a specific information structural status. To clarify this notion somewhat, note that there are various proposals on the market as to how to analyze these morphemes: it has been suggested that they are associated with topic/focus (e.g. Hockett 1966; Wolfart 1978; Goddard 1990; Rhodes 1990), with Point-of-View (e.g. Bloomfield 1962; Dahlstrom 1991; Bliss 2005), or with perspective/intentionality (Muehlbauer 2008). I will abstract away from the specifics of these arguments and for explanatory purposes assume that a noun phrase marked as proximate corresponds to the topic or focus of the sentence. More generally speaking, a proximate marked noun is given higher discourse prominence than an obviative marked noun. Proximacy/obviation marking occurs obligatorily with transitive verbs when there are two or more animate noun phrases (third person) in a sentence; generally speaking, the more prominent and necessarily animate noun is marked as *proximate* and all others – animate or inanimate – are marked as *obviative*. Witness the example in (7) for an illustration:[14]

(7) Ana póókaawa inóyííwa ani imitááyi.
an-**wa** pookaa-**wa** ino-yii-wa an-**yi** imitaa-**yi**
DEM-PROX *child*-PROX *see*-DIR-3SG DEM-OBV *dog*-OBV
'The child saw the dog.' [Bliss 2005:4]

In this example the noun phrase 'the child' is marked with a proximate suffix, thus receiving higher discourse prominence; the argument 'the dog' is marked as obviative, thus being given less emphasis. As opposed to other Algonquian languages, Blackfoot marks both obviation and proximacy with overt morphology, whereas others only mark the former but not the latter morphologically (Bliss 2005:12).

Another characteristic of the language is that it is polysynthetic in that it makes use of elaborate morphology to mark grammatical functions. Especially

[12] But see Louie (2008) and Wiltschko (2009) for alternative approaches.

[13] Sometimes these are also called *third/fourth* person, respectively. And Frantz (2009) dubbed these two roles "major" (proximate) and "minor" (obviative) third person. Regarding the terms *proximate/obviative*, Frantz (1966) refers to Bloomfield (1962), regarding *third/fourth* he refers to Uhlenbeck (1938). Following standard practice of current researchers, I will mainly use the terms proximate/obviative.

[14] Throughout this chapter, glosses only identify currently relevant morphological material for ease of exposition, leaving aside other information that may also be encoded by various morphemes. A complete list of abbreviations can be found on page xxi.

the verb carries a wide range of information, some of which is encoded in the stem itself, other information is expressed by a number of pre- and suffixes as well as pro- and enclitics. I will briefly discuss both the information associated with the verbal stem and the morphology related to the verbal template in turn.

The verbal stem itself consists of a root that carries the core lexical meaning of the verb plus a suffix that encodes grammatical information regarding animacy and transitivity; this suffix is generally referred to as an *abstract final* (cf. Hirose 2003; Bliss 2009; Armoskaite 2011). This basic verbal template is sketched in (8).[15]

(8) $\boxed{\boxed{\text{verbal root}} + \text{abstract finals}}_{stem}$

As already mentioned, the abstract finals encode information about the animacy and transitivity of the verb stem. Given that both these features present a dichotomy – animate vs. inanimate, transitive vs. intransitive –, this results in four logically possible combinations: accordingly, verbal stems are traditionally divided into *Animate Intransitive* (AI), *Inanimate Intransitive* (II), *Transitive Animate* (TA) and *Transitive Inanimate* (TI) (Frantz 2009). All four types are illustrated in turn in (9) for the verbal root *ipakk* (burst):

(9) a. Animate Intransitive (AI)
áaksipákksskaawa
aak-**ipakksskaa**-wa
FUT-*burst*.AI-3SG
'He will burst.'

b. Inanimate Intransitive (II)
áaksipákksiiwa
aak-**ipakksii**-wa
FUT-*burst*.II-3SG
'It will burst.'

c. Transitive Animate (TA)
áaksipakkapíniyiiwa
aak-**ipakkapini**-yii-wa
FUT-*rupture.eyeball*.TA-DIR-3SG
'She will rupture his eyeball.'

d. Transitive Inanimate (TI)
áaksipakksstsima
aak-**ipakksstsi**-m-wa
FUT-*burst*.TI-*3*:INAN-3SG
'She will burst it.'

[15]There is a second type of suffix that is considered part of the verbal stem and that encodes the presence of additional thematic arguments such as causers, benefactors or goals. These suffixes are traditionally referred to as *concrete finals*. They will show up in various examples but I will not discuss them any further here.

[Frantz and Russell 1995; glosses: BG]

As can be seen in these examples, the verbal stem as schematized in (8) does not appear on its own. It is part of a larger verbal template that provides dedicated slots for morphological markers concerning additional information regarding, among other things, tense, aspect, manner, modality, negation, etc. A slightly simplified version of the verbal template is given in (10); (11a) and (11b) serve as two illustrations:

(10) [person] + [prefixes] + [**verb stem**] + [direct/inverse] +
[1st/2nd plural[16]] + [3rd number/proximacy/animacy]

[cf. Frantz 2009]

(11) a. Kitsó'kááttsaayaawa
kit-Io'kaa-áttsi-a:-yaawa
*2-sleep.*AI-*cause*-DIR-3PL
'You put them to sleep.'

b. Nitáókska'síípiooka
nit-á-okska'si-ipi-o:k-wa
1-IMPF-*run.*AI-*cause*-INV-3SG
'He makes me run.'

[Frantz 2009:101, glosses modified by BG]

We have already encountered the proclitics, and I will discuss them in much more detail further on. The second preverbal slot can be filled by a number of adverbial prefixes, such as the aspectual marker 'á-' in (11b). In both the examples above, the animate intransitive stem is then followed by a causative suffix, which indicates the presence of a causer as an additional argument of the verb and is considered part of the verbal stem (see footnote 15). The slot immediately following the stem is dedicated to the *direct/inverse* system of the language which merits a more detailed discussion.[17]

Essentially the direct/inverse morphemes identify the argument roles of a transitive verb, i.e. they indicate which of the arguments is the actor and which one is the goal (Hockett 1966). Recall that in cases in which there are at least two animate third person arguments, these need to be marked for obviation and proximacy; these markers indicate the information structural status of each noun phrase. In each sentence, there can only be one proximate marked

[16]The first and second person plural markers do not appear instead of person marking in the template-initial slot: e.g. a first person plural is marked by a first person proclitic 'nit-' and a plural morpheme in the respective postverbal slot. Given that there are two distinct postverbal morphemes for first and second person plural, they are taken to also encode person (cf. Frantz 2009). However, Ritter and Wiltschko (2009) have argued that they are in fact agreement markers and hence crucially different from the preverbal proclitics. I will not discuss these markers any further here.

[17]In traditional Algonquian terms, this is referred to as *theme marking*. (Bloomfield 1946)

noun.[18] In these cases, the direct/inverse marker on the verb indicates whether a higher-ranking argument (i.e. proximate-marked) is the agent – *direct* – or whether a lower-ranking argument (i.e. obviative-marked) is the agent – *inverse* – of the event denoted by the verb. The direct/inverse morpheme essentially indicates who is acting on whom in a given event denoted by the verb. The following examples serve to illustrate the basic mechanism. The sentence in (12), which we have already seen in the discussion of the proximacy/obviation marking system in example (7), shows a verb bearing the direct-morpheme:

(12) Ana póókaawa inóyííwa ani imitááyi.
an-wa pookaa-wa ino-**yii**-wa an-yi imitaa-yi
DEM-PROX *child*-PROX *see*-DIR-3SG DEM-OBV *dog*-OBV
'The child saw the dog.' [Bliss 2005:4]

As already discussed, the proximate suffix on 'the child' marks it as the more prominent argument as opposed to 'the dog' which bears the obviation marker. The direct-morpheme '-yii-' on the verb indicates that it is the proximate (or higher-ranking) argument that acts on the obviative (or lower-ranking) argument. The inverse-morpheme, on the other hand, has the opposite effect as illustrated in the corresponding minimal pair example (13):

(13) Ana póókaawa otsinóóka ani imitááyi.
an-wa pookaa-wa ot-ino-**ok**-wa an-yi imitaa-yi
DEM-PROX *child*-PROX OBV-*see*-INV-3SG DEM-OBV *dog*-OBV
'The dog saw the child./The child was seen by the dog.' [Bliss 2005:4]

Again, just as in example (12), 'the child' is marked for proximacy whereas 'the dog' is marked for obviation. However, in this example the verb carries the inverse marker '-ok-' indicating that the less prominent, thus obviative marked, argument 'the dog' acts on the more prominent, thus proximate marked, argument 'the child'. In other words, 'the dog' corresponds to the actor and 'the child' to the goal.

This system becomes particularly intriguing when dealing with personal arguments which are encoded as part of the morphology that attaches to the verbal stem. Witness again the examples in (11), repeated below for convenience.

(11) a. Kitsó'kááttsaayaawa
kit-Io'kaa-áttsi-a:-yaawa
*2-sleep.*AI-*cause*-DIR-3PL
'You put them to sleep.'

b. Nitáókska'síípiooka
nit-á-okska'si-ipi-o:k-wa
1-IMPF-*run.*AI-*cause*-INV-3SG
'He makes me run.'
[Frantz 2009:101, glosses modified by BG]

[18] See page 59 for more details and further references.

In both cases, the preverbal slot is filled with a person proclitic but as you can see from the English translations they denote different arguments in each case. Again, this is due to the direct/inverse marker: the direct marker in (11a) tells us that the second person denoted by the proclitic acts on the plural third person encoded in the two final slots; the inverse marker in (11b), on the other hand, encodes that in this case the third person singular encoded in the postverbal slot acts on the first person in the preverbal slot.

As you may have noticed, the direct/inverse markers are not always the same. They are expressed by different morphemes, the choice of which depends on the arguments that are involved. Therefore, in addition to indicating whether it is the higher ranked person acting on the lower ranked person or vice versa, the direct/inverse markers also vary depending on the persons involved, i.e. in certain cases they also encode person-features carrying information about the arguments of the verb.[19] The complete paradigm of these suffixes is given in table III.2.

Actor → Goal ↓	first	second	third proximate	third obviative
first	n/a	*-oki*	*-ok*	*-ok*
second	*-o*	n/a	*-ok*	*-ok*
third proximate	*-a*	*-a*	n/a	*-ok*
third obviative	*-a*	*-a*	*-yii*	n/a
third inanimate	*-'p*	*-'p*	*-m*	n/a

Table III.2: Blackfoot direct/inverse markers

[adapted from Louie 2008:17]

This mainly serves to illustrate the complexity of the direct/inverse system which we will encounter repeatedly in the examples provided throughout the chapter; we will return to some of it in the discussion of the person proclitics, but the details of this system are largely left aside here and the interested reader is referred to Bliss (2005); Bliss et al. (2011).

One consequence of this type of extensive morphological encoding on the verb is that Blackfoot does not obligatorily require overt argument expression outside the verb and to a relatively free word order when nominal arguments do show up. This point naturally brings to mind research on other polysynthetic languages, in particular Hale's (1983) Configurationality Parameter, Jelinek's (1984) Pronominal Argument Hypothesis and Baker's (1996) Polysynthesis Parameter. Before expanding a bit more on these issues, it should be pointed out that currently there is no consensus on the status of Blackfoot, particularly with respect to the latter two theories. According to Hale (1983), a language counts as non-configurational if it has free word order and employs syntactically discontinuous expressions as well as null anaphora. Simply applying these

[19] I will return to this issue in more detail in section 2.1.

criteria, Blackfoot does indeed count as a non-configurational language. However, as pointed out by Bliss (2010), it is not at all clear what the ramifications of such a classification are with respect to the syntax of argument expression in Blackfoot. Jelinek (1984) rediscusses Hale's (1983) evidence and suggests what has become known as the Pronominal Argument Hypothesis: this hypothesis essentially says that arguments of non-configurational languages in Hale's sense are expressed by verbal morphology, i.e. pronominal elements under this view, which occupy the actual A-positions whereas any overt argument sits in an A'-position. A slightly different version has been proposed by Baker (1996) who assumes that covert *pro*s occupy the A-positions and agreement markers on the verb license these silent pronominals. One crucial feature of his Polysynthesis Parameter is the assumption that nominal arguments obligatorily get incorporated into the verb. With respect to Algonquian languages, Baker (1996) himself speculates that given that they do not display this obligatory noun-incorporation, they – and consequently also Blackfoot – are not part of the languages subsumed under his Polysynthesis Parameter. Déchaine (1999) comes to a similar conclusion: after showing that Algonquian agreement morphology does not saturate argument positions as would be expected under both Jelinek's (1984) and Baker's (1996) view, she concludes that

> [...] the picture of Algonquian agreement presented here, if tenable, would lead us to deny that "polysynthesis" defines a language type in the way that Baker (1996), following a long tradition, intends. Rather, polysynthesis is at best a descriptive term for a constellation of surface properties which reflect the convergence of independent factors [...] [Déchaine 1999:69]

In conclusion, the particular intricacies regarding Blackfoot's status with respect to e.g. Baker's (1996) PP or Jelinek's (1984) PAH reach far beyond the scope of this thesis and its primary topic of research. Since this chapter primarily deals with person proclitics, i.e. overt pronominal arguments, and is not concerned with the licensing of DP arguments[20], I will also not adopt either approach. Rather, I will assume, following Bliss and Gruber (2011b), that the proclitics are base-generated as arguments of the verbal or nominal stem that they attach to. However, I hope to have shown in this section that Blackfoot raises a wide range of intriguing and possibly far-reaching issues, many of which need to yet be addressed in detail. At this point, I conclude the general discussion of the language and turn to the core issues of this chapter, namely the pronominal proclitics.

2 The Core Data: Person Proclitics

This section introduces the basic facts and data regarding Blackfoot person proclitics, which form the empirical core of this chapter. Apart from pronominal

[20] See Bliss (2012) for an overview of related issues.

proclitics, the language also disposes of independent personal pronouns that we will turn to in more detail later on in this chapter.[21] In what follows, I will first introduce the basic paradigm of the long and short form proclitics and then proceed with their morphosyntactic make-up: following Bliss and Gruber (2011b), I will show that they are internally complex and that their distribution is neither lexically nor phonologically conditioned as generally assumed in the traditional literature.

2.1 The Basic Paradigm

As already mentioned in the introduction, Blackfoot person proclitics take on the following forms:

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*ot-*

Table III.1: Blackfoot proclitics I

These proclitics appear in both the nominal and the verbal domain: they can either denote the possessor of a noun and or an argument of a verb. Before turning to the issue of the distribution of the long and short forms, I will first discuss some basics of the pronominal system primarily focussing on the verbal domain as its underlying mechanisms differ considerably from, e.g. Indo-European systems.

The most notable difference is that these proclitics do not have forms dedicated to particular syntactic arguments, such as subject (cf. English 'he') or object (cf. English 'him'), but only appear in the forms given in table III.1 and only denote event participation (cf. Frantz 1971). Put differently, they only tell us whether their referent has a semantic role in the event described by the verb or not (cf. Parsons 1990). In other words, even though the proclitic always appears in the initial slot of the verbal template and arguably occupies the specifier of the inflectional phrase (cf. Déchaine and Wiltschko 2011), the referent denoted by the proclitic is not tied to any specific semantic role.[22] With transitive predicates, the proclitic's actual thematic role can then only

[21] Additionally, Blackfoot has an elaborate demonstrative pronoun system as well as interrogative and indefinite pronouns (Taylor 1969), which, however, do not bear on the present discussion and will thus largely be left aside.

[22] Even though this might be reminiscent of, e.g. English passives where the thematic patient appears as the syntactic subject, these constructions are still crucially different: which argument appears as a proclitic in Blackfoot can be shown to be subject to principles independent of either semantic or syntactic roles. More specifically, their appearance is governed by factors related to person, animacy, and sentience (cf., e.g. Bliss 2005; Frantz 2009; Ritter and Wiltschko 2009) and their thematic role is independent of specific syntactic constructions. I will briefly address the issue again subsequently, but since the details are fairly intricate and do not bear on the issue at hand, I will largely leave them aside.

be determined in combination with the earlier introduced direct/inverse system that identifies the actor and the goal of the eventuality.

Before turning to some examples, one more fact needs to be mentioned: Given that the proclitic slot is not dedicated to a specific thematic role and given that there is only one slot for all persons – i.e. first, second, and third compete for the same position – the actual appearance of these person morphemes is often taken to be governed by a person hierarchy.[23] In other words, the different persons are taken to be underlyingly ordered with respect to each other as shown in (14) (cf. Frantz 2009:57f.):

(14) kit- > nit- > ot-
second > *first* > *third*

As I have already shown in section 1.1.2, the semantic role that gets attributed to the proclitic in a given sentence depends on which direct/inverse marker it appears with. In what follows, the basics of this system will be illustrated step by step. First, witness the examples in (15):

(15) a. Nitsikákomimmawa nitána.
nit-ikakomimm-**a**-wa n-itana.
1-love-DIR-3SG *my-daughter*
'I love my daughter.'

b. Nitsikákomimmoka nitána.
nit-ikakomimm-**ok**-wa n-itana.
1-love-INV-3SG *my-daughter*
'My daughter loves me.'

[Frantz 2009:56; glosses modified by BG]

Notice that the preverbal pronominal element is identical in both examples despite the fact that the speaker is the logical subject (agent) in (15a) but the logical object (experiencer) in (15b). The decisive factor, which causes the first person morpheme to appear in the preverbal slot, is the fact that the speaker bears one of the thematic roles of the predicate. The difference between the two sentences results from the different direct/inverse marking in the dedicated postverbal slot: whereas '-a-' in (15a) indicates that the first person acts on the third person, '-ok-' in (15b) has the reverse effect: in this case it is the third person that acts on the first, thus turning the speaker into the experiencer.[24] Next witness the sentences in (16):

[23] But see Ritter and Wiltschko (2009) for a syntactic account of these so-called hierarchy effects: Ritter and Wiltschko assume that both the speaker and the addressee have a dedicated position with the IP-layer. Highly simplifying their analysis here, they basically hypothesize that the addressee is syntactically lower than the speaker and thus surfaces first.

[24] More precisely, '-a-' only encodes that a first or second person acts on a third person, whereas '-ok' encodes the opposite. See table III.2 on page 63.

(16) a. Kitsikákomimmawa nitána.
kit-ikakomimm-**a**-wa n-itana.
2-love-DIR-3SG *my-daughter*
'You love my daughter.'

b. Kitsikákomimmoka nitána.
kit-ikakomimm-**ok**-wa n-itana.
2-love-INV-3SG *my-daughter*
'My daughter loves you.'

[Frantz 2009:56; glosses modified by BG]

As can be seen, these examples parallel the sentences (15) in that the person morpheme in the preverbal slot is identical in both cases. The only difference now is that the addressee is the person involved in the event, hence these examples show the second person pronominal element 'kit-'. Likewise, it is the direct/inverse theme makers '-a-' and '-ok-', respectively, that indicate the verb's argument distribution.

So far, the examples in (15) and (16) illustrated that the preverbal pronominal slot is not dedicated to one specific syntactic argument such as subject or object, but rather that it is dedicated more generally to event participants. Until now we have only seen examples that involved one either first or second person and one third person argument. As a next logical step, we will look at transitive verbs that have both a first and second person argument. Compare the sentences in (17); note that the gloss 1:2 indicates that a first person acts on a second person, and likewise that 2:1 indicates that a second person acts on a first person:[25]

(17) a. Kitsikákomimmo.
kit-ikákomimm-**o**.
2-love-1:2
'I love you.'

b. Kitsikákomimmoki.
kit-ikákomimm-**oki**.
2-love-2:1
'You love me.'

[Frantz 2009:60f.; glosses modified by BG]

These examples illustrate that whenever there is a second person event participant it occupies the preverbal slot, irrespective of whether the second argument of the verb is a first or, as in the earlier examples, a third person. Again, thematic role identification proceeds via the direct/inverse marker in the postverbal slot: these morphemes indicate that a first person is involved and whether

[25]These two markers are not simply glossed with DIR or INV, respectively, since they also uniquely identify the second event participant, i.e. they also encode person information. See also table III.2.

it is the logical subject or object of the event. In (17a) the postverbal '-o' indicates that the speaker is the logical subject or agent of the clause, whereas '-oki' in (17b) has the reverse effect.[26] Consequently, in this case the speaker is interpreted as the direct object or goal.

Having introduced some general facts about the Blackfoot pronominal proclitics and their interaction with thematic role distribution of the verb, I will next zoom in on further details of the system, in particular the question of the distribution of the long and short form proclitics.

2.2 The Puzzle of the Person Proclitics

As already mentioned earlier, Blackfoot person proclitics generally appear in the following forms: 'nit-' (first person), 'kit-' (second person) and 'ot-' (third person). However, it has long been noticed (cf. Uhlenbeck 1938; Taylor 1969; Frantz 1991, 2009) that both in the nominal and verbal domain they sometimes also surface as so-called short forms as exemplified for the first person in (18) :

(18) a. nínssta
n-inssta
1-sister
'my sister'

b. Nááhksipaisska
n-aahk-ipaisskaa
1-MOD-*dance*
'I might dance.'
[Bliss and Gruber 2011b]

Consequently, the picture that emerges and has already been given in table III.1, repeated below for convenience, consists of two sets of proclitic forms.

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*ot-*

Table III.1: Blackfoot proclitics I

As argued for by Bliss and Gruber (2011b), the short and long forms are morphologically related: whereas the short forms only consist of a person marker, the long form proclitics are complex, consisting of a person marker followed by the morpheme '-it-'. As for third person, the short form 'w-' is related to the long form 'ot-' in the same fashion as the first and second person forms are related to each other: due to the phonological rule of Blackfoot stated in (19), the person marker 'w-' surfaces only in the short forms, but results in 'o' when abutting on an 'i':[27]

[26] Frantz (2009:61) analyses '-o' as indicating both the involvement of the speaker and the speaker being the subject. As for '-oki', he takes it to be composed of the inverse maker '-ok-' (cf. e.g. example (16b)) and the morpheme '-i' where the latter only indicates that a first person is involved. Also see Bliss et al. (2011) for a recent analysis of these theme markers.

[27] There is also a third variant of the third person marker, namely the morpheme 'm-' (Frantz 2009). However, its distribution is still unclear and subject to further research.

(19) w + i(:) → o [Frantz 2009:72]

The proclitic paradigm in III.1 can thus be slightly modified resulting in the pattern given in III.3.

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*w-it-* (=*ot-*)

Table III.3: Blackfoot proclitics II

Traditionally, the alternation between the two forms has not been assumed to follow any underlying pattern but is taken to be either lexically or phonologically conditioned. Proponents of the first view are for instance Taylor (1969) and Frantz (2009); in the *Blackfoot Grammar* one can read to this effect:

> Simply stated, certain morphemes select a short form of preceding person [...] prefixes nit-, kit-, and ot-; the corresponding short variants are n-, k-, and w-. One must learn which morphemes [...] select the short form [...] [Frantz 2009:35]

As for phonological conditioning, a number of researchers argue that this is what causes the alternation in other Algonquian languages, which also have long and short form proclitics similar to the ones in Blackfoot: Junker (2010) for East Cree; Valentine (2001) for Ojibwe; Wolfart (1973) for Plains Cree.

However, Bliss and Gruber (2011b) have shown that the alternation in Blackfoot is neither lexically nor phonologically conditioned. Lexical conditioning would lead us to expect that a specific lexical item either always only chooses the long or the short form, or, if it allows free variation, that the variation does not give rise to different interpretations. As the examples in (20) and (21) show, this is clearly not the case in Blackfoot:

(20) a. Amo no'tokáán
amo **n**-o'tokaan
DEM *1-hair*
'This is my (own) hair.'

b. Amo nito'tokáán
amo **nit**-o'tokaan
DEM *1-hair*
'This is my (clipping of his) hair.'

(21) a. Nááhksipaisska
n-aahk-ipaisskaa
1-MOD-*dance*
'I might dance.'

b. Nitááhksipaisska
nit-aahk-ipaisskaa
1-MOD-*dance*
'I would dance.'
[Bliss and Gruber 2011b]

In (20) the proclitic indicates the possessor of the noun 'hair'; in the a-example we can see the short form whereas in the b-example the long form appears. If this was merely free variation, then we would expect the same meaning

in both cases. However, as the translations show, this is clearly not borne out: whereas the short form in (20a) results in an inalienable reading of the nominal, the long form (20b) results in an alienable interpretation.[28] In (21) the long and short forms precede the modal marker 'aahk-': whereas the short form results in an epistemic modal reading, the long form leads to a counterfactual interpretation.[29] In short, the alternation of the long and short forms cannot be conditioned lexically since we cannot observe constant selection of one of the two forms by a specific lexical item and since the choice of proclitic has an immediate effect on the interpretation of the entire phrase.

As for the phonological conditioning, we would consistently expect either the long or the short form in phonologically identical environments. Again, this is not borne out as illustrated in (22) and (23):

(22) a. Nikáítsiniki
n-ikaa-itsiniki
1-PERF-*relate.story*
'I have told a story.'

b. Nitsikáítsiniki
nit-ika-a-itsiniki
1-ancient-IMPF-*relate.story*
'I am telling an ancient story.'
[Bliss and Gruber 2011b]

(23) a. Ááhkoyimmiiyiniiksi
w-aahk-oyimm-ii-yini-iksi
3-MOD-*mourn*-DIR-OBV-PL
'S/he might have mourned them.'

b. Otááhkóyinnimaanistsi
ot-aahkoyinnimaan-istsi
3-pipe-PL
'his pipes'
[Frantz and Russell 1995:1]

Both examples present minimal pairs in that the morpheme following the proclitic is phonologically identical in both the a and b cases, but still they appear with different proclitics. This is entirely unexpected if the choice of form were phonologically conditioned.

Given that we can therefore exclude both phonological and lexical conditioning of the alternation for Blackfoot on empirical grounds, the question of what governs the appearance of the long and short forms remains. In the following section, I introduce the proposal put forward by Bliss and Gruber (2011b) and extend it by combining it with the analysis of indexical pronouns put forward in this thesis.

3 The Internal and External Syntax

So far we have seen that Blackfoot person proclitics attach to both nominal and verbal stems, expressing the possessor or an argument, respectively. In both domains, they appear in two guises: long and short forms as summarized in table III.3, repeated here for convenience.

[28] I will return to this issue in section 4.
[29] I will return to this issue in section 5.2.

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*w-it-* (=*ot-*)

Table III.3: Blackfoot proclitics II

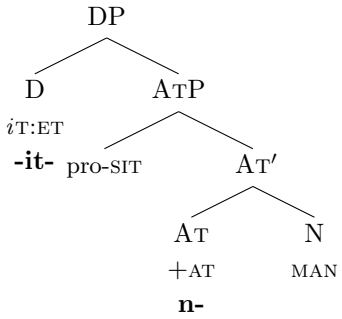
Following Bliss and Gruber (2011b), I have shown that the distribution of the proclitics is neither phonologically nor lexically conditioned and, crucially, that there are minimal pairs that only differ in the choice of proclitic which eventually leads to different interpretations. In this section, I will present the main analysis of the Blackfoot proclitics by combining Bliss and Gruber's (2011b) proposal with the theory of indexical pronouns put forward in this thesis. The core claim of this thesis is that the deictic category PERSON requires spatial and in certain cases also temporal information. Crucially, I propose that this dependency is reflected in the morphosyntactic structure of indexical pronouns, i.e. the linguistic expressions that denote PERSON. Whereas I speculate that the spatial component is universal across languages and establishes the link to the extralinguistic context (cf. chapter V), I propose that the temporal component is the locus of crosslinguistic variation: languages parametrically differ in whether their indexical pronouns get restricted by EVENTUALITY TIME or UTTERANCE TIME. In what follows, I focus on the temporal component and claim that Blackfoot instantiates a language of the first type, i.e. it restricts its (indexical) pronouns by EVENTUALITY TIME. I will first introduce the analysis of the internal syntax of the long and short form proclitics, arguing that they are internally complex consisting of two meaningful parts. Second, I will discuss the relation of the internal pronominal to the external clausal syntax, specifically with respect to the proclitics' temporal specification.

3.1 The AtP/DP Distinction

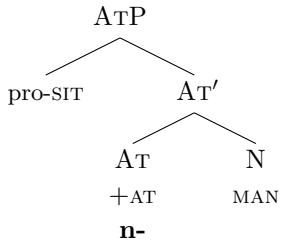
Based on Bliss and Gruber (2011b), I assume that the long and short forms consist of two meaningful parts that map onto the AT- and D-head, respectively. Specifically, it is argued that the short forms are also present in the long forms and that their function is to pick out the referent of the proclitic. Put differently, 'n-' picks out the speaker, 'k-' picks out the addressee, and 'w-' denotes a non-speech act participant. These morphemes associate with AT in the case of first and second person proclitics and ϕ in the case of third person proclitics in the pronominal structure. Accordingly, the morpheme '-it-', only present in the long forms, associates with D. In line with the internal syntax of indexical pronouns argued for in this thesis, the relevant structures for an indexical proclitic thus look as already given in (6) and repeated here.[30]

[30]As already pointed out earlier, and repeated here for the sake of completeness, at this point I do not have independent evidence that the content of the short forms in Blackfoot is indeed a spatial marker. However, it follows directly from the combination of the analysis

(6) a. First Person Long Form



b. First Person Short Form



As a next step I will now motivate the analysis of the first and second person forms as pro-ATPs and pro-DPs based on the analysis of pronouns presented by Déchaine and Wiltschko (2002). The issue of third person proclitics will then be taken up in section 3.1.2.

3.1.1 First and Second Person Proclitics

Déchaine and Wiltschko (2002), whose theory of pronouns is adopted in both Bliss and Gruber (2011b) and in this thesis, characterize the distinction between pronominal DPs and ϕPs, i.e. the equivalent to ATPs in the current proposal, by means of morphological, semantic and syntactic criteria. Starting with the first, they propose that DPs are morphologically more complex than ϕPs, a criterion that is fulfilled by the Blackfoot proclitics under the given analysis: whereas ϕPs only consist of the morphemes 'n-/k-/w-', DPs additionally contain the morpheme '-it-'. Further support for this analysis comes from the fact that both morphological components can be found independently in the Blackfoot grammar: 'n-/k-/w-' show up as short form proclitics and the morpheme '-it-' appears as a preverbal affix that is required when spatial and/or temporal locations are expressed in a sentence (cf. Frantz 2009; Bliss to appear). This is illustrated in (24):

(24) a. Ááksitsipsstsooyiwa omi ksikóókooyiss.
aak-**it**-ipsst-iooyi-wa om-yi ksikookooyiss.
FUT-LOC-*inside-eat*-PROX DEM *tent*
'S/he will eat in that tent.'

b. Matónni nitsítsinoowaw kiksísstа.
matonni nit-**it**-inoo-a-wa k-iksisst-wa
yesterday 1-LOC-*see*-DIR-PROX *2-mother*-PROX
'Yesterday I saw your mother.'

[Bliss and Gruber 2011b]

of Blackfoot proclitics argued for in Bliss and Gruber (2011b) with the analysis of indexical pronouns argued for in this thesis.

In (24a) the morpheme '-it-' relates to the location phrase 'in the tent'; in (24b) it refers to the temporal adverb 'yesterday'.

Further, Déchaine and Wiltschko (2002, 2010) argue that only ϕPs can act as bound variables, whereas DPs can only be interpreted as a referential expression. Again, this is borne out as illustrated by the examples in (25) where only the short form proclitic possessor can be interpreted as a bound variable whereas the long form is obligatorily referential:

(25) a. Nitsikáákomimma niksísstа ki ana Apánii ni'tóyi.
nit-ikaakomimm-a **n**-iksisst-wa ki ana Apanii ni'toyi
1-love-DIR *1-mother*-PROX CONJ DEM *butterfly be.same*
'I love my mother and Apanii does too."

✓STRICT → Apanii loves **my** mother.
✓SLOPPY → Apanii loves **her own** mother.

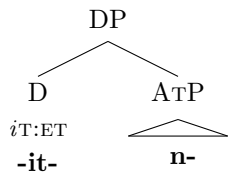
b. Nitsikááhsi'tsi'p nitsipisátsskitaani ki ana Apánii ni'tóyi.
nit-ikkahsi'tsi-p **nit**-ipisatsskitaan-yi ki ana Apanii ni'toyi
1-like-DIR *1-cake*-INAN CONJ DEM *butterfly be.same*
'I like my cake and Apanii does too.'

✓STRICT → Apanii likes **my** cake.
* SLOPPY → **cannot** mean: Apanii likes **her own** cake.

[Bliss and Gruber 2011b]

We have now seen evidence for the status of the short form proclitics as ϕPs/AtPs and the long forms as DPs. Within the theory of indexical pronouns put forward in this thesis, this implies that the long form proclitics contain a feature related to TIME. Specifically, I propose that Blackfoot instantiates a language whose pro-DPs encode EVENTUALITY TIME in their internal structure, as illustrated again in (26).

(26)



As introduced in greater detail in chapter II, I follow Gillon (2006) in taking D to be universally associated with domain restriction. Generally speaking, domain restriction ensures that the entity denoted by the NP will be interpreted with respect to the contextually relevant set of entities (cf. among many others Barwise and Cooper 1981; Westerståhl 1984; von Fintel 1994; Etxeberria Otaegi 2005); as an example, witness the sentence in (27):

(27) The cats like to hang out on our deck.

This sentence is clearly not about all cats in the entire world; rather, it is about a contextually salient set of cats, e.g. the cats in our neighbourhood. Following Bliss and Gruber (2011b), I analyze '-it-' along the same lines and argue that it introduces domain restriction and occupies D. Gillon's proposal is further combined with Musan's (1995) approach to the temporal interpretation of noun phrases: she argues that determiners quantify over stages of individuals rather than individuals in their entire temporal extendedness. With respect to personal pronouns, this leads to the claim that D restricts the domain of the pronoun to a specific stage of the individual denoted by the AtP. Specifically, I propose that this stage is determined by the temporal value of D: I take pronominal D to host an interpretable but unvalued TIME-feature in the sense of Pesetsky and Torrego (2004a). *Interpretable* refers to the fact that this feature is taken to have an impact on the semantic computation and is thus, following Chomsky (1995), passed on to the interpretational component. *Unvalued*, on the other hand, expresses the fact that the actual temporal specification cannot be part of the lexical entry of the pronoun since the actual temporal value differs from utterance to utterance.[31]

I argue that in Blackfoot's pro-DP this value originates from EVENTUALITY TIME which, following standard assumptions (cf., e.g. Zagona 1990; Stowell 1993, 2007; Demirdache and Uribe-Etxebarria 1997, 2000), I take to be encoded in the VP.[32] Consequently, '-it-' restricts the interpretation of the proclitic to that stage of the individual that is involved in the eventuality denoted by the VP. For a sentence like (28), this can be illustrated as already shown in III.1 and repeated below.

(28) Kítsspiyi.
kit-ihpiyi
2-dance
'You danced.' [Bliss and Gruber 2011b]

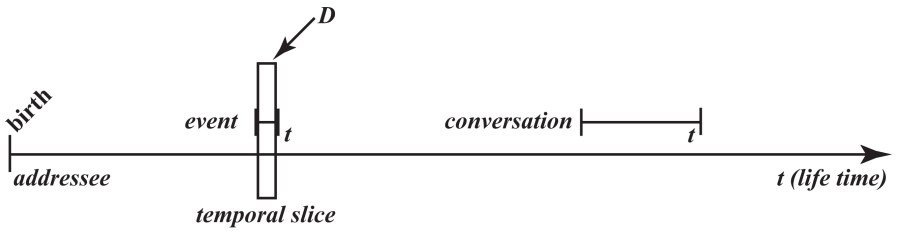


Figure III.1: Domain restriction by EVENTUALITY TIME

In this past tense sentence, the dancing-event took place before the utterance, i.e. the event time precedes the utterance time. The addressee was the

[31] See chapter II, section 2.4 for a more detailed discussion of this type of features.

[32] I will detail and illustrate the specific valuation mechanism that I employ in the discussion of the external syntax in section 3.2.

agent of the dancing-event and as such present throughout the entire time-span of the event. This time is syntactically encoded in the VP and values the temporal feature in the pronominal structure located in D. Consequently, D picks out precisely that stage of the addressee that took part in the event, thereby restricting its interpretation to the relevant time span as illustrated in figure III.1.

This analysis predicts that we should find a systematic difference in the distribution of the long and short forms. More precisely, we expect to find the long forms in cases in which the relation between the argument denoted by the pro-DP and the eventuality that is at issue in a given context is temporally restricted. Conversely, the short form pro-AtPs are predicted to appear in contexts in which the relation cannot be temporally restricted but holds irrespective of any specific eventuality. I will show that this prediction is borne out in both the nominal and the verbal domain: In the nominal domain, the short form proclitics only appear in the context of inalienable possession; that is precisely the context in which the relation between the individual denoted by the pronoun, in this case the possessor, and the eventuality of possession is temporally unrestricted and holds irrespective of any specific point in time. Accordingly, the long form proclitics appear in all cases in which the possessor-possessee relationship only holds at a certain point or period in time. This has already been illustrated in (5), repeated below, and will be discussed in greater detail in section 4.

(5) a. kitááattsistaama
kit-aaattsistaama
2-rabbit
'your rabbit'

b. kiksíssta
k-iksíssta
2-mother
'your mother'
[Bliss and Gruber 2011b]

The same holds for the verbal domain, as will be discussed in detail in section 5. For instance, the perfect marker '-ikáá' obligatorily chooses a short form proclitic, whereas a simple past tense or the present tense always combine with a long form proclitic as exemplified in (29).

(29) a. nikááyo'kaa
n-ikaa-yo'kaa
1-PERF-*sleep*
'I have slept.'

b. Nítsspiyi.
nit-ihpiyi
1-dance
'I danced.'
[Bliss and Gruber 2011b]

It has been independently proposed in the literature that the use of a perfect implies that the eventuality under discussion has turned into a property that is inherently linked to its argument, much like the inalienable relationship between a possessee and its possessor.

Before turning to these two empirical domains, I first need to address a few missing pieces to complete the picture given so far. I will start with the

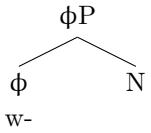
issue of third person proclitics, then proceed with discussing a recent claim by Ritter and Wiltschko (2009) that Blackfoot does not encode TIMEs syntactically. Lastly, I will complete the discussion by elaborating on how the proclitics interact with the external syntax.

3.1.2 Third Person Proclitics

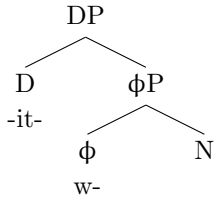
As argued for in chapter II, I do not assume third person pronouns to be subject to the same dependencies as indexical pronouns. In line with numerous researchers, I maintain that third person is characterized by the absence of traditional *person*-features (e.g. Benveniste 1966; Kayne 2000; Harley and Ritter 2002; Anagnostopoulou 2005; Bobaljik 2008), which translates into the absence of a spatial component within the system proposed in this thesis. However, this does not imply that I assume them to be subject to a different syntactic structure altogether; in other words, they are subject to the same structural options as proposed by Déchaine and Wiltschko (2002) and can map onto pro-DPs or pro-ϕPs.[33]

With respect to the Blackfoot third person proclitic, I thus maintain that the short form maps onto a pro-ϕP, whereas the long form maps onto a pro-DP, as illustrated in (30):

(30) a.



b.



Notice that the morpheme associated with D is entirely identical to the morpheme that appears in first and second person proclitics. Recall at this point that I argue that in Blackfoot pronominal D is associated with EVENTUALITY TIME; put differently, I propose that '-it-' is the spell-out of the temporal feature in D. At first, this might seem to contradict my argumentation at various points in this thesis that third person is fundamentally different from first and second person. However, I claim that with respect to the temporal feature in D my analysis leads us to expect the pattern we find in Blackfoot: Recall that I argue that pronominal D is the locus of crosslinguistic variation. Languages restrict the interpretation of PERSON either by UTTERANCE TIME or by EVENTUALITY TIME. As argued in detail in chapter I, third person does not fall under the deictic category PERSON, since by definition PERSON only comprises speech act participants, i.e. the speaker and the hearer. A third person, however, is not part of the same category since it cannot be a speech act participant. Consequently, we do not expect to find languages that restrict their third person

[33] Déchaine and Wiltschko (2002) propose a third structure, pro-NPs. Since these are not relevant for the present discussion, I am abstracting away from them.

pronouns by UTTERANCE TIME, as this would imply that a third person had to be present within the utterance context.[34] Conversely, languages that restrict the interpretation of their pronouns by means of EVENTUALITY TIME are a different matter: certainly a third person referent is just as likely to be part of an eventuality as is a first or second person referent. Accordingly, we expect such a language to also restrict the interpretation of third person pronouns in the same way as first and second person pronouns. Blackfoot is thus such a case in point as evidenced by the fact that its third person proclitics also include the D-head '-it-'; just like in indexical pronouns, I argue that '-it-' restricts the interpretation of the (third) person denoted in the ϕP to the temporal stage associated with the eventuality.[35]

3.2 Putting the Pieces Together

So far I have introduced the basic structural analysis of Blackfoot long and short form proclitics and presented evidence for their internal syntax being a pro-DP and a pro-AtP, respectively. Further, I have claimed that D contains an interpretable but unvalued TIME-feature that requires to be valued by EVENTUALITY TIME. In what follows, I will address some general claims and assumptions that I make regarding the interaction of the proclitics with the external syntax. This discussion will serve as a background for the subsequent sections, which will provide evidence for my analysis of the proclitics from the nominal (section 4) and the verbal domain (section 5).

3.2.1 Syntactic Valuation

As already introduced earlier, I propose that TIME in D functions as a restrictor over temporal stages of the individual denoted in the AtP . I argue that it is an interpretable but unvalued feature in the sense of Pesetsky and Torrego (2004a). Consequently, this feature needs to be valued during the syntactic derivation. As discussed in detail in chapter II, I claim that the origin of this value is subject to crosslinguistic variation and can come from either UTTERANCE TIME or EVENTUALITY TIME. I argue that Blackfoot instantiates a language that values the pronominal TIME-feature by EVENTUALITY TIME and claim that this valuation takes place under Reverse Agree, as proposed by Wurmbrand (2012a,b).[36] Reverse Agree is defined as in (31).

(31) A feature F:__ on α is valued by a feature F:val on β, iff

[34] It is well conceivable, however, that a language might have a dedicated third person form that is only used for individuals present within the immediate utterance context. If such a language also made use of UTTERANCE TIME within its pronominal structure, then the analysis put forward here predicts that UTTERANCE TIME would also be part of such a dedicated third person form. This is essentially an empirical question that has to be left open for further research.

[35] This raises the question of whether the same mechanism applies to non-pronominal DPs. This question is an empirical matter that goes beyond the scope of this thesis.

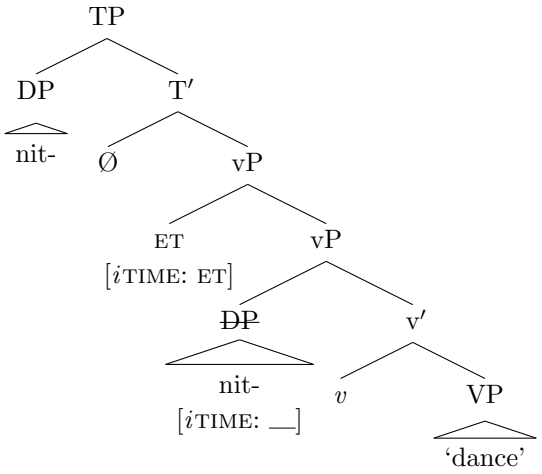
[36] Also see chapter II, section 3.

i. β asymmetrically c-commands α AND
ii. There is no γ, γ distinct from β, with a valued interpretable feature F such that γ commands α and is c-commanded by β.

The basic workings are illustrated in (32b) by means of the sentence in (32a).

(32) a. Nítsspiyi
nit-ihpiyi
1-dance
'I danced.'

b.



As can be seen from the structure, EVENTUALITY TIME in the highest verbal projection asymmetrically c-commands the pronoun in its base-generated position. EVENTUALITY TIME is valued on the referential Zeit Phrase (ET) in the highest specifier of the verbal projection and can thus value the TIME-feature in the proclitic under Reverse Agree: there is no intervening category carrying another matching feature that could potentially value the proclitic's TIME-feature instead. Once the proclitic is valued it moves further up in the structure to its final position in Spec-TP.

To sum up, I argue that the temporal coordinates of a Blackfoot personal pronoun stem from the temporal coordinates of the eventuality, i.e. they come from the event context. Further, I argue that Blackfoot proclitics are internally complex: whereas the short forms only encode spatial anchoring to the utterance context, the long forms also contain temporal anchoring. Under the assumption that the D-layer restricts the interpretation of the individual denoted by the AtP to certain stages of that individual, we consequently expect the distribution of the long and short forms to correspond to the following: if the relation between an individual denoted by the proclitic and the eventuality it is an argument of is temporally restricted, we expect the long form proclitic including the temporal domain restrictor '-it-'; if, on the other hand, an eventuality is permanently attributed to the referent of the proclitic, i.e.

if the relation is temporally unrestricted, we expect to find the short proclitic lacking temporal restriction.

3.2.2 Blackfoot: a Tenseless Language?

Due to work by Ritter and Wiltschko (2009), Blackfoot has recently gained the attention of a broader audience for being a tenseless language. The general observation dates back to the early days of work on Blackfoot as evidenced by the following quote from Uhlenbeck (1938):

> Though this language possesses neither a true tense-system nor a true aspect-system, there are certain prefixes to express completion, futurity, duration (iteration) and many other distinctions, partly belonging to the sphere of time and aspect. [Uhlenbeck 1938:133]

As becomes immediately obvious from this statement, referring to Blackfoot as a 'tenseless' language is not to say that it cannot express temporal (or aspectual) relationships. It can clearly do so by employing dedicated verbal prefixes that provide the various meanings. Crucially, however, temporal marking is not obligatory as opposed to, e.g. Indo-European languages. Ritter and Wiltschko (2009) illustrate this with the example in (33) which, according to them, can get both a present or a past interpretation.

(33) kitána aasáí'niwa
k-itana aasai'ni-wa
2-daughter cry-PROX
'Your daughter cried.'
or: 'Your daughter is crying.'
[example from Frantz 1991:36; glosses added by BG[37]]

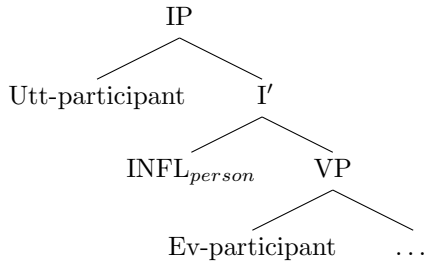
Data like these have led researchers to refer to Blackfoot, among other languages, as tenseless, and hence as not being on par with, e.g. an English-type system that requires the overt expression of tense. Under the assumption that the basic function of the inflection domain IP is to anchor[38] the event denoted in the VP to the utterance context denoted in the IP (cf. Enç 1987), Ritter and Wiltschko argue that the actual content of IP is subject to crosslinguistic variation ("Parametric Substantiation Hypothesis", op. cit.): They hypothesize that IP can be instantiated by one of the categories that are standardly taken to be part of the utterance context: TIME, LOCATION, or PERSON. They argue

[37] I provide my own glosses, since the glosses given in Ritter and Wiltschko (2009) represent an incorrect morphological breakdown. Also note that Frantz (1991) only provides the past tense interpretation as a translation of this sentence.

[38] Following Demirdache and Uribe-Etxebarria (1997, 2000), anchoring in Ritter and Wiltschko's (2009) sense proceeds via a head (I) that establishes a relationship between its specifier and its complement. See chapter II and chapter V for a detailed discussion of the relevant theoretical background.

that whereas the English IP is substantiated by tense (hence, TP), the Blackfoot IP is instantiated by PERSON.[39] Temporal (and aspectual) information is thus not obligatorily encoded in the Blackfoot IP but can be added to the predicate by means of various modifiers, or, as illustrated in (33) even be absent altogether. Simplifying somewhat, they argue that in Blackfoot the speech act participants are represented in Spec-IP whereas the participants of the eventuality are represented in Spec-VP. This is thus entirely parallel to the claim that UTTERANCE TIME and EVENTUALITY TIME are represented syntactically as discussed repeatedly at various points throughout this thesis; the crucial difference is that Ritter and Wiltschko (2009) propose that in Blackfoot it is not TIMEs that are represented but PERSONs, as schematized in (34):

(34)



[Ritter and Wiltschko 2009:177]

They analyze the Blackfoot person proclitics 'nit-', 'kit-', 'ot-' as heading the inflectional projection IP. Consequently, they take the person proclitics to anchor the eventuality denoted in the VP to the utterance context denoted in the IP. Compared to English, the person proclitics thus bear the same function as English verbal tense morphology. Simplifying somewhat, this gives the following results: a first person proclitic 'n-' or 'nit-' indicates that the speaker (Spec-IP) took part in the event (Spec-VP), a second person conveys that the addressee (Spec-IP) took part in the event (Spec-VP) and a third person proclitic appears when none of the speech act participants (Spec-IP) are part of the eventuality (Spec-VP).

However, there is also some counterevidence to the analysis of Blackfoot as a tenseless language. Reis Silva and Matthewson (2007), for instance, show that in the absence of overt tense marking, the ambiguity reported by Ritter and Wiltschko (2009) does not always hold: their Blackfoot consultant only allowed both present and past tense interpretations with imperfective stativs and eventives, but perfective eventives were restricted to past tense interpretations as in (35).

(35) a. oma pita ipaawani
DEM *eagle fly.up*
≠ 'That eagle is flying up.'
= 'That eagle flew up.'

b. oma pita a-ipaawani
DEM IMPF-*eagle fly.up*
= 'That eagle is flying up.'
= 'That eagle was flying up.'

[Reis Silva and Matthewson 2007]

[39] As for location, Ritter and Wiltschko (2009) present data from the Salish language Halkomelem to support their crosslinguistic claim.

Based on such examples, Reis Silva and Matthewson question the status of Blackfoot as a tenseless language and Ritter and Wiltschko's (2009) conclusions on independent grounds. While Reis Silva and Matthewson (2007) primarily discuss data and semantic aspects of their observations, they also tentatively suggest that Blackfoot disposes of a TP entirely parallel to English; according to them, the main difference between the two languages lies in the fact that Blackfoot has phonologically null tense morphemes for both present and past tense contexts, which is also the line that I am adopting for the purposes of this chapter.

Aside from this, there are two more points with respect to Ritter and Wiltschko's (2009) analysis that merit addressing in connection with my analysis: Firstly, as discussed in detail throughout this chapter, it can be shown that the Blackfoot person proclitics are internally complex AtPs and DPs, respectively. Hence, they cannot function as the head of IP and thereby fulfill the role attributed to them by Ritter and Wiltschko (2009).[40] This renders the two approaches incompatible with respect to the specific implementation of the anchoring mechanism. Secondly, however, I argue that the category PERSON is in fact a complex deictic category consisting of spatial and temporal features. Consequently, I predict that any system that prima facie makes use of person-features, such as Blackfoot under Ritter and Wiltschko's (2009) account, in fact makes use of a more complex category. A priori, the two approaches are thus not incompatible: according to Ritter and Wiltschko (2009), the temporal component is absent in the Blackfoot clausal spine and replaced by PERSON; but I argue that PERSON in fact contains a temporal component. From this point of view, TIME would then also be present in the Blackfoot clausal spine, even under Ritter and Wiltschko's (2009) account. We then predict to find empirical evidence for a more complex encoding of the relevant features in Blackfoot. This issue is, however, beyond the scope of this thesis and left open for further research.

In conclusion, the two proposals do not necessarily exclude each other. For the purposes of this thesis, I therefore maintain that universally all languages encode both UTTERANCE TIME and EVENTUALITY TIME in their external syntax, and that hence these two TIMEs are also syntactically represented in the Blackfoot clausal spine.

4 Proclitics in the Nominal Domain

In the previous section, I argued that Blackfoot's long form proclitics contain a feature in D that restricts the interpretation of the proclitic to a specific temporal stage of the denoted individual. Specifically, I propose that the relevant temporal stage is picked out by EVENTUALITY TIME and that the feature is

[40] But see Ritter and Wiltschko (To appear) for a slightly different analysis in which the person proclitics no longer occupy the head of IP; the details of their modified approach and its ramifications are, however, beyond the scope of this thesis.

spelt out by the morpheme '-it-'. This predicts that the long form proclitics should appear in contexts in which the relation between the individual and the eventuality is temporally restricted; the short forms, on the other hand, are predicted to appear in contexts in which this relation is temporally unrestricted. In this section, I will show that these predictions are consistent with Blackfoot possessive structures.

To indicate possession on a noun, Blackfoot uses the same set of proclitics that are found on verbal stems; in other words, a noun that is possessed by the speaker will be prefixed with the first person marker 'nit-', a noun related to the addressee with 'kit-' and a third person possessor is expressed with the prefix 'ot-'. However, these long forms only appear on nouns that are usually referred to as *alienable*. In cases of so called *inalienable* possession, Blackfoot employs the short form proclitics (Frantz 2009:70f.). This is illustrated in the examples in (36) for alienable possession and in (37) for inalienable possession:

(36)	a. nitááattsistaama **nit**-aaattsistaama *1-rabbit* 'my rabbit'	b. kitááattsistaama **kit**-aaattsistaama *2-rabbit* 'your rabbit'	c. * kááattsistaama **k**-aaattsistaama *2-rabbit*
(37)	a. niksíssta **n**-iksíssta *1-mother* 'my mother'	b. kiksíssta **k**-iksíssta *2-mother* 'your mother'	c. * nitsiksíssta **nit**-iksíssta *1-mother*

[Bliss and Gruber 2011b]

In what follows, I will briefly revisit the notion of *possession* and some of the literature with respect to the distinction between alienable and inalienable possession. Then I will proceed to the Blackfoot facts and present the analysis in detail.

4.1 A Few Notes on Possessive Constructions

Broadly speaking, the linguistic notion *possession* refers to a particular, typically asymmetric relation that holds between two entities – a possessor and a possessee – and is established syntactically. With respect to the surface syntactic realizations, we can distinguish between two different types: DP-internal and DP-external (or clausal) constructions. The first comprise nominal possessive constructions in which the possessor and the possessee appear in one nominal constituent. The second type, the external possessor construction, expresses possession sententially, e.g. by means of certain predicates such as 'have'.[41] Even though subsequently we will see examples of both constructions, we are primarily concerned with nominal possessive constructions, i.e. internal ones, of which one type is illustrated in the German example in (38):

[41] Crosslinguistic variation is very broad with respect to both syntactic types. See e.g. Abney (1987); Freeze (1992); Coene and D'hulst (2003) for related discussions.

(38) meine Katze
my.F *cat*.NOM
'my cat'

This example shows one typical type of a possessive relation, namely *property*. Possession is indicated by means of the first person possessive pronoun 'mein' (my) which establishes an asymmetric relationship of property between the speaker and 'katze' (cat): the first possesses the latter but not vice versa. This, however, is but one example of a possessive construction; both with respect to the syntactic structure as well as with respect to the semantic interpretation we can find a wide range of different possessive structures intra- and crosslinguistically. As two simple examples of purely syntactic variation witness the German phrases in (39):

(39) a. Marjos Katze
Marjo.GEN *cat*.F.NOM
'Marjo's cat'

b. die Katze von Marjo
the.F.NOM *cat*.F.NOM *of* *Marjo*
'the cat of Marjo'

In one case the possessor–possessee relationship is established by means of a genitive case marker on the possessor whereas in the second example the same is achieved by means of a prepositional phrase.

Besides the syntactic variation, there is also a wide array of semantically different types of possession. To illustrate just three, witness the English examples in (40):

(40) a. John's child
b. the table's top
c. the woman's pen pal [Barker 1995:8]

These phrases exemplify different types of relations that hold between the two entities that are connected to each other by means of a possessive construction: the first is a *kinship relation*, the second is a so-called *part–whole relation* and the third illustrates an arbitrary, symmetric relation.

The enormous variation in the syntax and semantics of possessor constructions opened up a broad field for research within the generative enterprise. These constructions played a crucial role in the development of a theory on the internal structure of noun phrases and the so-called *DP-hypothesis*, a matter which is reflected in the large body of literature on the topic (cf. among many others Szabolcsi 1983; Abney 1987; Giorgi and Longobardi 1991; Kayne 1994; Barker 1995; Cardinaletti 1998; Coene and D'hulst 2003).

Broadly speaking there are two main approaches to the analysis of possessive structures. One is based on the longstanding observation that the structure

of possessive nominal constructions parallels that of the clausal domain. Under this view, the possessor is taken to be the external argument, i.e. subject, of the possessee head noun (cf. Keenan 1974; Cinque 1980; Szabolcsi 1983; Abney 1987; Giorgi and Longobardi 1991). A slightly different approach views the possessor–possessee relation as a predication relation which typically involves movement of the possessor to its surface position (cf. Guéron 1986; Kayne 1994; den Dikken 1998; Corver 2003).[42] In the approach to Blackfoot possessive structures taken here, the first line is adopted, i.e. I analyze the nominal domain parallel to the clausal domain adopting an approach developed by Ritter and Rosen (2010b).

Apart from the different types of syntactic and semantic variation that we have already seen, nouns can also be divided into two big groups regarding their relation to other entities: in one case, the relation to another entity is accidental, in the other case, it is inherent. The first group is referred to as *alienable* and is basically only defined by the existence of the second group, the so-called *inalienable* nouns. These nouns denote entities which necessarily stand in a relationship to other entities; importantly, the relation is non-transitory and typically temporally unrestricted. We have already seen one such example in (40a): the notion 'child' necessarily implies the relationship to a father and a mother. Another typical example are body parts: a 'nose' is necessarily the nose of someone, an 'arm' (almost) always belongs to a body. Kinship and body part terms usually serve to illustrate the core meaning of inalienability, but there is an important caveat: in many languages that morphologically mark the difference between the two overtly, membership of one class or the other is mostly a lexical property; that is to say that real world relational entities need not necessarily belong to the class of inalienable nouns, and vice versa. Blackfoot is such a case in point, as can be seen in the examples in (41):[43]

(41) a. **n**óta'sa
'my horse'

b. **nit**áápotskinaama
'my cow'

c. **n**isápiikitsoohsa'tsisa
'my ring'

d. **nit**ohpó'nna
'my bracelet'

e. **n**óoma
'my husband'

f. **nit**óótoyoomi
'my brother in law'

[Frantz and Russell 1995]

All these examples are minimal pairs in the sense that semantically each pair should in principle belong to the same class of either relational or non-relational

[42]Strictly speaking, this approach also treats the syntax of possession parallel to clausal syntax, assuming movement of the predicate and presence of a copular in both cases.

[43]Muehlbauer (2007) argues on the basis of Plains Cree that semantically there are actually three distinct classes: alienable nouns (e.g. 'tree'), relational nouns (e.g. 'mother'), and inalienable nouns (e.g. 'hand'). However, even such a classification does not rebut my point here: if a language morphologically only marks a two-way distinction and it can be shown that there are logically unexpected exceptions to class membership, the conclusion that we are dealing with a lexical rather than a purely semantic classification seems warranted.

nouns, but as evidenced by the choice of proclitic, grammatically they belong to the opposite class. So in a sense one could compare it with grammatical gender in, e.g. German, where the gender of a noun does not necessarily coincide with the real world gender of the entity although of course in a considerable number of cases it does. Additionally, in languages in which the difference is sometimes less obvious there can also be considerable speaker variation. Vergnaud and Zubizarreta (1992:597) state to this effect that "some speakers may be able to treat 'computer' as inalienable, but others may not."

One might object at this point that the choice of proclitic might then not be due to the alienable/inalienable distinction but might simply be a purely lexical property. However, as will be shown shortly, there are systematic interpretational differences that only occur when a noun belonging to the inalienable class appears with the proclitic that is generally associated with alienable nouns. Therefore, I conclude that it is the class membership that is lexically fixed and not whether a noun associates with the long or short form proclitic.

4.2 The Internal Syntax of Blackfoot Possessors

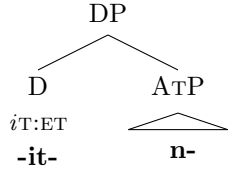
As already mentioned in the introduction, Blackfoot uses the same person proclitics that are found on verbal stems in order to indicate possession; this was illustrated by the examples (36) and (37), repeated here for convenience:

(36)	a. nitááattsistaama	b. kitááattsistaama	c. * kááattsistaama
	nit-aaattsistaama	**kit**-aaattsistaama	**k**-aaattsistaama
	1-rabbit	*2-rabbit*	*2-rabbit*
	'my rabbit'	'your rabbit'	
(37)	a. niksíssta	b. kiksíssta	c. * nitsiksíssta
	n-iksíssta	**k**-iksíssta	**nit**-iksíssta
	1-mother	*2-mother*	*1-mother*
	'my mother'	'your mother'	

[Bliss and Gruber 2011b]

As opposed to (36), the examples in (37) show the short rather than the long form proclitic. The crucial difference between (36) and (37) is that the second but not the first falls into the lexical class of inalienable nouns. Invariably, this set of entities in Blackfoot requires the short form proclitic whereas alienable possession takes on the long forms. I argue that the short forms are pro-AtPs whereas the long forms are pro-DPs, instantiated by the structure given in (26) and repeated below.

(26)



The long forms that appear in alienable possession thus contain the morpheme '-it-' which restricts the interpretation of pronominal referent to a specific temporal stage. More precisely, I argue that it restricts the interpretation to that stage of the individual at which the possessor relationship holds, i.e. the time of the eventuality of possession. This reflects the fact that alienable possession, as opposed to inalienable possession, is a non-permanent, transitory relationship. The short forms, on the other hand, merely consisting of an AtP lack this temporal restriction. As expected, they appear in contexts in which the relationship between the individual they denote and the individual they stand in a relationship with is permanent and non-transitory.

Interestingly, inalienable nouns in Blackfoot not only appear with the short forms whenever they are used possessively, the possessor proclitics obligatorily appear whenever such a noun is used; accordingly, these cases are also referred to as *obligatorily possessed* (Frantz 2009; Nichols and Bickel 2008). This results in the grammaticality judgements in (42):

(42) a. niksíssta
n-iksíssta
1-mother
'my mother'

b. kiksíssta
k-iksíssta
2-mother
'your mother'

c. oksíssta
w-iksíssta
3-mother
'her/his mother'

d. *iksíssta
Ø-iksíssta
Ø-mother
'mother'

[Bliss and Gruber 2011b]

Therefore, if a Blackfoot speaker wants to talk about someone being a mother, she has to resort to a different strategy. One option that consultants repeatedly provided is a verbalized noun such as 'Nitsííko'si' which translates into English "I have children" (Bliss and Gruber 2011b).

It should be stressed here that we are dealing with a lexical rather than a semantic category: from the core meaning of a noun we cannot always deduce whether it belongs to the class of inalienable nouns or not. Even though in many cases the lexical requirement coincides with the semantic core, i.e. most kinship terms are in fact obligatorily inalienably possessed, there are a number of cases in which the two intuitively differ as shown in (41) on page 84.

Next I will turn to the difference between these two structures in the external syntax and argue that this analysis provides further support for the status of the proclitics as both pro-AtP s and pro-DPs.

4.3 The External Syntax of Blackfoot Possessors

In the previous section, I have shown that the distribution of short and long form person proclitics in the nominal domain corresponds to the difference between inalienable and alienable possession. Or, put differently, it corresponds

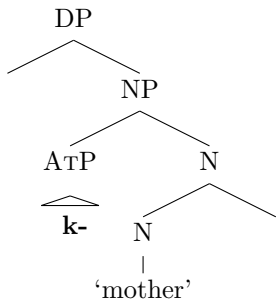
to temporally unrestricted and temporally restricted possessor-possessee relations. In what follows, I will detail how this relation is reflected in the external syntax of Blackfoot nominal possession.

4.3.1 Inalienable Nouns: Obligatory Possession

As already pointed out, inalienable nouns form a distinct lexical class and obligatorily appear with a possessor proclitic; this proclitic standardly takes on the short form. As discussed earlier, the short form is argued to map onto an AtP, i.e. it crucially lacks a D head that could restrict the interpretation of the pronoun to a specific temporal stage.

Given that a possessor is part of the lexical requirement of the inalienable root, Bliss and Gruber (2011b) argue that the possessor is directly selected by the root.[44] Further, we follow Ritter and Rosen (2011) in analyzing the Blackfoot possessor as the external argument of the noun and propose that it is merged in the specifier of the nominal projection. This is illustrated in (43) with a second person possessor:[45]

(43)



The external possessor argument is thus directly selected by the root and the possessor relation is established via the Spec-head configuration within the nominal projection.

Interestingly, the independent personal pronouns follow the same pattern as inalienably possessed nouns: they are compositional and consist of the short form proclitic and the animate nominal gender stem 'iistó' (Frantz 2009:75). They express emphasis and are roughly equivalent to the English combination of pronoun plus reflexive, e.g. 'I myself' (Taylor 1969:163). The independent pronoun paradigm looks as shown in table III.4 on the next page.

[44]Contra the universal claim in the framework of Distributed Morphology (Halle and Marantz 1993; Halle 1997; Marantz 1997), this implies that Blackfoot roots carry at least some information about their argument structure. This has also been argued by Armoskaite (2011) who shows that Blackfoot does not have category-neutral roots. Instead, Blackfoot roots all bear grammatical information that determines their group membership; roots that belong to one class, e.g. nouns, do not appear in contexts of a different class, e.g. verbs.

[45]I am abstracting away from categories that can potentially intervene between the DP and the NP, such as NumP.

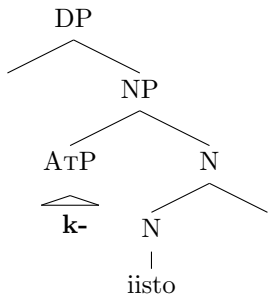
	singular	plural
first	niistówa	niistónnaana
	n-iisto-wa	*n-iisto-nnaan-wa*
	1-pro-PROX	1-pro-PL.EXCL-PROX
first inclusive	–	kiistónnoona
		k-iisto-nnoon-wa
		1-pro-PL.INCL-PROX
second	kiistówa	kiistówaawa
	k-iisto-wa	*k-iisto-waa-wa*
	2-pro-PROX	2-pro-PL-PROX
third	ostóyi	ostówaawayi
	w-iisto-yi	*w-iisto-waawa-yi*
	3-pro-OBV	3-pro-PL-OBV

Table III.4: Independent Blackfoot pronouns

[adapted from Frantz 2009:75]

Blackfoot independent pronouns thus look exactly like regular possessed noun phrases. I suggest that they also have the same structure as any other inalienably possessed noun as depicted in (44):[46]

(44)



An analysis on par with regular possessed noun phrases finds additional support in the suffixes they appear with as shown in table III.4: In addition to the person proclitics the independent pronouns exhibit distinct forms with respect to the discourse oriented proximacy/obviation system, in that they either bear the proximate marker '-wa' or the obviative marker '-yi'.[47] Interestingly, Blackfoot is the only Algonquian language that shows proximacy/obviation

[46] In a recent poster presentation, Déchaine et al. (2011) claim that Blackfoot independent pronouns simply map onto a ϕP structure: [$_{PhiP}$ n- [$_{N}$ iisto]]. Such an account necessarily implies that the proclitic itself is not internally complex and that the parallel to possessed nominals does not also hold on the structural level, both of which are my core arguments for the analysis suggested here. Which of the two accounts is ultimately correct, is an empirical question that has to be left open for further research.

[47] Following Déchaine (1999), I assume that the proximate/obviative marker is located in

marking on the indexical, i.e. first and second person, pronouns, not just on third person; Frantz (2009) thus also lists examples with the obviative marker '-yi' on first and second person instead of the proximate marker '-wa' as given in table III.4 on the facing page. The third person does not seem to be attested with a proximate marker. In general, Blackfoot marks all noun phrases with a third person possessor as obviative (Frantz 2009:14). Given that the independent pronouns look just like inalienably possessed gender stems, only showing obviative marking on third person is thus in line with the behaviour of possessed noun phrases in general. Crucial for the present discussion is the fact that independent pronouns behave like inalienable nouns and also only show the short form proclitics: this follows from the account of long and short form proclitics presented here, as independent pronouns arguably do not contain a temporally restricted relation between the possessor and the animate gender stem; further empirical support comes from the fact that independent pronouns with long form proclitics are unattested in Blackfoot, (45).[48]

(45) a. niistówa
n-iisto-wa
1-pro-PROX

b. * nitsiistówa
nit*-iisto-wa*

To sum this up, I propose that Blackfoot obligatorily possessed nouns, i.e. inalienably possessed nouns, are lexically defined for requiring a possessor. This possessor gets selected by the root itself and attaches low in the nominal structure as the external argument of the noun. I have shown that this analysis finds an interesting parallel in independent pronouns, which behave entirely parallel to inalienably possessed nouns with respect to their morphological make-up. Next, I turn to alienably possessed nouns.

4.3.2 Alienable Possession

As demonstrated earlier, alienable nouns invariably appear with a long form proclitic, which is argued to map onto a DP. Therefore, it contains a D head that restricts the interpretation of the pronoun to a specific temporal stage. Specifically, I claim that it restricts the interpretation of the pronoun to the time slice at which the possessor relationship holds, i.e. to the EVENTUALITY TIME of possession.

With respect to its external syntax, Bliss and Gruber (2011b) argue that the optional possessor proclitic DP is merged higher in the structure in a possessor

a NumP dominating NP, since the markers simultaneously expresses proximacy/obviation and number (cf. Frantz 2009).

[48]It has been suggested to me that '-iisto' might be the spell-out of the silent nominal MAN; independent pronouns would then map onto the exact same structure as proclitics. First of all, the evidence just presented shows that '-iisto' behaves like any other inalienable nominal. Second, if it were the spell-out of MAN, it would be expected to only appear in first and second but not third person pronouns. Since this is not the case, '-iisto' is not a suitable candidate for the spell-out of MAN.

phrase as also suggested by Alexiadou (2003) for Greek alienable possession[49]; this functional projection is headed by the possessive suffix '-im'[50] that gets added to alienable stems when they appear as possessed nouns. This is illustrated in the examples in (46):

(46) a. nitááattsistaama
nit-aaattsistaa-**m**-wa
1-rabbit-POSS-PROX
'my rabbit'

b. kitááattsistaama
kit-aaattsistaa-**m**-wa
2-rabbit-POSS-PROX
'your rabbit'

[Bliss and Gruber 2011b]

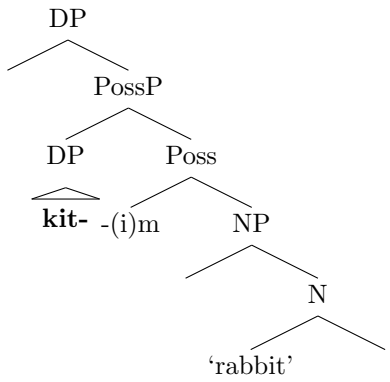
Following Ritter and Rosen (2011), Bliss and Gruber (2011b) analyze this suffix as a functional head that licenses the possessor as an external subject. For the Blackfoot verbal domain, Ritter and Rosen (2010a) have argued that the content of v is overtly expressed by the abstract finals that are part of the verb stem and carry information about the argument roles of the verb as discussed in section 1.1.2. Ritter and Rosen (2011), taking a symmetric approach to the nominal and clausal structure (cf. Szabolcsi 1983; Abney 1987), propose that the nominal possessive suffix '-(i)m' parallels these abstract finals in the verbal domain: it adds an argument and is located in n. This last point is where I depart from Ritter and Rosen (2011): Whether or not a verb requires an external argument, which is introduced by v, is part of the verb's argument structure, but whether or not an alienable noun has a possessor is contextually determined. However, analyzing '-(i)m' as the spell-out of n parallel to little v suggests that the possessor of an alienable noun is determined by the noun itself. Crucially, this is not the case, which is precisely why the possessor requires an additional suffix in order to be licensed. Therefore it is argued that '-(i)m' heads its own projection, PossP, which hosts the possessor proclitic in its specifier. The entire structure then looks as shown in (47):[51]

[49] Just as proposed here, Alexiadou (2003) also analyses alienable possession as structurally more complex than inalienable possession. Contrary to what we suggest for Blackfoot, though, she proposes a predication analysis for Greek inalienable nouns.

[50] Frantz (2009:72) notes: "This suffix has slightly different realizations with different stems, and the actual form it takes does not seem to be completely predictable." In some cases the suffix surfaces simply as '-m'. There are also cases in which the suffix does not appear at all; I assume that there is a null-morpheme instead.

[51] I assume that linearization proceeds via head-movement of N to Poss.

(47)



In this case, the possessor relationship is established via a dedicated projection within the extended nominal projection (cf. among others Szabolcsi 1994; Cinque 1994; de Wit 1997; Schoorlemmer 1998; Alexiadou 2003); this projection is headed by the morpheme '-(i)m' that licenses the possessor in its specifier.

4.3.3 Independent Support

Additional support for an approach to (in)alienable possession that is based on the distinction between an argument selected by the root (inalienable) and an argument introduced by an additional head (alienable) comes from Barker (1995). He proposes that "nominals translate as either two-place predicates or one-place predicates" and that "[t]hus one of the lexical meanings of the noun 'child' can be represented as a two-place relation between a parent and a child" (Barker 1995:8) as illustrated in (48a) and that a noun like 'firetruck' can be represented as (48b):

(48) a. $[\![\text{child}]\!] = \lambda x \lambda y[\textbf{child}(x,y)]$
b. $[\![\text{firetruck}]\!] = \lambda y[\textbf{firetruck}(y)]$

This captures Bliss' and Gruber's treatment of the two types of nouns straightforwardly: in the first case, 'child', the possessor is part of a two-place predicate and thus part of the nominal's argument structure. This is immediately reflected in the analysis of Blackfoot inalienable nouns presented here since the possessor is directly selected by the root; in the second case, 'firetruck', there is only one predicate and any possessor that gets added to that noun must be an argument that gets added outside the lexical domain. As predicted by such an approach, the two types of nouns also behave differently syntactically: e.g. one can say "a child of John" but not "*a firetruck of John" (Barker 1995:9). A similar approach is also taken by Partee (1983/1997) in her discussion of genitive constructions and their interaction with relational nouns. Her discussion is based on the contrast given in (49), where R stands for "relation":

(49) a. John's portrait. (ambiguous)
b. i. A portrait of John's. (free R only)
ii. A portrait of John. (inherent R only)
c. That portrait is John's. (free R only).

[Partee 1983/1997:465]

Whereas (49a) is ambiguous between a reading under which John is the one depicted on the portrait (relational) and a reading under which he is the owner of a portrait (non-relational), no ambiguity arises in the second example. To account for the differences, Partee first of all hypothesizes that there are only two basic genitive constructions to which the other variants are related: a predicative and an adnominal construction. Further, she proposes a category dubbed "transitive common noun phrases" (Partee 1983/1997:466) which semantically encodes the presence of a possessor argument by means of an inherent relational variable (cf. Barker's (1995) two-place predicate) and results in the adnominal genitive construction. With respect to non-relational nouns, she suggests that they have a "free relation variable", as opposed to the inherent one of relational nouns; crucially, this free variable is context-dependent and its presence syntactically reflected in the predicative genitive construction. This approach relying on a context-dependent relational variable is in line with the analysis proposed here concerning the D-element '-it-' in the Blackfoot proclitics: it is argued that this morpheme restricts the interpretation of the individual denoted by the proclitic to that stage of the individual at which the possessor relationship holds; put differently, one could think of the D-element as providing the relevant temporal context for the relation. Furthermore, any approach that assumes different lexical requirements depending on the type of noun – relational vs. non-relational – also expects languages that show different loci of merger of the possessor, which is confirmed by the current analysis of Blackfoot.

To sum up, so far we have seen that the following: an inalienable possessor has been identified as an argument which is selected directly by the root, thus reflecting the inherent relationship between the possessor and the possessee both syntactically and semantically; an alienable possessor, on the other hand, is introduced root-externally by an additional suffix again reflecting the type of relationship both syntactically and semantically: these possessors attach higher in the structure of the DP and hence do not bear any direct connection to the root. The connection between the possessor and the possessee is contextually determined (cf. Ritter and Rosen 2011), in the sense that the relation between the two entities only holds under the circumstances specifically defined by the eventuality context as opposed to inalienable possession where the relation holds irrespective of any specific eventuality context. In Blackfoot, this contextual restriction is explicitly expressed in the morphosyntax of the possessor proclitic: in the analysis presented here, this contextual link is provided by means of the morpheme '-it-' which introduces the relevant domain restriction. I argue that it is endowed with an interpretable TIME-feature that receives its

value syntactically from EVENTUALITY TIME. Therefore, it picks out a temporal slice or stage of the individual at which the possessor relationship holds. This captures the fact that alienable possession can be a transitory property whereas inalienable possession holds at all times.

This analysis makes three empirical predictions: Firstly, in cases in which an inalienable noun is coerced into an alienable relationship we expect the long form proclitics including the domain restrictor '-it-'. Secondly, given that the analysis postulates two potential possessor positions in the nominal structure we expect it to be possible that both of them can be filled simultaneously. And lastly, we expect that the long forms are illicit in cases in which the possessor-possessee relationship and the eventuality encoded in the VP do not coincide. I will discuss all three of these predictions subsequently.

4.3.4 Predictions: Coercion, Stacking, and Temporal Discrepancy

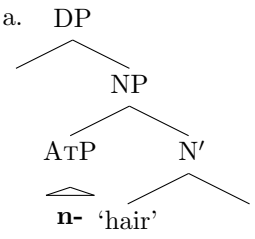
It is a well-known fact that certain inalienable nouns can be coerced into alienable ones, i.e. in the right context a standardly non-transitory relationship can be turned into a transitory relationship. One such example concerns the inherently relational noun 'hair': one can easily imagine cutting someone's hair and giving it to someone else. Given the analysis of Blackfoot possession discussed so far, we expect such a difference to be reflected in the choice of proclitic: recall that it is argued that the short form proclitic possessor reflects a non-transitory, temporally unrestricted relationship between the possessor and the possessee; on the other hand, the long form alienable possessor proclitic contains the D-element '-it-' which is argued to restrict the relationship between the possessor and the possessee to a specific temporal stage. In cases of inalienable nouns used in alienable, i.e. transitory, contexts we consequently expect to find the long form proclitic rather than the short form. This is indeed borne out as already shown in the minimal pair examples in (20) and repeated here:

(20) a. Amo no'tokáán
amo **n**-o'tokaan
DEM *1-hair*
'This is my (own) hair.'

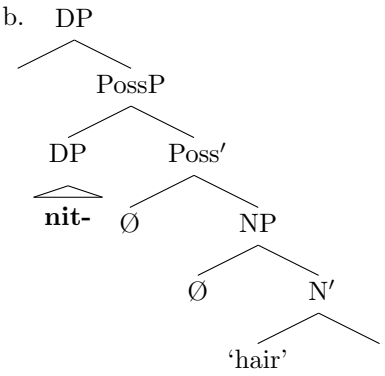
b. Amo nito'tokáán
amo **nit**-o'tokaan
DEM *1-hair*
'This is my (clipping of his) hair.'
[Bliss and Gruber 2011b]

According to my analysis, these examples correspond to the structures in (50):

(50) a.



b.



In (50b), the postulation of two null-morphemes is motivated as follows: So far we have only seen obligatorily possessed inalienable nouns and optionally possessed alienable nouns. The noun 'hair', however, belongs to a third class of Blackfoot nouns, namely the optionally inalienably possessed nouns (cf. Frantz 2009; Ritter and Rosen 2011). Those nouns are inherently relational, typically bodyparts such as 'hair', but do not necessarily appear with a possessor proclitic, i.e. they are not obligatorily possessed inalienable nouns. In cases, in which the possesssor is not expressed, they invariably appear with a prefix 'm-' as shown in (51):

(51) mo'tokáán
m-o'tokaan
m-hair
'hair'

I hypothesize that in cases in which there is no overt possessor this morphological marker surfaces in the specifier of the root, just like the inalienable possessor in (50a), filling the lexically required argument slot with an unspecified possessor. The idea is that this prefix simply marks the inherently relational nature of the noun but does not provide any information about who the possessor is. This also explains the fact that if a possessor does get merged, 'm-' does not get inserted. As for the empty head of the possessor phrase PossP, I suggest the following: it was argued earlier that this head typically surfaces as '-(i)m', as shown in (47) on page 90.[52] This head is taken to license the possessor in its

[52]It has been suggested to me that '-(i)m' and '-m' might in fact be identical and surface in the head of the Possessor-Phrase. The idea would then be that the example in (51) also contains a PossP, however with an empty specifier. This amounts to a structure like the following: [DP [PossP Ø[Poss m-] [NP Ø[N hair]]]]. This leaves unexplained under which circumstances it obligatorily introduces an overt possessor as in regular alienable possession (cf. (47)) and under which circumstances it licenses a null-possessor as in inherently relational nouns (cf. (51)). Since these properties are intrinsically linked to the type of nominal root that is involved, i.e. alienable versus inherently relational, I discard this option and maintain the claim in the main text. However, this is not to say that '-im' and '-m' might in fact not be related to each other since both surface in possessive constructions. I leave this issue open for further research.

specifier. I follow Ritter and Rosen (2011) in assuming that this overt marker is only required to license the possessor of an inherently non-relational noun, e.g. 'rabbit'. But in cases of inherently relational but not obligatorily possessed nouns, e.g. 'hair' as in the example in (20b), it does not appear since a possessor is required by the root itself . Consequently, the head of the possessor phrase is also taken to be filled by a null morpheme, as illustrated in (50b).

The second prediction concerns the syntactic slots that are available for possessors: an analysis that postulates two distinct possessor positions in a DP structure predicts instances in which both possessor slots can be filled. Again, this is borne out as shown by the example in (52) and the ungrammatical variants in (53). The obligatorily possessed noun 'mother' is used in a context of a transitory relation:[53]

(52) a. nitsikóóksissta
nit-iko-**w**-iksisst-wa
1-old-3-mother-PROX
'my former mother'

(53) a.* nitsikóíksissta
nit-iko-iksisst-wa
1-old-mother-PROX

b. * nikóó(tsi)ksissta
n-iko-**w(it)**-iksisst-wa
1-old-3-mother-PROX

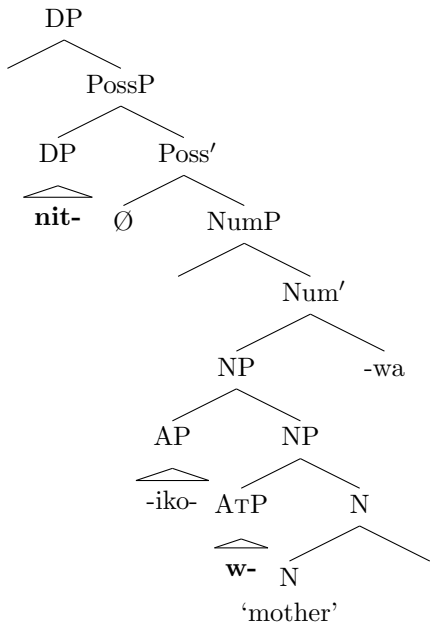
As can be seen in (52), the root of the inherently relational and obligatorily possessed noun 'mother' still selects for a possessor, in this case an unspecified third person possessor. This possessor is obligatory and necessarily surfaces as the short form proclitic, as evidenced by the ungrammatical versions in (53); this is predicted under our analysis of an obligatory inalienable possessor which is selected by the root.[54] As predicted, the transitory possessor appears higher up in the structure and surfaces as the long form proclitic 'nit-'. The corresponding structure is depicted in (54); as already mentioned in footnote 47, I follow Déchaine (1999) in assuming that the proximate suffix '-wa' is located in a number projection and for expository purposes I locate the adjectival modifier 'old' in an NP-adjunct position.[55]

[53] A relevant context could be a relationship to a foster parent.

[54] Why this surfaces as a regular third person prefix 'w-' rather than the prefix 'm-' which appears in non-obligatorily possessed inherently relational nouns as in example (51) is unclear at this point.

[55] Nothing hinges on positing the adjective in an NP-adjunct position; determining its exact position would go beyond the scope of this thesis and is left for further research.

(54)



The last prediction concerns cases in which an alienable possessor relation and the EVENTUALITY TIME of the sentence do not coincide. Since I argue that '-it-' in D carries an interpretable but unvalued TIME-feature that receives its value from the EVENTUALITY TIME of the clause, it follows that the possessor relationship and the eventuality necessarily coincide. However, we can easily construct examples in which this is clearly not the case, as for instance illustrated in (55).

(55) My ring used to belong to my dad.

In this example, the possessor relationship between me and my ring differs from the eventuality of the ring belonging to my dad. Although these cases remain to be systematically tested in Blackfoot, a first piece of data clearly confirms the prediction that the long form proclitic is ungrammatical in those cases: Blackfoot has two lexical items denoting 'horse'. One of them belongs to the class of alienable nouns, 'ponokáómitaa', whereas the other one belongs to the class of inalienable nouns, 'o'tas'. Consequently, whereas the first one combines with a long form proclitic, the second one combines with a short one. Now witness the examples in (56).

(56) a. * Oma kitsiponokaomitaam annahk Pitaaki
oma **kit**-ponokaomitaa-m-wa annahk Pitaaki
DEM *2-horse* DEM *Martina*
ííkaotasimmiwayi
ii-akaa-ota's-immyiiwaayi
IC-PERF-*horse-own*
intended: "Your horse used to belong to Martina."

b. Oma kotas annahk Pitaaki ííkaotasimmiwayi
oma **k**-o'tas annahk Pitaaki ii-akaa-ota's-immyiiwaayi
DEM *2-horse* DEM *Martina* IC-PERF-*horse-own*
'Your horse used to belong to Martina.'

[data from Heather Bliss, p.c.]

It should be pointed out that the language consultant had great difficulty with this example. After having provided the sentence in (56a) with the alienable lexeme for 'horse', she judged it as ungrammatical and said that there was no way of saying this; but then she provided the sentence in (56b) with the inalienable variant. Interestingly, the alternative that she deemed acceptable was the one that did not involve a long form proclitic. This is expected under my analysis: I argue that the long form implies that the possession relation is restricted to the eventuality time of the sentence. But in the cases at hand the eventuality under discussion and the possessive relation refer to two different times. However, as already pointed out, this prediction needs to be tested further: we will need to see more examples with nouns that do not provide a choice but only allow for the long form proclitic. For now I conclude that these results are very encouraging for my analysis of Blackfoot proclitics and turn to an interesting parallel in Indo-European languages.

4.3.5 Parallels in French and German

The analysis of Blackfoot possession put forward here relates to accounts for Indo-European inalienable nouns that have been proposed in the literature. Consider the French sentence in (57):

(57) Les enfants ont levé la main.
the-PL *children have raised the*-F.SG *hand*

[Vergnaud and Zubizarreta 1992:596; glosses added by BG]

This sentence is ambiguous between an inalienable and an alienable interpretation: Under the first reading, 'la main' (the hand) is understood as a body-part of each of the children. In English this would be expressed along the lines of 'Each of the children raised his/her hand' (Vergnaud and Zubizarreta 1992:596). Under the alienable reading, the group of children that we are talking about possesses one hand, e.g. the hand of a doll, and all together they raise this one hand. In their account, Vergnaud and Zubizarreta (1992) attribute the

two different readings to two different types of determiners that according to them are available in French: one an expletive determiner, the other one a fully denoting determiner[56]; the expletive determiner leads to an inalienable interpretation whereas the denoting determiner results in an alienable interpretation.[57] The contrast is even more obvious in German which, as opposed to French, allows bare nouns. Consider the minimal pair in (58):

(58) a. Die Kinder haben das Blut gespendet.
the children have the blood donated
'The children have donated the blood.'

b. Die Kinder haben Blut gespendet.
the children have blood donated
'The children have donated their blood.'

[Wiltschko 1995:51]

Whereas the first sentence with the overt definite determiner 'das' (the) only has a reading under which the group of children own, e.g. a jar of blood and donate that jar; the second example, which lacks the determiner, means that each of the children donated their own blood. In other words, the second version results in the inalienable reading, whereas the first induces an alienable interpretation of an otherwise inherently relational noun. Crucially, the interpretation is dependent on the presence or absence of the determiner, much like in the analysis of Blackfoot proclitic possessors even though there the connection to a determiner position is not as clearly visible at first.

In short, there is an interesting parallel between the interpretation of alienable versus inalienable possession in French, German, and Blackfoot concerning the determiner position. However, at this point it is unclear how exactly the analyses of this phenomenon could be unified for all three languages. With this I conclude the discussion of the proclitics in the nominal domain. In the next section, I will turn to the verbal domain with a particular focus on the interaction between the proclitics and the simple past and the perfect.

5 Proclitics in the Verbal Domain

As introduced at the beginning of this chapter, the person proclitics that have just been discussed as possessors in the nominal domain also appear as arguments in the verbal domain. The referent of the proclitic refers to one of the participants of the eventuality denoted by the verb.[58] With most tense or aspect markers, it surfaces as the long form proclitic as exemplified in (59).

[56] See also Longobardi (1994) on the distinction between expletive and "substantive" (op.cit.) determiners.

[57] More precisely, Vergnaud and Zubizarreta (1992) draw the connection between the first being type- and the second being token-denoting.

[58] See the discussion of the proclitics in section 2.

(59) a. Nitsinnisi
nit-innisi
1-fall
'I fell.' [Bliss and Gruber 2011b]

b. Nitáókska'si.
nit-a-okska'si
1-IMPF-*run*
'I am running.' [Frantz 2009:34, glosses modified by BG]

c. Kitáaksipii.
kit-yaak-ipii
2-FUT-*enter*
'You will enter.' [Frantz 2009:32]

All these environments exclusively show the long form proclitics. However, the perfect marker 'ikaa-', as shown in (60), is the only tense/aspect marker that obligatorily appears with the short form proclitic.[59]

(60) nikááyo'kaa
n-ikaa-yo'kaa
1-PERF-*sleep*
'I have slept.'

In what follows, I will discuss the perfect marker 'ikáá-' in greater detail and set it in contrast with the simple past tense. I argue that the choice of short versus long form proclitic follows straightforwardly from the analysis put forward so far. At the end of this section, I present some preliminary additional evidence from the domain of modality: the modal prefix 'ááhk-' can appear with either the long or the short form, resulting in interesting interpretational differences that tie in with the analysis put forward here.

5.1 The Blackfoot Perfect and Simple Past

As already mentioned in section 3.2.2, one way to express the simple past in Blackfoot is by not using any specific morphological marker. As pointed out earlier, such a form is ambiguous between a present and a past tense reading (Frantz 2009; Ritter and Wiltschko 2009). The perfect, on the other hand, is expressed by the prefix 'ikáá-'. Interestingly, these forms are also ambiguous between a present perfect and a past perfect interpretation. This is illustrated in the examples in (61).

[59] Other morphemes that appear in the verbal domain and select the short forms are certain prefixes that introduce applicatives, i.e. additional arguments that are not part of the verb's basic argument structure (cf. Pylkkänen 2002). A tentative analysis of these constructions is given in Bliss and Gruber (2011a), but the details are left open for further research.

(61) a. Nítsspiyi
nit-ihpiyi
1-dance
'I dance.'
or: 'I danced.'

b. Nikááihpiyi
n-ikaa-ihpiyi
1-PERF-*dance*
'I have danced.'
or: 'I had danced.'
[Bliss and Gruber 2011b]

Disambiguation then follows according to the context, as illustrated in (62) for the perfect (word-initally, 'ikáá-' appears as 'ákaa-').

(62) Attsinówainiki na Myaani akáíkamotaa
attsinowainiki na Myaani akaa-ikamotaa
see DEM *Myaani* PERF-*give.birth*
'By the time I saw Mary (again), she had given birth
[data from Heather Bliss, p.c.]

Whereas present/past tense contexts obligatorily select the long form proclitics, the perfect morpheme 'ikáá-' invariably appears with the short form proclitics (Frantz 2009). This is also illustrated by the (un)grammaticality judgements in examples (63) and (64).[60]

(63) a. nitsó'kaa
nit-yo'kaa
1-sleep
'I slept.'

b. * no'kaa
n-yo'kaa
1-sleep
intended: 'I slept.'

c. kitsó'kaa
kit-yo'kaa
2-sleep
'You slept.'

d. * ko'kaa
k-yo'kaa
2-sleep
intended: 'You slept.'

(64) a. nikááyo'kaa
n-ikaa-yo'kaa
1-PERF-*sleep*
'I have slept.'

b. * nitsikááyo'kaa
nit-ikaa-yo'kaa
1-PERF-*sleep*
intended: 'I have slept.'

c. kikááyo'kaa
k-ikaa-yo'kaa
2-PERF-*sleep*
'You have slept.'

d. * kitsikááyo'kaa
kit-ikaa-yo'kaa
2-PERF-*sleep*
intended: 'You have slept.'
[Bliss and Gruber 2011b]

In (63), which illustrates the past tense, the short forms are ungrammatical; conversely, in (64), which illustrates the perfect, the long forms result in ungrammaticality. As already mentioned, the perfect morpheme 'ikáá-' is the only marker within the tense/aspect domain that selects the short form proclitic. It indicates that "[...] an event is completed, or that a process has terminated

[60] For ease of exposition, I am abstracting away from the ambiguity for now.

before the present" (Frantz 2009:34).[61] It is standardly translated with an English present perfect, but as already shown can also give rise to past perfect interpretations.[62] Bliss and Gruber (2011b) attribute the selectional restriction of short form proclitics to an analysis of the perfect as a property: once the described perfect event has taken place, it is permanently attributed to the individual denoted by the proclitic and turned into a temporally unrestricted property of the individual. Thus, the perfect is similar to inalienable possession in that the relation between the individual denoted by the proclitic and the property it associates with is temporally unrestricted. As such, it stands in contrast with a simple past tense, which simply states that an event took place prior to the utterance time without having any implications for the present.[63] I take this analysis one step further by arguing that 'ikáá-' has a function parallel to an English participle marker; following Iatridou et al. (2002) I propose that it indicates the existence of a "perfect time span" whose temporal component (present or past) is contributed by tense in T. In what follows, I will illustrate the main differences between the simple past and the perfect and give some general background on the perfect. Then I will proceed to discuss the analysis of both constructions in Blackfoot.

5.1.1 A Few Notes on the Simple Past and the Perfect

A simple past tense sentence conveys the information that the eventuality denoted by the verb occurred at some time in the past. A sentence like 'I arrived yesterday' simply states that the eventuality of me arriving took place on the day before the utterance. As for perfect constructions, matters are more intricate: the perfect is situated on the crossing between tense and aspect, it displays puzzling interaction effects with temporal adverbs and aktionsarten and it gives rise to several distinct readings. I will briefly introduce some of these issues subsequently in order to provide the basic background for the discussion of the Blackfoot perfect and its analysis. For ease of exposition, I will mainly focus on the present perfect.

---

[61] Frantz (2009) identifies this morpheme as a perfective marker. However, following Bliss and Gruber (2011b), I analyze it as a perfect since it can co-occur with an aspect marker and behaves like a standard perfect as will be shown in this section.

[62] It can also appear with the future marker 'yáak-' and result in a future perfect, as in (i).

i. Apinákosi áaksikáóka'pihtsiiyiwa.
apinákosi yaak-ikaa-oka'pihtsiiyiwa.
tomorrow FUT-PER-*spoil*
'Tomorrow it will have spoilt.' [Frantz 2009:36]

For the purposes of this thesis, I will abstract away from these cases and focus on the present and past perfect interpretations.

[63] This analysis leads us to expect that the choice of proclitic also differs with respect to stage-level and individual-level predicates: the former are characterized as temporary properties of individuals, whereas the latter are permanent properties, e.g. 'being sick' versus 'being tall' (cf. Carlson 1980; Kratzer 1995). Our analysis predicts that the former should appear with the long forms whereas the latter should appear with the short forms. However, this is an empirical question that is still open for future research.

One property that is generally acknowledged as a characteristic of the present perfect has to do with its connection to the present in the broadest sense (cf., e.g. Comrie 1976; Dowty 1979; Vlach 1993). The example in (65) trivially exemplifies this:

(65) *Alexis comes home late and says that he is hungry. Bettina replies:*
"I have already eaten."

Upon uttering this sentence the speaker not only conveys that she has already had dinner at some point before Alexis' coming home but that, as a consequence, she is also no longer hungry now. The past tense version of this sentence, on the other hand, would not have the same effect as illustrated in (66).

(66) "I already ate."

This utterance merely conveys that the speaker ate at some point prior to the conversation. But as opposed to (65), it is easily compatible with a continuation that implies that the event of eating in the past has no implication for the present, e.g. ". . . but now I am hungry again, so I'll join you for a bite".

Another interesting characteristic of the perfect concerns its status as tense and/or aspect: At first sight, the perfect appears to be similar to a past tense in that it expresses that a given eventuality took place at some time before the conversation. Therefore it is also often discussed in opposition to the past tense (among others Reichenbach 1947; McCoard 1978). In his seminal work on temporal interpretation, Reichenbach (1947) treats the present perfect on par with present and past tense.

Reichenbach's (1947) system is based on a tripartite view of tense comprising speech time (S), reference time (R) and event time (E). Under his account, the difference between past tense and present perfect lies in the fact that in the past tense both the event time and the reference time coincide while preceding the speech time; the present perfect, on the other hand, expresses the coincidence of the reference time and speech time, both preceded by the event time. This type of account is also referred to as an Anteriority approach to the perfect. One of the problems of this view has been widely discussed in the literature (cf. Comrie 1976; McCoard 1978) and coined "the present perfect puzzle" by Klein (1992): whereas the English past tense happily appears with adverbials like 'yesterday', the present perfect is ungrammatical when combined with such past oriented adverbials.[64] This is illustrated by the examples in (67):

(67) a. Anani slept all day yesterday.
b. *Anani has slept all day yesterday.

[64]There is an additional layer to this puzzle, namely crosslinguistic variation: Not all languages have the same restrictions as English. German, for instance, freely allows past oriented adverbs with both the simple past and the present perfect. See, e.g. Musan (2001); von Stechow (2002); Rathert (2004) for discussion.

If the present perfect were a regular tense with past orientation, then this incompatibility would be surprising. Also, there are adverbials, e.g. 'since', that can only appear with a perfect but not with a simple past (cf. McCoard 1978).

A second approach to the perfect considers it an aspect. Klein (1994), for instance, defines tense as relating the time of utterance and the topic time, i.e. the time about which a claim is being made.[65] This is illustrated with the past tense example in (68):

(68) *A judge asks a witness in court: "What did you notice when you entered the room?" The following sentence is part of the witness' answer:*
A man was lying on the floor. [Klein 1994:36f.]

In this case, the topic time is the time when the witness entered the room which is when she saw the man lying on the floor. This was prior to the time of utterance; the function of the past tense in (68) is then to indicate precisely this order: the event situated at the topic time took place prior to the utterance time. Aspect, on the other hand, is defined by Klein (1994) as relating the topic time to the situation time (or event time). Under this view, the perfect counts as an aspect as it relates the topic time to the event time, bearing in mind that in the present perfect the topic time happens to coincide with the speech time. I will illustrate this by means of the sentence given in (65) and repeated here for convenience:

(65) "I have already eaten."

The situation time is the time when the eating took place; this is related to the topic time, which, as already mentioned, always coincides with the utterance time in the present perfect.[66] Under Klein's (1994) account, the perfect thus counts as aspect rather than tense, a view that is, among others, also held by Kratzer (1998); von Stechow (2002); Paslawska and von Stechow (2003); Pancheva (2003); Kiyota (2008); Higginbotham (2008).

The actual interpretation of a perfect, however, also depends on tense. More specifically, in a given sentence the interpretation of a perfect draws on both the aspectual and the temporal component: for instance, in English the latter is taken from the temporal morphology of the analytic form, i.e. present, past or future auxiliary. Additionally, the perfect can appear together with a imperfective marker which again is unexpected if it were an aspectual marker of the same type. Alexiadou et al. (2003) thus conclude:

[65] This is where Klein (1994) crucially differs from Reichenbach (1947): even though Klein also assumes three distinct temporal locations (utterance time, topic time, situation time), he defines tense as only relating two of these three reference points (utterance time and situation time). Topic time only comes into play with respect to aspect.

[66] To make the distinction between topic time and utterance time with respect to the perfect clearer, consider a sentence with a past perfect in the relevant context:

i. *I am telling a friend what I did the evening before:*
When Alexis came home, I had already eaten.

Now the event of eating is related to the topic time which no longer coincides with the time of utterance but with the time of Alexis coming home.

> "The most appropriate terminology seems to be the traditional one, according to which the *have*-perfect is a relative tense. It relates the reference time to some other time in the past [...]."
> [Alexiadou, Rathert, and von Stechow 2003:xiv]

With respect to the Blackfoot perfect marker 'ikáá-', I follow a third line of analysis that takes a more fine-grained approach and analyzes analytical perfect constructions as being composed of the perfect morphology, of tense and of aspect. This analysis is supported by the fact that the perfect marker 'ikáá-' can appear together with aspectual as well as temporal markers. As for the latter, we have already seen that the lack of overt tense markers leads to an ambiguity between the present and past perfect, parallel to sentences that are ambiguous between present and past tense interpretations. As for the former, the example in (69) illustrates the cooccurrence of 'ikáá-' (word-initally again appearing as 'ákaa-') and the aspectual marker 'a-'.

(69) Amo nínnawa ákaa'paistotakiwa náápioyii.
amo nínnawa ákaa-a'p-**a**-istotakiwa náápioyii
that man PERF-PREF-DUR-*make house*
'This man has built a house.' [Frantz 2009:35]

These data support an approach to the perfect that analyzes it as neither purely temporal nor as purely aspectual. Specifically, following Iatridou et al. (2002), I argue that the perfect is associated with dedicated morphology, i.e. 'ikáá-', that asserts the existence of a perfect time span during which an eventuality occurred. The details of this approach will be given subsequently in connection with the analysis of the Blackfoot perfect.

5.1.2 Blackfoot Simple Past and Perfect: the Analysis

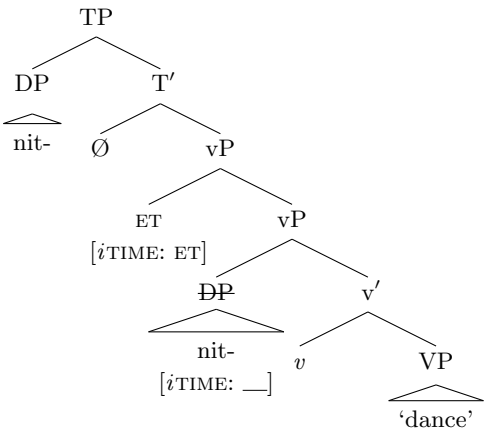
As for the simple past, recall that the examples are ambiguous between a past tense and a present tense interpretation. This was already discussed in section 3.2.2 and is again exemplified in (70).

(70) nitáihkiita
nit-a-ihkiita
1-IMPF-*cook*
'I am cooking.'
or: 'I was cooking.' [Reis Silva and Matthewson 2007]

I propose that this ambiguity is due to the lack of an overt temporal marker and that underlyingly there is a null-morpheme in T. As already discussed earlier in section 3.2.2, Reis Silva and Matthewson (2007) draw a similar conclusion: although they do not detail a syntactic account, they tentatively suggest, contra Ritter and Wiltschko (2009), that Blackfoot has a phonologically null

tense morpheme situated in T. As for the proclitic, I argue that it gets base-generated in the extended verbal projection and is licensed as an external argument by a light head *v* (cf. Kratzer 1996; Chomsky 1995). The structure for an unergative sentence thus looks as already given in (32) and repeated here.

(32) a. Nítsspiyi
nit-ihpiyi
1-dance
'I danced.'

b. 

As already detailed in section 3.2, I propose that the unvalued TIME-feature of the long form proclitic receives its value from EVENTUALITY TIME under Reverse Agree. After this valuation, it then moves further on to the specifier of TP, which I take to be its final position within the structure (cf. Bliss and Gruber 2011b; Déchaine and Wiltschko 2011). Since there is no overt temporal marker, I propose that the head of TP is occupied by a null morpheme.

As for the perfect, the analysis is couched in an Extended-Now (XN) theory (cf. McCoard 1978; Mittwoch 1988), specifically the approach taken by Iatridou et al. (2002). XN-approaches to the perfect date back to McCoard (1978) and stand in contrast to so-called Anteriority approaches: the crucial difference between the two is that Anteriority theories take the event time to precede the speech time as, e.g. in Reichenbach (1947); XN-theories, on the other hand, argue that "the Perfect serves to locate an event E within a period of time that began in the past and extends up to the present moment." (Rathert 2004:18) To illustrate this, consider the German example in (71):

(71) Der Schwarzwald hat schon immer die Menschen in seinen Bann
the Black-Forest has already always the people in his spell
gezogen.
drawn
'The Black Forest ever since cast his spell over people.'
[Rathert 2004:18]

Rathert points out that under an Anteriority approach the spell-casting is taken to have ended by the time the sentence is uttered. This, however, is clearly not the case: the spell-casting continues in the present, as predicted under an XN-approach.

A prominent version of an XN-analysis of the perfect is that of Iatridou et al. (2002).[67] Following their account, Bliss and Gruber argue that the perfect asserts the existence of a time interval during which the eventuality denoted by the verb occurred; this interval is referred to as the *perfect time span*. This time span has a left and a right boundary: the left boundary (LB) is set by a covert or an overt perfect level adverbial, whereas the right boundary (RB) is set by tense. A typical English perfect level adverbial is 'since'. An adverbial such as 'since 1990' therefore sets the LB to 1990; the RB depends on the tense of the auxiliary. This is exemplified in (72):

(72) a. I have been sick since 1990.
b. I had been sick since 1990.

[cf. Iatridou et al. 2002]

In both examples, the left boundary of the perfect time span is 1990; the right boundary, on the other hand, differs according to the tense of the auxiliary: in the first case it is equivalent to the utterance time, i.e. the present, whereas in the second case it is at some point prior to utterance time, i.e. the past.

In the absence of an overt element determining the left boundary of the perfect time span, Iatridou et al. (2002) argue for the presence of a covert perfect level adverbial that sets the LB. This can be illustrated by an adverbial that is ambiguous between a perfect level adverbial and an eventuality level adverbial such as English 'for'. As a perfect level adverbial, it sets the LB to the beginning of the time span indicated by the for-phrase; as an eventuality level adverbial, it only indicates the duration of the eventuality without contributing any information about its starting point, as demonstrated in (73):

(73) a. I have lived in Thessaloniki for ten years.
b. There is a time span (the perfect time span) whose LB is ten years ago and whose RB is the utterance time, and throughout that time span I lived in Thessaloniki.
c. There is a time span (the perfect time span) whose LB is when I was born and whose RB is the utterance time, and in that time span there is an eventuality of my living in Thessaloniki for ten years.

[Iatridou et al. 2003:66]

Under the first reading, the for-phrase is interpreted as a perfect level adverbial and hence sets the LB to ten years prior to the utterance; under the second reading, the for-phrase is interpreted as an eventuality level adverbial indicating

[67] This paper got republished as Iatridou et al. (2003); all citations in this chapter are taken from the 2003 version.

how long the eventuality lasted but not making any statement about the LB of the perfect time span. Iatridou et al. (2002) propose that the LB in this case is set by a covert perfect level adverbial that results in the reading in (73c). This ambiguity also holds in Blackfoot as shown by the example (74) and the two indicated readings that are available.

(74) Nikáísamaihpiyi.
n-ikaa-isam-a-ihpiyi
1-PERF-*long.time*-IMPF-*dance*
'I have danced for a long time.'

i. **LB = perfect level adverb:** There is a time interval (the perfect time span) whose LB is *a long time ago* and whose RB is now and throughout that time interval, I danced (continuously).

ii. **LB = existence of subject:** There is a time interval (the perfect time span) whose LB is when I was born, and whose RB is now and in that time interval, there is at least one eventuality of me having danced for a long time.

[Bliss and Gruber 2011b, adapted from Iatridou et al. 2002]

Again the two different boundaries demarcate the perfect time span: in the first case the eventuality lasted throughout this time span, whereas in the second case it took place at some interval within that time span. This is schematized in the figures III.2 and III.3.

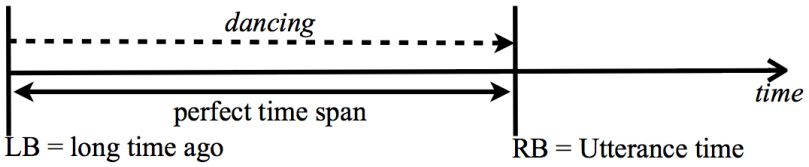


Figure III.2: Overt perfect level adverb, (74i)

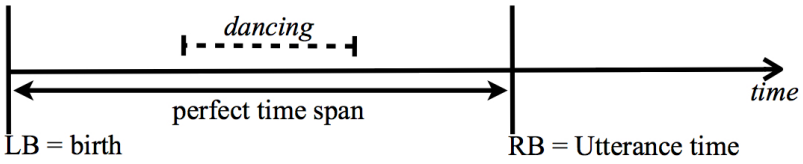


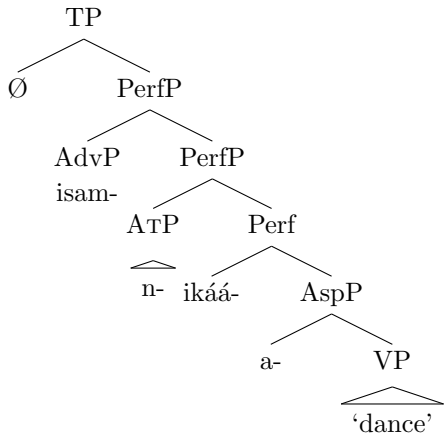
Figure III.3: Covert perfect level adverb, (74ii)

Following Parsons (1990); Vlach (1993) among others, Bliss and Gruber (2011b) propose that this demarcation leads to an interpretation of the predi-

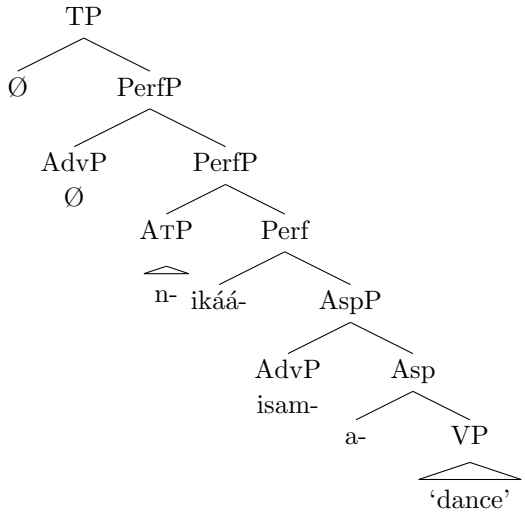
cate as a property which is permanently attributed to the individual. We suggest that this property is relevant over the individual's lifetime starting with the perfect eventuality and continuing after the RB. Consequently, the relation between the individual and the property becomes temporally unrestricted and thus leads to the choice of the short form proclitic. This particular view of the perfect follows a long tradition in the same spirit: Parsons (1990:234) says that "for every event e that culminates, there is a corresponding state that holds forever after." And Vlach (1993:260) notes to this effect that "[t]he consequent state of an eventuality E [...] continues to hold forever."

The two corresponding syntactic derivations of (74) then look as in (75) and (76). Following Iatridou et al. (2002), I assume that perfect level adverbials attach to PerfP whereas eventuality level adverbials attach lower in the structure.

(75) Overt perfect level adverb:



(76) Covert perfect level adverb:



Under this analysis, the perfect marker 'ikáá-' has the same function as, e.g. the English morpheme '-en' which turns the verb into a participle and asserts the existence of a time span. The temporal part of the interpretation is contributed by T parallel to the previously discussed contribution of a present or past auxiliary in English ('have eaten' versus 'had eaten'). I propose that the Blackfoot proclitic gets directly selected by the head of PerfP: the function of this marker is to close off a time span of the eventuality denoted by the verb; under this approach the proclitic is the external argument of the time span which is attributed to the individual as permanent property.

5.2 Preliminary Additional Support: Modality

So far I have argued that the main difference between the long and short form proclitics is the following: the long but not the short forms contain domain restriction over temporal stages of the individual denoted by the proclitic. Consequently, the short forms only appear in contexts in which the relation between the individual and the eventuality is temporally unrestricted. In what follows, I will add further, albeit preliminary, evidence for this dichotomy: in the domain of modality, specifically in conjunction with the modal prefix 'ááhk-', the choice of proclitic results in different interpretations.

The Blackfoot preverb 'ááhk-' is listed in the dictionary as corresponding to English 'might' (Frantz and Russell 1995); it is analyzed as a marker of modality (cf. Bliss and Ritter 2007, 2009). Interestingly, it can occur with either the long or the short form proclitics as shown in (77). Frantz (2009:109) remarks in a footnote that whether the prefix selects the long or short form proclitic varies from speaker to speaker; however, this is not what appears to be the case for any of the speakers who provided the following judgements:

(77) a. Nááhksikkamihpiyi
n-aahk-ikkam-ihpiyi
1-MOD-*if-dance*
'I might dance.'

b. Nitááhksikkamihpiyihtopi (. . . nikatáíssiksinaasstopi)
nit-aahk-ikkam-ihpiyi-htopi (. . .)
1-MOD-*if-dance*-UNREAL *(. . .)*
'I would dance (. . . if I hadn't hurt myself.)'

[Bliss and Gruber 2011b]

As can be seen, the choice of proclitic results in different interpretations of the modal marker: whereas the short form results in an epistemic interpretation expressing the speaker's uncertainty, the long form in combination with 'ááhk-' results in a counterfactual interpretation. Casting this in the approach taken here, the idea is that whereas in epistemic modality the relation between the eventuality and the proclitic argument is temporally unrestricted, it is temporally restricted in counterfactuals. One way to extend this to the domain

of modality is the following: expressing an epistemic sentence implies that the speaker does not know whether the eventuality will occur or not and hence cannot define any specific temporal slice of the individual denoted by the proclitic at which the relation between individual and eventuality holds. In the counterfactual statement, however, there is a hypothetical situation in which the relation between the individual denoted by the proclitic and the eventuality would hold. I speculate that it is precisely this hypothetical temporal stage of the individual that the long form proclitic picks out. This view finds interesting crosslinguistic support from approaches to the past tense and the present perfect as well as to epistemic modals and counterfactuals, which I will introduce subsequently.

5.2.1 Past Tense and Counterfactuals

With respect to the past tense, recall that in Blackfoot past predicates always encode their proclitic argument with the long form, i.e. with the one including temporal restriction; likewise, the modal prefix 'ááhk-' chooses the long form in counterfactual statements. It has been observed that in numerous languages there is a connection between past morphology and counterfactuals as the latter often employs the first. As an illustration, witness the English example in (78):

(78) I wish I had a car. [Iatridou 2000:231]

The information conveyed by this sentence is that I do not have a car now; the morphology, however, corresponds to a simple past tense. Iatridou (2000) seeks to explain this connection by a common core of the interpretation of past tense and of counterfactuality. Drawing on Klein (1994), she analyses past tense as expressing that a given "topic time excludes the utterance time" (Iatridou 2000:246); recall at this point that topic time is defined as the time that is being talked about. This was illustrated in (68), repeated here for convenience.

(68) *A judge asks a witness in court: "What did you notice when you entered the room?" The following sentence is part of the witness' answer:*
A man was lying on the floor. [Klein 1994:36f.]

The relevant topic time here is the moment the witness entered the room which happened prior to the utterance time; or, put differently, the topic time in this case excludes the utterance time. Based on the idea that tense and modality can be modelled parallel to each other with the first being based on time and the latter being based on worlds, Iatridou suggests the following for the meaning of past morphology in a counterfactual: "The topic worlds exclude the actual world" (Iatridou 2000:247) where the actual world is the world of the speaker, parallel to the utterance time. Applying this to the example in (78), this means that the topic world is the world in which the speaker has a car but in the actual world the speaker does not have a car thereby resulting in the counterfactual interpretation.

Iatridou's (2000) account is based on the observation that many languages employ past tense morphology in counterfactuals and the fact that counterfactuals give access to possible worlds. Under her account, these possible worlds are related to the actual world in a similar fashion as a past event is related to the present. Crucially, in her analysis it is the past tense morphology that is responsible for the meaning of counterfactuality. In Blackfoot, however, we witness dedicated modal morphology, namely the marker 'ááhk-' which appears to open access to possible worlds; at this point the only parallel between past tense and counterfactuality that we can safely draw is the choice of proclitic. Although this relates the two in an interesting way, the extend to which the distribution of 'ááhk-' is similar to counterfactuals in, e.g. English and how it interacts with other components such as tense or aspect is subject to further research.

5.2.2 Present Perfect and Epistemic Modality

Izvorski (1997) takes Iatridou's approach to past tense and counterfactuality (based on an earlier manuscript version), and seeks to apply it to the present perfect and epistemic modality. With respect to the present perfect, recall that the Blackfoot perfect marker 'ikáá-' invariably selects the short form proclitic, just like the modal marker 'ááhk-' when used epistemically, that is Blackfoot also appears to treat these two similarily. Based on crosslinguistic evidence from Turkish, Bulgarian, and Norwegian, Izvorski (1997) shows that the present perfect morphology is often used to express indirect evidentiality, or, "the availability of indirect evidence for the truth of a proposition" (op. cit.), a form of epistemic modality. This is exemplified in (79):

(79) a. Gel-miş-im. [Turkish]
come-PERF-1SG

b. Az sâm došâl. [Bulgarian]
I *be*-1SG.PRES *come*-PART

c. Jeg har kommet. [Norwegian]
I *have*-1SG.PRES *come*-PART

'I have come.' and/or
'I apparently came.' [Izvorski 1997]

All these languages employ present perfect morphology to express evidentiality, which Izvorski (1997) analyzes as epistemic modality. Following Iatridou's (2000) approach, Izvorski also takes the difference between tense and modality to lie in one relating times and the other one relating worlds. She argues as follows: the present perfect tense asserts that the consequent state of an eventuality that took place at a given topic time still holds at the utterance time but that the eventuality itself does not hold anymore at the utterance time.[68] Correspondingly, present perfect modality asserts that the proposition

[68]Note that this is entirely in line with my claim that the perfect results in a property (Izvorski's (1997) consequent state) that remains relevant to the individual.

of the utterance is known in a set of possible worlds but that these worlds are currently not accessible to the speaker; take the Bulgarian example in (80):

(80) Maria celunala Ivan.
Maria kiss-PERF *Ivan*
'Maria apparently kissed Ivan." [Izvorski 1997:7]

According to Izvorski, this sentence means that there is a world in which the specifics of an event that involved Maria kissing Ivan are known but that this world is not accessible to the speaker. Hence we get an epistemic modal interpretation of the perfect morphology.

Another interesting parallel can be found in Condoravdi (2002): She argues that some epistemic modals provide an open ended temporal interval that starts at "an initial subinterval and extend[s] to the end of time" (Condoravdi 2002:71). This is strikingly similar to the notion of being temporally unrestricted employed here and the argumentation provided in the section on the perfect: there I account for the use of the short form proclitics by arguing that the relation between the individual denoted by the proclitic and the perfect eventuality starts at a certain time and becomes irrevocably linked to the individual. If this is on the right track, then the use of the short form in epistemic contexts finds a natural explanation in connection with Condoravdi's (2002) account of epistemics: the eventuality denoted by the verb does not have a natural temporal endpoint that delimits it such that the proclitic could be restricted to it. In order to test this claim for Blackfoot it would have to be shown that Blackfoot epistemic modals also involve an open-ended temporal interval. This is an empirical matter that has to be left open for further research.

To sum this up, the fact that counterfactuals and past tense as well as epistemic modality and present perfect have been shown to share common features crosslinguistically and have been given parallel treatment in the literature lends support to the preliminary evidence that Blackfoot proclitics also behave identical across the respective domains: in both past tense and counterfactuals Blackfoot employs the long form proclitics, whereas in both present perfect and epistemic modality it uses the short forms.

6 Summary

In this chapter, I argued that Blackfoot proclitics provide empirical evidence for the claim that indexical pronouns are internally complex and contain a layer that is related to TIME. Specifically, I showed that Blackfoot instantiates a language in which this temporal component is related to EVENTUALITY TIME.

Following Bliss and Gruber (2011b), I argue that the long and short form proclitics given in table III.3 and repeated here are internally complex:

It was shown that whereas the short forms map onto an AtP/ϕP structure, the long forms map onto a DP structure in the sense of Déchaine and Wiltschko (2002). The short forms only comprise of a morpheme located in

	first person	second person	third person
short forms	*n-*	*k-*	*w-*
long forms	*nit-*	*kit-*	*w-it-* (=*ot-*)

Table: III.3 Blackfoot proclitics II

AtP/ϕP which denotes the respective person; the long forms additionally contain the morpheme '-it-' which is located in D and provides domain restriction over the stages of the individual denoted in AtP/ϕP. Extending Bliss and Gruber's (2011b) proposal, I argue that this temporal restriction is directly linked to EVENTUALITY TIME encoded in the VP: '-it-' is the spell-out of an interpretable, unvalued TIME-feature that gets its specification from EVENTUALITY TIME by means of the syntactic valuation mechanism Reverse Agree (Wurmbrand 2012a,b). Thus it forces an interpretation of the proclitic that is restricted to that stage of the individual that is involved in the eventuality under discussion.[69] Whereas the short forms appear in contexts in which the relation between the predicate and the individual denoted by the proclitic is temporally unrestricted and inherently linked to the individual, the long forms appear in contexts in which this relation is temporally restricted. It is precisely this restriction that is overtly expressed in the long forms by means of the morpheme '-it-'.

I have provided evidence for these claims from both the nominal and the verbal domain: Whereas in the nominal domain the short forms only appear as possessors of inalienably possessed nouns, the long forms appear in all other cases. Crucially, inalienable relations are inherent and temporally unrestricted, whereas alienable possessions are transitory and thus temporally restricted. In the verbal domain, the short forms appear with perfect predicates and in epistemic modality contexts; the long forms, on the other hand, show up in the past, present and future contexts as well as in counterfactual statements. As for the perfect, it has been argued that it indicates that an eventuality has been turned into a property that is inherently linked to its proclitic argument, much like inalienable possession in the nominal domain. In sum, in both the nominal and the verbal domain the correspondence between short form proclitic and temporally unrestricted predicate-argument relations has been shown to hold.

In the next chapter, I will now turn to three languages that are proposed to restrict the interpretation of their indexical pronouns by means of UTTERANCE TIME. Specifically, I will look at the Germanic languages English, German, and Dutch and discuss their generic uses of second person pronouns.

[69] Or, to that stage of the relation that is relevant in a given context.

CHAPTER IV

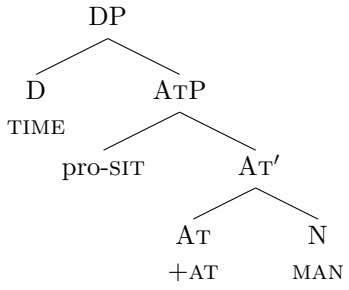
Restriction by UTTERANCE TIME: English, German, and Dutch

– You can tell someone is smiling just by listening to them?
– You can't. We can.
Lie To Me, episode 1.10

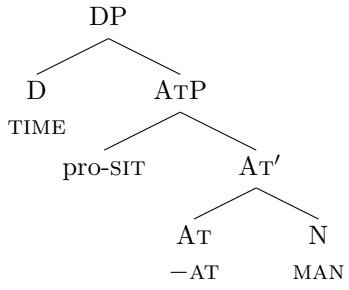
1 Setting the Stage

The central claim of this thesis is that the deictic category PERSON, which encompasses the speech act participants speaker and hearer, is dependent on spatial and in certain cases also temporal specification. Importantly, I argue that this dependency is reflected in the internal structure of indexical pronouns; adapting Déchaine and Wiltschko's (2002) pronominal structure, indexical pronouns are proposed to look as in (1):

(1) a. First Person Pronoun



b. Second Person Pronoun



This chapter's focus lies on the temporal component in the head of D, which I argue to be the locus of crosslinguistic variation. Like the preceding chapter on Blackfoot, this chapter on German, English, and Dutch also addresses the second research question raised in chapter I:

II. Is there a universal structure of indexical pronouns that can account for crosslinguistic variation with respect to their morphosyntax, syntax and semantics, and if so, what does it look like?

As introduced in chapter II, I hypothesize that languages spatially anchor their pronouns to UTTERANCE LOCATION via AtP; the temporal component in D, on the other hand, is claimed to be the locus of crosslinguistic variation: TIME in D is an interpretable but unvalued feature in the sense of Pesetsky and Torrego (2004a) that is subject to syntactic valuation. Since both UTTERANCE TIME and EVENTUALITY TIME are taken to be encoded in the syntax, as detailed in chapter II, section 2.4, both are potential sources for the specification of the temporal component in the indexical pronoun; for current purposes, I hypothesize that the choice is subject to parametric variation, an issue that I will return to at the end of this chapter. Languages are thus proposed to differ in whether their indexical pronouns are linked to UTTERANCE TIME or to EVENTUALITY TIME. The main focus of this chapter lies on restriction by UTTERANCE TIME and its primary goal is as given in (2):[1]

(2) Provide empirical evidence that indexical pronouns of English, German, and Dutch (Germanic, Indo-European) employ UTTERANCE TIME as their temporal restrictor.

The primary empirical evidence for this claim comes from generic uses of second person pronouns, as already illustrated in chapter I with the example in (3):

(3) In the 20ies, you had to wear a hat.

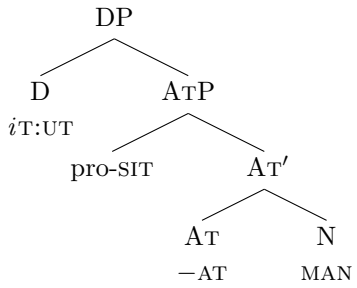
This sentence is clearly not (just) about the addressee, but rather about people in general. Examples like this raise the question how an otherwise indexical pronoun can give rise to non-indexical interpretations. In this chapter, I intend to show how the proposed structure can account for these effects.

One of the core ingredients of the present proposal is the assumption that the function of the temporal feature in D is to restrict the interpretation of the pronoun to a specific temporal stage of the individual denoted by it. As discussed in greater detail in chapter II, section 2.4, this claim presupposes an ontology that not only consists of individuals but also contains stages of individuals in the sense of Carlson (1980); Musan (1995). Further, it assumes that the core semantic function of D is domain restriction as proposed by Gillon (2006). I claim that the specific temporal stage that is picked out is determined

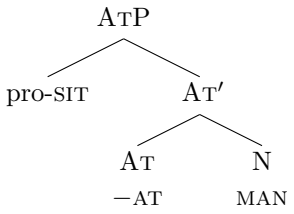
[1]The issue of restriction by EVENTUALITY TIME is the focus of chapter III, which discusses the Algonquian language Blackfoot.

by the source of temporal information that is encoded in the pronoun's D-head. Following Déchaine and Wiltschko (2002), I assume that pronouns do not always consist of an entire DP-structure, but that the DP-layer can be missing. This implies that certain pronouns only map onto an ATP-structure whereas others map onto full DPs.[2] Combining this with the claim that crosslinguistically ATP in indexical pronouns is associated with a spatial component as discussed in chapter V and that in English, German and Dutch the D-layer is associated with UTTERANCE TIME (UT) results in the two structural options shown in (4), exemplified for second person pronouns:[3]

(4) a.



b.



Thereby I am making the following prediction: first and second person pronouns that map onto a DP structure and are hence restricted by UTTERANCE TIME necessarily need to receive an indexical reading. This follows from the idea that their interpretation is then confined to that stage of the individual that is present at UTTERANCE TIME, as illustrated in figure IV.1.

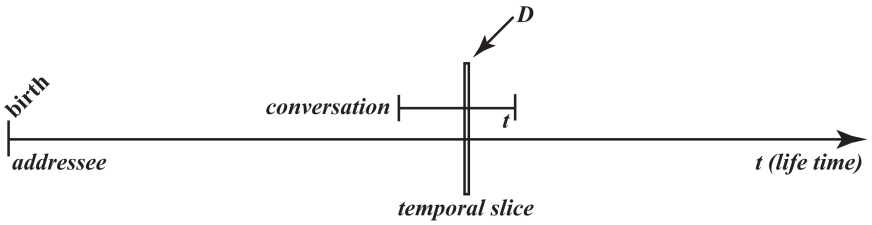


Figure IV.1: Domain restriction by UTTERANCE TIME

Conversely, this should not be the case for pronouns that only map onto a mere ATP as in (4b) since due to the lack of D no restriction to a specific temporal stage applies. This raises the question which empirical domain could help decide whether this prediction is borne out or not. Consider that if someone is prompted to explain the meaning of, e.g. the English pronoun 'you', the

[2] I am abstracting away from a third pronominal type argued for in Déchaine and Wiltschko (2002), i.e. an NP, since this third type is irrelevant for the present discussion.

[3] For expository reasons, I mostly depict the temporal feature in D as interpretable (*i*T) and valued (UT). However, the actual value will only be filled in during the course of the syntactic derivation as discussed in greater detail in section 4.

answer always contains something along the lines "the person I am talking to". Intuitively, there is no a priori reason why such an indexical should give rise to interpretations that deviate from this elementary meaning. From a much more sophisticated perspective and as already discussed in greater detail in chapter I, Kaplan (1989a) argued for such a view of indexicals in general and referred to it as "direct referentiality": in Kaplan's view, indexicals pick out their referent from the immediate utterance context, and nothing could change or interfere with this reference. Put differently, an indexical always needs to be interpreted with respect to the current utterance context; an indexical pronoun could therefore only refer to either the speaker (first person pronoun) or the hearer (second person pronoun) of the utterance. If this were to be true then the above suggested difference between DPs and ATPs would be superfluous.

However, since Kaplan's seminal work it has been shown by numerous authors (cf., e.g. Partee 1989; Kratzer 1998; Schlenker 2003; Rullmann 2004) that this is in fact not always the case: indexicals can receive interpretations other than the one directly provided by the immediate utterance context. As already mentioned, this chapter deals with one specific case in which an otherwise indexical pronoun receives a non-indexical interpretation, namely generic uses of second person pronouns. One such example is given in (5):

(5) In the 19th century, you would often encounter famous artists in Viennese cafés.

Clearly, 'you' in this case does not refer to the actual addressee of the utterance but rather states a general fact about life in 19th century Vienna. This kind of sentences is referred to as *generic* statements since they generalize over groups of individuals and events. Based on data from English, German, and Dutch, I argue in this chapter that indexical pronouns of these languages can only appear in such generic contexts when they are ATPs; DPs are excluded from such contexts since, according to my analysis, they are necessarily interpreted indexically and hence do not allow for generalizations of this type.[4] Previous research on such constructions primarily approached it from a semantic (cf. Alonso-Ovalle 2002; Malamud 2007, 2012) or pragmatic angle (cf. Whitley 1978; Bolinger 1979; Kitagawa and Lehrer 1990; Hyman 2004); the aim of this research is to address it from a morphosyntactic point of view. I will show that morphosyntax plays a crucial role and thus cannot be neglected in the discussion of generic interpretations: the underlying pronominal structure will be shown to be intrinsically linked to whether a second person pronoun can be

[4]Habituals are not part of the discussion here, since it is of course possible to generalize over one specific individual:

i. Hannes runs 5 km every morning.

ii. You run 5 km every morning.

This sentence only generalizes over events not over individuals and events; a strictly indexical pronoun is thus not excluded from habitual contexts.

subject to generic interpretations in the first place.[5]

This chapter is structured as follows: In the next section, after some general background on second person pronouns in generic contexts, I report on the data collection that was conducted for this research. Then I introduce the core data starting with Standard German and English, which will serve to define the empirical domain we are dealing with. Building on the findings from these data, I then consider Dutch as well as the domain of generics in general. In section 3, I detail and motivate the internal structure of the indexical pronouns. Starting with data from Dutch, I will show that only second person pronouns that map onto AtPs appear in generic contexts. This claim will be supported by Déchaine and Wiltschko's (2002) criteria for identifying ϕPs, the category parallel to AtPs, and DPs according to their morphosyntax and semantics as well as by data from the general domain of generics. In section 4, I consider the external syntax of the two types of pronouns, i.e. their behaviour within clauses, and show how the internal and external syntax interact. In the last section, I summarize and conclude.

2 The Core Data: Generic Second Person

Consider the English sentence in (6):

(6) In Holland, you learn to ride a bike before you even learn to walk.

Rather than a statement about its addressee, this sentence describes a general fact about people growing up in Holland. Additionally, the utterance has the following implications: If the addressee grew up in Holland, she will have learned to ride a bike before she learned to walk. Or, likewise, had the addressee grown up in Holland, then she would have learned to ride a bike before she learned to walk. Furthermore this is an inclusive use of the pronoun in the sense that the speaker is also part of the set of people for whom this statement is true. Fairly loosely put, the statement generalizes over people in general, including the speaker and hearer of the utterance.[6]

But whereas in an English example 'you' can be ambiguous between singular and plural, this is clearly not the case in German. We can easily replicate the English data in (6) in German and get the unambiguously singular second person pronoun 'du' as shown in (7):[7]

[5]This chapter primarily deals with second person pronouns. The issue of first person pronouns in similar contexts will be taken up in section 5.2.

[6]Many of the examples in this chapter contain two instances of second person pronouns, but nothing in particular depends on this choice. It is interesting to note that the second occurrence necessarily receives the same interpretation as the first, but this issue will not be part of the discussion here.

[7]Malamud (2007:11) shows that English varieties that distinguish between second person singular and plural, only use the singular in these cases. She gives the following example from South Philadelphia English with second person plural 'yiz' and singular 'you'.

(7) In Holland lernst **du** Fahrrad fahren, noch bevor **du** gehen
*in Holland learn-2*SG *you bike ride even before you walk*
lernst.
*learn-2*SG
'In Holland, you learn to ride a bike before you even learn to walk.'

Again, this German sentence is a statement about people growing up in Holland in general, not about the addressee of the utterance.[8] This fact about second person pronouns is not unique to Germanic languages and has long been noted. Benveniste (1966), with special reference to French, says to this effect:[9]

> La définition de la deuxième personne comme étant la personne à laquelle la première s'adresse convient sans doute à son emploi le plus ordinaire. Mais ordinaire ne veut pas dire unique et constant. On peut utiliser la deuxième personne hors de l'allocution et la faire entrer dans une variété d'"impersonnel". [...] En mainte langue, *tu* [...] sert de substitut á 'on' [...] [Benveniste 1966:232]
>
> The definition of the second person as the person who the first addresses is, without doubt, its most ordinary use. But ordinary does not mean unique and invariable. One can use the second person outside the system of address forms and let it enter in a kind of "impersonal". [...] In many languages, *tu* serves as a substitute for 'on' [...] [translation: BG]

As noted by Siewierska (2004) and further evidenced by a questionnaire distributed for this research, second person pronouns in generic contexts are extremely widespread and not limited to a specific language family: examples range from the majority of Indo-European languages to Uralic (e.g. Hungarian), Semitic (e.g. Modern Hebrew), Niger-Congo (e.g. Koromfe), and Austronesian (e.g. Indonesian).[10] However, it should be noted at this point that the degree to which second person pronouns are used in generic contexts varies crosslinguistically, i.e. not all languages that allow for a generic interpretation of the indexical also employ it as frequently as for instance (American) English. What exactly governs the actual use in every single language needs to be looked at individually and is beyond the scope of this research. However, it ties in with the fact that all the languages investigated so far also have other means to

i. In those days, *[yiz]* could smoke in bars.
(only deictic reading: *you, my hearers could smoke*)

ii. In those days, you could smoke in bars.
(both impersonal and deictic-singular readings ok)

[8] With the right context, both the English and the German example can also have an indexical reading. However, getting an indexical reading in this specific context is considerably harder with a present tense verb.

[9] Benveniste (1966) uses the term "impersonal" to refer to a non-indexical, generalizing use of a second person pronoun. Further on in the discussion, I will briefly discuss this terminological issue and show that a more fine-grained and consistent terminology is necessary to do the facts justice.

[10] Further details will be provided subsequently in section 2.1 on page 122.

express generalizations about people and events, and that, to the best of my knowledge, none of them solely employ second person in generic contexts. Some examples are the English impersonal pronoun 'one' (8a), the Italian impersonal 'si' (8b) or the French impersonal 'on' (8c).

(8) a. In Vancouver, **one** can easily find amazing food.
b. Prima o poi **si** scopre sempre il colpevole.
first or later one discovers always the culprit
'Sooner or later one always discovers the culprit.' [Cinque 1988:522]
c. Ici, **on** ne peut pas garer sa voiture.
here one NEG *can not park* POSS *car*
'One cannot park one's car here.'
[Cabredo Hofherr 2004; glosses by BG]

The fact that second person pronouns of so many languages across various language families can receive a non-indexical interpretation raises the question why this would be the case in the first place.[11] I propose that the underlying reason is twofold: on the one hand, it is structurally conditioned and on the other hand functionally. As for the structural reasons, I propose that the structure of indexical pronouns put forward in this thesis facilitates a non-indexical reference. As introduced in chapter II, I hypothesize that indexical pronouns contain a spatial component; specifically, I assume that second person pronouns can be defined by a spatial component that indicates that a sentient individual is *not* located at UTTERANCE LOCATION. The very nature of second person pronouns thus already includes the option of referring to people outside the immediate context. Clearly, this is not all that is needed, as only the right linguistic context leads to a generic interpretation. However, since I hypothesize that the spatial component within the pronoun is identical across languages, this view provides a potential source for the crosslinguistic ubiquity of second person generics.[12] As for the functional reasons, the fact that languages also have other means to express generic meaning suggests that the use of a second person pronoun in these cases evokes specific effects that the other means lack. I propose that the answer lies within the semantic impact that a second person pronoun has in these contexts: as argued by Malamud (2007), a second person pronoun evokes the empathy of the addressee. In her discussion of the impersonal pronouns 'man', 'si' and 'you' (German, Italian and English, respectively), Malamud shows that, among other things, 'man' and 'si' differ from

[11] Second person singular is not the only personal pronoun that gets used in impersonal contexts. According to Siewierska, third person plural is the most common form in impersonal contexts crosslinguistically, e.g. English "They say that yoga is good for you."; some languages also exhibit first person plural impersonals, whereas second person plural "tends not to be used impersonally" (Siewierska 2004:213). Since this work primarily deals with the question of what the internal structure of indexical pronouns looks like, I am mainly interested in what generic uses of these pronouns (i.e. mostly second person) can tell us; thus I set aside the broad issue of other means that are used to express impersonal/generic statements.

[12] On the question how the addressee-referring interpretation is ensured, see chapter II, section 4.

impersonal 'you' in who the hearer's empathy tracks. This is best illustrated by the examples in (9) which contrast the two pronouns 'one' and 'you':

(9) a. In those days, one could throw **you** in jail for this kind of thing.
(empathise with the victim)
b. ? In those days, **you** could throw one in jail for this kind of thing.[13]
(empathise with the jailer)
c. In those days, **one** could be thrown in jail for this kind of thing.
(empathy can go either way)
[Malamud 2007:11]

This observation is aptly described as follows:

> "[...] every use of impersonal *you* involves an appeal for the addressee's empathy so that the addressees are asked to put themselves into someone else's shoes." [Malamud 2007:13]

This captures the idea that the hearer does not necessarily need to be in the situation that is being discussed but she necessarily needs to be able to picture herself in the given situation.

In order to get a clearer picture of the crosslinguistic distribution and potential syntactic restrictions on second person pronouns in non-indexical contexts, the present research employed a questionnaire that was designed and distributed specifically for this project. In what follows, I will give some details about the methodology used for the data collection. And although the remainder of the chapter will focus on generic uses of second person pronouns, mainly in English, German, and Dutch, I will subsequently also summarize some of the findings of the data collection.

2.1 Data Collection: Methodology and Overview

The questionnaire, which is added in its entirety in the appendix of this chapter on page 167, contained nine target sentences that tested for non-indexical uses of second person pronouns in different syntactic and semantic environments. Every test sentence was given in English and preceded by an explicit context that ensured that the pronoun did not get interpreted indexically. One such example including its context is given in (10). The main question was whether an equivalent of that sentence in the given context with the described meaning and crucially employing a second person pronoun existed in the consultant's native language and what it looked like.

(10) *A friend is talking about her colleagues at work and tells you that one of them sold highly confidential data to a competitor. She is very upset about that incident and can't understand how anyone could do that. She says:*
"You just don't do that!"

[13] The question mark refers to the use of 'one' in object position.

The questionnaire was designed in English, specifically targeted linguists[14] and included details about its empirical goal. This method was mostly chosen for practical reasons: the main goal of the data collection was to get a picture as large as possible about a significant number of genetically diverse languages. This objective called for a method that allowed easy distribution, straightforward tasks, a common source language, and required access to a large number of diverse languages. All this is possible with a written questionnaire and within the community of linguists, who easily understand tasks involving very specific interpretational judgements and could simultaneously provide alternatives and basic background information on their native language. For most of the languages, I had at least two consultants; exceptions are Japanese, Koromfe, Indonesian, Cree, and Siamou for which I only had one consultant each; in total I gathered data on 25 languages from a total of 60 speakers.[15] Out of those 25 languages, only two turned out not to allow for non-indexical readings of second person pronouns, at all: Japanese and Siamou. Japanese has independently been reported to not allow second person pronouns as generics (cf. Kitagawa and Lehrer 1990); as for Siamou, I am not aware of any studies that addressed this specific question previously. Why there are languages that do not allow for second person generic readings is, of course, an intriguing question; but it can only be addressed satisfactorily if the respective languages are considered in their entirety, a task that falls well beyond the scope of this thesis.

The results of my data collection are summarized in the table IV.1 on the next page.[16] However, a word of caution is in order with respect to the table which is a simplification of the results: Not all languages allow for second person non-addressee interpretations as easily as, e.g. English. In other words, all the target sentences are felicitous in English with a non-addressee reading, but not in all reported languages are all sentences possible in the same contexts. Furthermore, not all speakers always gave the same judgments for all sentences. If a language is reported as allowing for non-indexical readings of second person, this merely indicates that some of the target sentences were accepted by some speakers.[17] In order to provide a more accurate picture, languages for which the judgments among speakers were particularly diverse or unclear are marked in the table with an asterisk.

[14] In some cases, the data was not provided by the linguists themselves but elicited by them from native speakers. The languages in particular are Siamou (Carmela Toews), Koromfe (John Rennison), and Cree (Rose-Marie Déchaine).

[15] I had a total of 61 consultants, but one questionnaire had to be excluded since the relevant forms were not provided. This was due to personal preference, not due to second person being ungrammatical in generic uses.

[16] Siewierska (2004:212) lists a number of additional languages that can make use of a generic second person such as Abkhaz, Estonian, Godi, Gulf Arabic, Hindi, Kashmiri, Komi, Koyra Chin, Kurdish, Marathi, Mauwake, Maybrat, Macushi, Modern Hebrew, Mundani, Nkore-Kiga, and Tuvaluan.

[17] Note that a lot of the languages that are reported here as allowing for non-indexical readings of second person pronouns are also independently reported as such in the literature.

	second person reading:	non-indexical	indexical only	consultants
Indo-European				
Germanic				
1	Afrikaans	✓	✗	3
2	Dutch	✓	✗	6
3	English	✓	✗	2
4	Flemish	✓	✗	3
5	German	✓	✗	4
6	Icelandic*	✓	✗	2
7	Norwegian	✓	✗	2
8	Swedish	✓	✗	2
Romance				
9	Brazilian Portuguese	✓	✗	2
10	Catalan	✓	✗	2
11	French	✓	✗	2
12	Italian	✓	✗	4
13	Romanian	✓	✗	2
14	Spanish	✓	✗	2
Greek				
15	Modern Greek	✓	✗	5
Slavic				
16	Russian*	✓	✗	3
17	Slovene	✓	✗	2
Uralic				
18	Hungarian	✓	✗	2
Turkic				
19	Turkish*	✓	✗	3
Sino-Tibetan				
20	Mandarin Chinese	✓	✗	2
Japonic				
21	Japanese	✗	✓	1
Austronesian				
22	Indonesian	✓	✗	1
Niger-Congo				
23	Siamou	✗	✓	1
24	Koromfe	✓	✗	1
Algic				
25	Cree	✓	✗	1
Total		23	2	60

Table IV.1: Summary of questionnaire results on second person generics

Some of the languages that were elicited for this project are exemplified subsequently: (11) Swedish (Germanic, Indo-European), (12) Spanish (Romance,

Indo-European), (13) Slovene (Slavic, Indo-European), (14) Mandarin Chinese (Sinitic, Sino-Tibetan), and (15) Koromfe (Gur, Niger-Congo).

(11) I Nederländerna lär **du** dig att cykla till och med innan **du** lär dig gå.
in Netherlands learn you REFL *to bike until and with before you learn* REFL *walk*
'In Holland you learn to ride a bike before you even learn to walk.' [Swedish]

(12) En Holanda **aprendes** a andar en bici antes que a caminar
*in Holland learn-2*SG *to go on bike before that to walk*
'In Holland you learn to ride a bike before you even learn to walk.' [Spanish]

(13) Na Nizozemskem se **naucis** voziti kolo se preden se **naucis** hoditi.
on Netherlands REFL *learn-2*SG *ride bike even before* REFL *learn-2*SG *walk*
'In Holland you learn to ride a bike before you even learn to walk.' [Slovene]

(14) Zai helan **ni** zai xue zoulu zhiqian shenzhi de xian xue qi zixingche.
In Holland you at learn walk before even have.to first learn ride bike
'In Holland you learn to ride a bike before you even learn to walk.' [Mandarin Chinese]

(15) n̩ sɛbraa (a) sundu **n̩** namba sɪrɛ ɲ̩ ɲ̃ã fɔrʊ nɪ hũnde.
you learn-FUT[18] DET *horse/bike you not-yet leave your mother belly at only*
'You learn (how to ride) a bike even before you have left your mother's belly.' [Koromfe]

Note that some of these examples do not contain a second person pronoun but only second person verbal inflection. This is not entirely unexpected since it has already been argued for some null subject languages that only non-overt second person can receive a generic interpretation (e.g. Cinque 1988 on Italian; Gruber 2008 on Austro-Bavarian). In all these examples given above, the verb always inflects for second person; since all these languages are typical subject-agreement languages, I conclude that the clausal subject is therefore also second person; whether this subject is instantiated by a silent pronominal *pro* or by the verbal inflection itself does not bear on the issue at hand. However, an

[18]The future marker on the verb 'learn' indicates that the we are dealing with a generic statement. (John Rennison, p.c.)

interesting related result from the questionnaire is the following: It appears to be the case that languages that allow for a second person generic interpretation and have more than one option of referring to the addressee, e.g. weak or clitic pronouns or pro-drop altogether, always employ the weakest form available to induce a non-addressee referring interpretation. As will become clear, this is not entirely unexpected under the analysis of indexical pronouns put forward in this thesis: assuming that in many cases the strongest pronoun will map onto a full DP-structure, these are naturally excluded from generic contexts. One such case, namely Dutch, will be discussed in detail in this chapter. However, it also needs to be pointed out that the correlation of DPs and strong pronouns need not necessarily hold under the approach taken by Déchaine and Wiltschko (2002). Therefore, whether strong pronouns in generic contexts are excluded in all the languages reported here, or whether in some cases this is an effect due to the specific elicitation method, needs to be inquired individually.

Naturally, the results of the questionnaire raise numerous further questions concerning several linguistic sub-disciplines: syntax, semantics, typology, historical linguistics, and pragmatics. The present work focusses on the syntax and the syntax-semantics interface and is restricted to three of the many languages: German, English, and Dutch. In particular, this work is concerned with the question why and how an indexical item can give rise to generic interpretations. In the next section, I will introduce the core data starting with Standard German examples that allow us to define the precise empirical domain that this chapter will be further concerned with.

2.2 Standard German and Standard English

Examples employing pronouns like English 'one', Italian 'si', or French 'on', as shown earlier in the examples in (8), are usually subsumed under the term *impersonal constructions* (cf. among many others Perlmutter 1983; Cinque 1988; Chierchia 1995b; Kratzer 1997; Egerland 2003a; D'Alessandro 2007) and in many cases, uses of second person pronouns in these environments are also dubbed *impersonal* (cf. eg. Kitagawa and Lehrer 1990; Cabredo Hofherr 2004; Malamud 2007). However, as has already been shown, e.g. by Cinque (1988), impersonal contexts are not all alike. As it turns out, one major distinction directly influences the interpretation of second person pronouns: universally versus existentially quantifying environments. Given that the terminology concerning these environments and uses is not employed uniformly throughout the relevant literature, I adopt one specific terminological proposal for reasons of clarity, namely Egerland (2003a), which will be introduced subsequently.

Egerland distinguishes between *generic* and *arbitrary* readings of impersonal pronouns. Generic pronouns roughly correspond to *people, everyone, anyone*, that is they "refer to a quasi-universal set of individuals" (Egerland 2003a:1). Arbitrary pronouns, on the other hand, refer to a non-specific group of people like *some people, someone* and thus "take on an existential reading" (Egerland 2003a:1). This classification also corresponds to Cinque's (1988)

"quasi-universal" and "quasi-existential" readings of the Italian impersonal pronoun 'si'.

To illustrate these two readings, i.e. generic and arbitrary, the German impersonal pronoun 'man' serves as an ideal starting point.[19] Both the syntactic and semantic properties of German 'man' have already been widely discussed in the literature (cf. Kratzer 1997; Zifonun 2001; Cabredo Hofherr 2004; Malamud 2007, 2012). In what follows, I will focus on the fact that it can give rise to either a generic or an arbitrary reading depending on the context it is used in.[20] First, see (16) which illustrates the generic use of 'man'.

(16) Wenn **man** allergisch auf Hunde ist, ist **man** nicht automatisch auch
if one allergic on dogs is is one not automatically also
auf Katzen allergisch.
on cats allergic
'If one is allergic to dogs, one is not also necessarily allergic to cats.'

This sentence is about people in general, a meaning that also becomes apparent from the English translation with the impersonal pronoun 'one'. As pointed out, generic impersonal pronouns have what has been called a *universal force*. For illustrative purposes, we can thus approximate the formalization of this sentence as in (16′):[21]

(16′) $\forall$x: x is allergic to dogs $\rightarrow \neg\Box$ x is allergic to cats

This makes the universal force explicit as it translates the meaning of (16) into: for all x, if x is allergic to dogs it follows that it is not necessarily the case that x is allergic to cats. In contrast to this generic use of German 'man', consider the example in (17):

(17) Immer wenn ich länger als drei Wochen in Holland bin, stiehlt **man**
always when I longer than three weeks in Holland am steal one
mir mein Rad.
me my bike
'Whenever I spend more than three weeks in Holland, someone steals my bike.'

[19] I will not attempt to provide an analysis of 'man' but merely use it as a means to help delimit the domain of second person pronouns in similar constructions. For analyses of 'man', the interested reader is referred to the literature cited in the main text.

[20] Kratzer (1997) distinguishes between an *inclusive* and an *exclusive* reading of 'man' where clusivity is about whether or not the speaker is included in the group of referents. Even though this is a crucial observation, it does not fully capture the difference between generic and arbitrary referents. Therefore, I refrain from using this terminology.

[21] This formalization is only an approximation as generic statements generally tolerate exceptions (Carlson 1980; Krifka et al. 1995). The formula is therefore to be understood as intuitively highlighting the main point about the universal force behind this generic statement, not as a semantically correct account of the actual sentence meaning, as most generics do not universally quantify. More accurately, the semantics involve a generic operator that quantifies over the relevant variables. This issue will be taken up again in section 2.4.

Here, the impersonal 'man' does not refer to people in general but to a non-specified person or group of people. Again, this becomes obvious from the English translation: As opposed to (16), this example does not allow a translation of 'man' with 'one' but calls for an indefinite like 'someone'. As pointed out earlier, this so-called *arbitrary* use of the impersonal has existential force and therefore allows us to restate the relevant part of the sentence as in (17′):

(17′) *[whenever I spend more than three weeks in Holland]*
∃x: x steals my bike

Again, this formalization makes the sentence meaning of (17) explicit: [whenever I spend more than three weeks in Holland] there is an x that steals my bike.

To sum this up, we have seen two different uses of the German impersonal pronoun 'man': A generic use that has universal force and can be circumscribed by 'people in general' and an arbitrary use that has existential force and is roughly equivalent to 'someone'. Since we already know that German can employ second person pronouns to make statements about people in general rather than only about the addressee, the following question arises: Can a second person pronoun always replace the German impersonal pronoun 'man'?

Let us start with the generic use of 'man', paraphrased with 'people in general', which has been illustrated by the conditional in (16), repeated here for convenience, and replace 'man' with the second person pronoun 'du' as in (18).[22]

(16) Wenn **man** allergisch auf Hunde ist, ist **man** nicht automatisch auch
if one allergic on dogs is is one not automatically also
auf Katzen allergisch.
on cats allergic
'If one is allergic to dogs, one is not also necessarily allergic to cats.'

(18) Wenn **du** allergisch auf Hunde bist, bist **du** nicht automatisch auch
if you allergic on dogs are are you not automatically also
auf Katzen allergisch.
on cats allergic
'If you$_{indexical}$ are allergic to dogs, you$_{indexical}$ are not also necessarily allergic to cats.'
also: 'If **one** is allergic to dogs, **one** is not also necessarily allergic to cats.'

As becomes obvious from the English translations provided below the example, the second person pronoun 'du' is ambiguous between an indexical and a generic

[22]It has often been noted that generic sentences and conditionals seem to share certain properties. For instance, most characterizing sentences can be restated as a conditional; Carlson and Pelletier (1995:49) note that "*A lion has a bushy tail* can be rephrased as *If something is a lion, it has a bushy tail.*" Several researchers have even argued to treat the two sentence-types along the same lines semantically (e.g. Heim 1982). The details of the link and of such accounts would, however, lead to far afield from the present discussion.

reading. The conditional can either be understood as stating a fact about the addressee of the utterance (e.g. in the context of discussing the addressee's allergy to dogs) or as a general statement about people (e.g. in the context of discussing allergies in general).

Next recall example (17), again repeated here for convenience, that exemplified the arbitrary use of 'man', which got translated into English with 'someone'; again, the impersonal pronoun will be replaced with a second person pronoun as in (19).

(17) Immer wenn ich länger als drei Wochen in Holland bin, stiehlt **man**
always when I longer than three weeks in Holland am steal one
mir mein Rad.
me my bike
'Whenever I spend more than three weeks in Holland, someone steals my bike.'

(19) Immer wenn ich länger als drei Wochen in Holland bin, stiehlst **du**
always when I longer than three weeks in Holland am steal you
mir mein Rad.
me my bike
'Whenever I spend more than three weeks in Holland, you$_{indexical}$ steal my bike.'
not: '[...] **someone** steals my bike.'

Interestingly, in this case the second person pronoun can only get an indexical reading. The arbitrary interpretation that the impersonal pronoun 'man' received in this example is entirely unavailable for second person in this context. Also note at this point that the English equivalents of the German sentences in (18) and (19) give rise to the same judgements: Employing 'you' in the first example results in an ambiguity, whereas it can only result in an indexical interpretation in the second example.

These observations are not unexpected as they also parallel data from Cinque (1988:547f.). He showed that what he called the "Arbitrary 2nd Person Singular Pronoun Construction" in Italian can only receive a generic interpretation in contexts with a universal force, i.e. the generic contexts, but necessarily gets interpreted as an indexical in existential contexts, i.e. what I referred to as the arbitrary readings. This can be illustrated by using the same examples as for German and English; the only difference is that Italian, being a null subject language, does not use the overt pronoun in these cases but the pro-drop version with second person inflection on the verb:[23]

[23]Since it is irrelevant for my point here, I remain impartial as to wether the subject is a silent *pro* or whether verbal inflection counts as the pronominal subject of the clause.

(20) a. Se sei allergico ai cani, non sei necessariamente
*If are-2*SG *allergic to-the dogs not are-2*SG *necessarily*
allergic anche ai gatti.
allergic also to-the cats.
'If you$_{indexical}$ are allergic to dogs, you$_{indexical}$ are not also necessarily allergic to cats.'
also: 'If **one** is allergic to dogs, **one** is not also necessarily allergic to cats.'

b. Ogni volta che passo piu' di tre settimane in Olanda, mi
*every time that spend-1*SG *more of three weeks in Holland, me*
rubi la bicicletta.
*steal-2*SG *the bike*
'Whenever I spend more than three weeks in Holland, you$_{indexical}$ steal my bike.'
not: '[...] **someone** steals my bike.'

The same restriction, i.e. that second person pronouns can only receive a non-indexical reading in generic contexts, has also been noted for English by Kitagawa and Lehrer (1990), for Swedish and French by Egerland (2003b) and for Spanish by Alonso-Ovalle (2002). Furthermore, these data also relate to the fact that in any case there is a principled opposition between an existential and a generic interpretation of noun phrases as widely discussed in the literature (cf. among many others Carlson 1980; Krifka et al. 1995; Kratzer 1995; Cohen and Erteschik-Shir 2002). To illustrate this point witness the sentences in (21):

(21) a. Dogs are mammals.
b. Dogs were sitting on my lawn.

[Carlson 1980:1,2]

Even though the subject noun phrases in both sentences are identical, i.e. both of them are bare plurals, the first only gets a generic interpretation whereas the second is exclusively existential: in (21a) we can only be talking about the kind *dog* (generic), whereas in (21b) we can only be talking about some contextually salient, specific dogs (existential), a distinction I will return to in greater detail in the next section.

To sum up, we have seen that there is an interaction between the quantificational force of a sentence and the interpretation of a second person pronoun: Whereas universal force allows either a generic or an indexical reading, existential force unambiguously leads to an indexical interpretation. Adopting the terminology of Egerland (2003a), I will from now on refer to the first as a *generic second person*. Accordingly, I have shown that in the contexts that I referred to as arbitrary, second person pronouns cannot get a non-indexical (or arbitrary) interpretation but are necessarily indexical.

In the next section, I will examine the properties of generic second person pronouns in Dutch, which has two different sets of second person pronouns, namely weak and strong ones.

2.3 Dutch

So far we have seen that

a. second person pronouns can be used in generic contexts, i.e. contexts involving quasi-universal statements;

b. generic uses of second person pronouns do not (exclusively) refer to the addressee but convey information about people in general;

c. generic uses of second person pronouns are crosslinguistically wide-spread across language families.

In this section, I will put the previous data in a broader context: I will address the issue of the interaction between generic second person pronouns and morphosyntax. So far we have only considered data from Standard English and Standard German, which largely behave alike with respect to the examples that have been discussed so far.[24] Importantly, these two languages, at least in their standard variety, only have one pronominal type each. A typical case of a language that has two pronominal types is the closely related language Dutch: it has the strong second person pronoun 'jij' and the weak second person pronoun 'je'. The sentences in (22) and (23) illustrate both pronouns using the same examples that we saw earlier with respect to German and English.

(22) a. In Nederland leer je fietsen zelfs voordat je leert
in Netherlands learn you_{weak} *cycle even before* you_{weak} *learn*
lopen.
walk
'In the Netherlands, $you_{indexical}$ learn to ride a bike before $you_{indexical}$ even learn to walk.'
also: 'In the Netherlands, one learns to ride a bike before one even learns to walk.'

b. In Nederland leer jij fietsen zelfs voordat jij
in Netherlands learn you_{strong} *cycle even before* you_{strong}
leert lopen.
learn walk
'In the Netherlands, $you_{indexical}$ learn to ride a bike before $you_{indexical}$ even learn to walk.'
not: 'In the Netherlands, one learns to ride a bike before one even learns to walk.'

[24] The most notable difference between the two languages lies within the frequency of use of generic second person pronouns: in particular American English varieties make abundant use of generic second person, whereas in Standard German, and arguably Standard British English, other means are more frequently chosen than in American English. These differences, however, do not bear on the main question at hand here, namely what the internal structure of these pronouns looks like and whether a structural difference can account for both indexical and generic uses.

(23) a. Als **je** allergisch bent voor honden, ben **je** niet
if you_{weak} *allergic are for dogs, are* you_{weak} *not*
automatisch ook allergisch voor katten.
automatically also allergic for cats
'If $you_{indexical}$ are allergic to dogs, $you_{indexical}$ are not also necessarily allergic to cats.'
also: 'If one is allergic to dogs, one is not also necessarily allergic to cats.'

b. Als **jij** allergisch bent voor honden, ben **jij** niet
if you_{strong} *allergic are for dogs, are* you_{strong} *not*
automatisch ook allergisch voor katten.
automatically also allergic for cats
'If $you_{indexical}$ are allergic to dogs, $you_{indexical}$ are not also necessarily allergic to cats.'
not: 'If one is allergic to dogs, one is not also necessarily allergic to cats.'

The sentences in (22a) and (23a) with the weak pronoun 'je' are both ambiguous between an indexical and a generic interpretation. However, it is completely impossible to assign either (22b) or (23b) a generic meaning.[25] The same pattern can be observed throughout: the strong pronoun 'jij' will always be interpreted as referring to the addressee, whereas the weak pronoun 'je' can also get a generic interpretation.

Contra this generalization, Tarenskeen (2010) reported instances of strong pronouns in what she analyzed as generic contexts. Two such examples from her corpus study are given in (24)[26]; both originate from the Dutch spoken corpus, specifically the part containing interviews with teachers:

(24) Ja **jij** wordt een jaar ouder maar de leerlingen niet.
yes you_{strong} *become one year older but the students not*
'Yes, you become another year older, but the students don't.'
[CGN: Dutch speaker nr. 108, utterance nr. 170]

(25) 't leukste als leraar is natuurlijk ook dat je ziet dat ze wat
the nicest as teacher is of-course too that you see that they what
leren van wat **jij** ze vertelt.
learn of what you_{strong} *them tell*
'The nicest thing about being a teacher is, of course, also that you see that they learn something from what you tell them.'
[CGN: Dutch speaker nr. 140, utterance nr. 105]

[25] In fact, both examples even seem slightly odd to some speakers as the double use of the strong pronoun invokes a strong focus. Using the weak pronoun 'je' instead of the second strong 'jij' in each sentence will make the examples sound more natural.

[26] Data are courtesy of Sammie Tarenskeen who generously provided me with the results of her corpus study of the Corpus Gesproken Nederlands (CGN). For the methodology she applied see Tarenskeen (2010:23f.)

As you can see from the English translation, the sentences do not necessarily need to refer to the addressee but can easily be understood as general remarks about teachers. So again, we are dealing with a non-indexical interpretation; only this time the Dutch sentences contain the strong variant which according to the previously discussed data and results of my study should necessarily receive an indexical interpretation. Prima facie, these sentences seem to be irreconcilable with my generalization that Dutch will always only employ the weak pronoun in generic context. However, further elicitation refined the picture and brought to light a restriction that seems to apply in cases of non-indexical uses of the strong pronoun 'jij':[27] those Dutch speakers that do accept a strong pronoun as non-indexical require its addressee to be part of the group that the pronoun is generalizing over. To illustrate this point, witness the examples in (26), which produced the strongest and most uniform judgements among speakers:[28]

(26) a. Als **jij** een vrouw bent, moet je harder werken.
if you_{strong} *a woman are must you harder work*
'If you are a woman, you have to work harder.'

b. Als **jij** een man bent, moet je harder werken.
if you_{strong} *a man are must you harder work*
'If you are a man, you have to work harder.'

The crucial observation is that (26a), under the relevant reading generalizing over women, can only be uttered when addressing a woman. (26b), on the other hand, could only be uttered addressing a man. If one wanted to express the same meaning but were talking to someone of the opposite group, one would have to use the sentence in (27), employing the weak pronoun 'je':

(27) Als **je** een man bent, moet je harder werken.
if you_{weak} *a man are must you harder work*
'If you are a man, you have to work harder.'

I propose that only (27) is a true instance of a generic sentence: it generalizes over a group of people and the addressee is invited to empathize with this group, irrespective of whether he or she is part of that group. The strong pronouns, on the other hand, refer to the addressee and make a statement about the addressee as part of a specific group. Thus they are not true instances of generic second person pronouns. Rather, they designate a prototypical referent of a specific

[27]Data were elicited both in writing and orally. In general, it proved difficult to receive judgements on such examples and speakers did not agree on them: A large number still only accepted the weak form as non-indexical. But among those that did accept the strong form, the reported judgements were very clear.

[28]For independent reasons, two strong pronouns are strongly disliked by speakers. In the examples in (26), it seems to be the case that the strong pronoun could be either the first or the second occurrence and be interpreted as non-indexical in either position.

group, namely the addressee of the utterance, and only thereby allow it to extend the interpretation of the sentence from the addressee to said group.[29]

To sum up, I have shown that strong second person pronouns in Dutch are necessarily interpreted indexically. Consequently, they are excluded from generic sentences, which refer to people in general. Only weak second person pronouns can appear in these contexts and take on generic meaning.

2.4 The Broader Context: Some Notes on Genericity

As I have shown earlier in this section, the non-indexical uses of second person pronouns under discussion here fall into the larger category of generic expressions in general. Genericity as a specific type of phrase or sentence meaning has received a fair amount of attention in philosophy, semantics, and logic. Broadly speaking, the term refers to statements that convey information about general facts or regularities as opposed to statements about specific entities or events. There are several subtypes that often get conflated under the term *genericity* and we need to at least distinguish between two of them: "reference to kinds" and "characterizing sentences" (Krifka et al. 1995). Typical examples of each type are stated in (28):

(28) a. The potato was first cultivated in South America.
b. A potato contains vitamin C, amino acids, protein and thiamine.
[Krifka et al. 1995:2,3]

(28a) contains the kind-referring (generic) noun phrase 'potato' and the sentence reports a specific event related to this kind. Kind-referring nominals are in opposition to object-referring nominals: the former receive a generic interpretation and the latter an existential one (cf. also example 21). (28b), on the other hand, exemplifies genericity at the clausal level: the predicate expresses a regularity or property concerning all potatoes, i.e. we are dealing with a characterizing (generic) sentence. The counterpart to generic sentences are episodic ones (or "particular sentences", Krifka et al. 1995) which report specific events. This was already shown in (21) and will be discussed in greater detail subsequently. With respect to similarities and differences between the kind-referring and characterizing sentences, one can read in the introduction to *The Generic Book*:

> It is quite obvious that reference to kinds and characterizing sentences have something in common: with kinds we abstract away from particular objects, whereas with characterizing sentences we abstract away from particular events and facts. [...] it is important to keep these two types of generic phenomena apart, since it turns out that there are linguistic differences between them.
> [Krifka et al. 1995:4]

[29] I owe this suggestion to Sjef Barbiers, p.c.

For our purposes here, it suffices to note that when we talk about generics we refer to sentences that convey a generalization, either over events or over individuals or both.[30] Most importantly, note that all the examples that we have seen so far and that allow for a non-indexical interpretation of the second person pronoun involved sentence-level genericity, i.e. they were characterizing sentences. They convey generalizations over events and the individuals in those events. Put differently, second person pronouns that receive a generic interpretation can only do so in a characterizing sentence, i.e. under the presence of sentence-level genericity. This brings us to the next point, which has a direct effect on the interpretation of second person pronouns: As already mentioned, it is a widely accepted view that there is a fundamental opposition between generic and episodic statements (cf. e.g. Krifka 1987; Krifka et al. 1995; Chierchia 1995a).[31] Carlson describes the distinction as follows:

> [...] a generic sentence is [...] any sentence expressing a generalization [...] and [...] the opposing category consists of episodic sentences – sentences which relate specific occurrences.'
>
> [Carlson 1995:224]

As an illustration, see the examples in (29):

(29) a. A lion has a bushy tail.
b. A lion stood in front of my tent.

[Krifka et al. 1995:9]

For expository purposes let us concentrate on the meaning of the predicate which is where the difference between genericity and episodicity pertains in these cases: the first example informs us about the property of having a tail, whereas the second sentence tells us about a single event of standing in front of a tent. Characterizing sentences as in (29a) are typically analyzed as having an operator in their structure which is taken to be a quantificational adverb binding the variables in its scope. This adverb can either be overt, e.g. 'always' or 'usually', or covert, and it can bind multiple variables (Chierchia 1995a:192); the variables it can bind can be eventualities or variables provided by indefinites and kind-denoting definites (Chierchia 1995a). Following standard practice, I will from now on refer to this quantificational adverb as GEN and assume that all characterizing sentences contain one such operator in their syntax. Consequently, this also holds for generic statements involving a second person pronoun that generalizes over people in general. Simply put, the idea is that GEN binds the event variable resulting in an interpretation of the eventuality as occurring repeatedly; at the same time, GEN binds the indexical pronoun resulting in an interpretation that generalizes over people in general. I will

[30] For a detailed discussion of generics and related issues the reader is referred to the vast literature, e.g. Dahl (1975); Carlson (1980); Krifka (1987, 1988); Carlson and Pelletier (1995); Katz (1995); Chierchia (1998); Greenberg (2003) amongst many others.

[31] However, see Greenberg (2003) for a related discussion and slightly different view.

abstract away from specific semantic implementations of this operator and refer the reader to the relevant literature, particularly Carlson and Pelletier (1995), for details; I will return to the interaction with the pronoun later on in the chapter in section 4.3.2 in the discussion of the external syntax.

After having established the empirical domain, i.e. generic uses of second person pronouns, in English, German and Dutch, I will next turn to the analysis of these pronouns starting with their internal structure.

3 The Internal Syntax

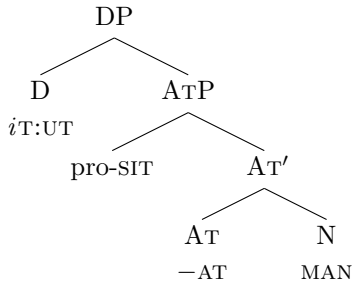
In the previous sections, I have shown that second person pronouns in German and English can appear in generic contexts, i.e. sentences that make general statements. Important additional evidence came from Dutch, which has both weak and strong second person pronouns: only the weak ones can be used in generic statements, whereas the strong ones give rise to an obligatory indexical reading. In what follows, I will detail my analysis of the internal structure of indexical pronouns, starting with the Dutch weak and strong second person pronouns. I argue that the proposed structure directly accounts for the interpretational differences between these two pronominal types. I will then proceed to the implications this analysis has for Standard English and Standard German.

3.1 Dutch Indexical Pronouns

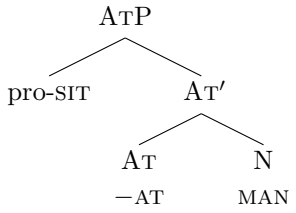
The core of the theory of indexical pronouns put forward in this thesis is formed by the following hypothesis: The deictic category PERSON is dependent on spatial and in certain contexts also temporal coordinates. Importantly, I propose that this dependency is reflected in the morphosyntactic structure of the lexical items denoting PERSON. Put differently, I propose that indexical pronouns consist of a layer that contains the spatial component and a layer that contains the temporal component. In what follows, I will focus on the indexical pronoun's D-layer: I claim that it contains temporal information that restricts the interpretation of the pronoun to a specific moment in time, namely to the moment of the utterance. Consequently, I propose that the relevant structures look as in (30) and that phrasal spell-out applies.[32]

[32] Cf. chapter II, section 2.5.

(30) a. Strong Pronoun 'jij':



b. Weak Pronoun: 'je':



I propose that Dutch weak second person pronouns map onto an ATP structure lacking temporal specification, and that strong pronouns map onto a DP structure, thus containing temporal specification. Thereby I account for the patterns that I have shown earlier: Dutch can only employ weak second person pronouns in generic contexts, but never the strong ones. As I will explain in detail, these necessarily get an indexical interpretation. This pattern is again exemplified in the sentences in (31).

(31) a. **Je** moest in de jaren 20 de Charleston leren dansen.
you$_{weak}$ must in the years 20 the Charleston learn dance
'In the 20ies, you$_{indexical}$ had to learn the Charleston.'
also: 'In the 20ies, **one** had to learn the Charleston.'

b. **Jij** moest in de jaren 20 de Charleston leren dansen.
you$_{strong}$ must in the years 20 the Charleston learn dance
'In the 20ies, you$_{indexical}$ had to learn the Charleston.'
not: 'In the 20ies, one had to learn the Charleston.'

I propose that the temporal component in Dutch indexical pronouns is linked to UTTERANCE TIME. This link is established via a standard syntactic agreement mechanism. Specifically, the temporal component is analyzed as an interpretable but unvalued TIME-feature in the sense of Pesetsky and Torrego (2004a). The relevant value, i.e. UTTERANCE TIME in the case at hand, gets assigned syntactically via the operation Agree. The notion *value* refers to the fact that the lexical entry of the pronoun has a predefined slot for TIME but no predefined content: since the actual TIME differs from utterance to utterance, the specific value of the feature can only be known once the pronoun is used, i.e. enters syntactic derivation.[33]

As already discussed in chapter II, the specific semantic impact induced by TIME in D can be summarized as follows: the temporal component picks out a temporal stage of the individual denoted by the ATP, and restricts the pronoun's interpretation to that specific stage. This idea is based on two proposals that deal with the role of D on the one hand and with the temporal interpretation of noun phrases on the other hand.[34] With respect to the first issue, I

[33]See chapter II, section 2.4 for a more detailed discussion of this type of features.
[34]See chapter II, section 2.4 for a more detailed discussion of the two proposals.

follow Gillon (2006) in taking D to be universally associated with domain restriction. Generally speaking, domain restriction is concerned with picking out those entities that are relevant to the interpretation of a given utterance (cf. among many others Barwise and Cooper 1981; Westerståhl 1984; von Fintel 1994; Etxeberria Otaegi 2005). Take for instance the sentence in (32):

(32) The boys are spectacularly late.

This sentence is not about all boys in the entire world, but rather about a contextually salient set of boys; put differently, it is not about the whole domain of boys, but about a contextually restricted domain. Gillon (2006) argues that universally D is the syntactic locus of this domain restriction, i.e. the element that is ultimately responsible for determining the relevant set of entities. I combine this proposal with Musan's (1995) approach to the temporal interpretation of noun phrases: she argues that D quantifies over stages of individuals rather than over individuals in their entire temporal extendedness. A stage of an individual (cf. also Carlson 1980) refers to a specific temporal slice of that individual, or, put figuratively, resembles a picture that captures the individual at a specific moment in time.

As already mentioned earlier, I propose that the temporal value of D in Dutch indexical pronouns is provided by UTTERANCE TIME. Consequently, the domain is restricted to that stage of the individual – speaker or addressee – present at the utterance time. This effect has already been illustrated in figure IV.1 on page 117, repeated here for convenience:

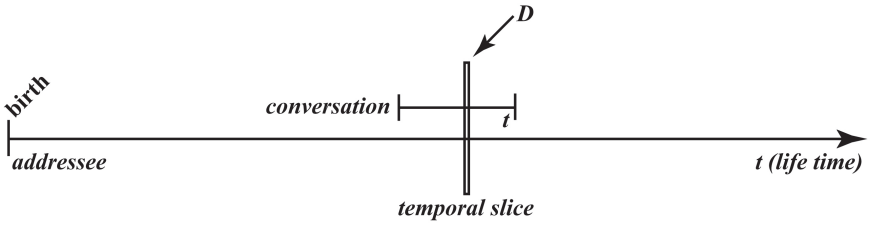


Figure IV.1: Domain restriction by UTTERANCE TIME

This analysis predicts that all pronouns that contain a D-layer can only get interpreted indexically. Importantly, this is not a bi-conditional: for a first or second person pronoun to get interpreted indexically it does not require the D-layer. The link to the utterance context is hypothesized to be established in the AtP-layer via the spatial component; this is the component that is responsible for anchoring the pronoun to the extralinguistic context, i.e. it constitutes the essence of what *indexicality* stands for. Put differently, I argue that an indexical pronoun that only consists of an AtP-layer will per default also be interpreted indexically; it can, however, under certain circumstances receive a non-indexical interpretation. We have seen one such case in detail, namely generic uses of second person pronouns. Crucially in the approach outlined here, the interpretation of a pure AtP-indexical will not be restricted to

any temporal stage of the individual, but will be left vague in this respect. It is therefore easily susceptible to a semantic operation such as a generic operator GEN which generalizes over people and events.

Additional support for an analysis of the strong pronoun 'jij' as a DP comes from equative copular constructions: it has long been noticed that equations differ from predicative structures in many respects (Williams 1983; Partee 1987; Geist 2007). One crucial difference that directly bears on the present discussion concerns the type of arguments that appear in these constructions; witness the examples in (33):

(33) a. Cicero is Tully. [equation]
b. Cicero is an orator and philosopher. [predication]
[Geist 2007:87]

Even though the structures of these two sentences appear to be identical, the meaning of the two sentences is crucially different: whereas the first asserts that Cicero and Tully have one and the same referent, the second attributes the property of being an orator and philosopher to Cicero. Importantly, the first example contains two definite noun phrases, whereas the second example contains only one definite and an indefinite noun phrase. Furthermore, predicative structures can contain any type of argument that expresses a property: for instance, instead of the indefinite noun phrase the sentence could also contain an adjective (e.g. 'old'), a prepositional phrase (e.g. 'in the arena'), or an adverbial (e.g. 'here'). All of these options are not available in equations: they only allow two fully referential arguments, i.e. two DPs. With this in mind, witness the Dutch sentences in (34):[35]

(34) a. Ik ben ik en jij bent **jij**.
I am I and you are you
b. * Ik ben ik en jij bent **je**.
I am I and you are you

As these sentences show, only the strong pronoun 'jij' is grammatical in an equation context, whereas the weak pronoun 'je' is ungrammatical. This is in line with my proposal about the internal structure of these pronouns since the equations only allow for DPs but not AtPs.

With this perspective on the Dutch pronominal system, I now turn back to English and German, both languages with only one pronominal paradigm each.

[35]Norbert Corver, p.c., points out that in cases in which the second pronoun refers to a different person than the first, it appears in accusative rather than nominative case:

i. Ik ben jou/*jij en jij bent mij/ik.
I am you_{acc}/you_{nom} *and you are* me_{acc}/ik_{nom}

ii. Ik ben *mij.
I am me

This is an interesting observation that merits further investigation. However, at this point the issue of pronominal case is left for future research.

3.2 Standard English and German Indexical Pronouns

In the previous section, I argued that Dutch weak and strong second person pronouns map onto two different syntactic structures: whereas the weak indexical pronoun corresponds to an AtP-structure, the strong indexical pronoun corresponds to a complete DP-structure. The latter thus contains temporal specification that restricts the interpretation of the pronoun to a specific temporal stage, namely that of UTTERANCE TIME. This analysis is supported by the fact that strong second person pronouns in Dutch necessarily get an indexical interpretation, whereas weak second person pronouns can appear in generic contexts and receive a non-indexical reading.

Earlier in this chapter I have shown that Standard English and Standard German can also use second person pronouns in generic contexts, as in example (7) repeated here for convenience.

(7) In Holland lernst **du** Fahrrad fahren, noch bevor **du** gehen lernst.
*in Holland learn-2*SG *you bike ride even before you walk*
*learn-2*SG
'In Holland you learn to ride a bike before you even learn to walk.'

As opposed to Dutch, the standard varieties of these two languages only dispose of one set of pronouns each. What does their internal structure look like then? I propose that these pronouns can map onto either an AtP or a DP structure. If the pronoun appears within a generic statement, as in (7) and receives a non-indexical interpretation, it follows from my account that we are dealing with an AtP, i.e. a structure with no temporal restriction on its interpretation. This naturally raises the question whether there are contexts in which a German or English second person pronoun receives an obligatory indexical interpretation and from which we can conclude that we are dealing with a DP rather than an AtP.[36]

Indeed there are cases in which no ambiguity arises and from which it seems safe to conclude that we are dealing with full DPs. Consider the following context: Verena always catches a cold as soon as the temperature drops. She sees her sister Mirjam leaving the house on a cold day in nothing but a miniskirt and a t-shirt. Verena tells her to put on a coat. Mirjam, who never gets sick, replies as in (35):[37]

(35) If **YOU** leave the house in the winter, you have to put on a coat. I, however, don't have to do that.

The contrastively focalized second person pronoun in the first sentence can only get one interpretation, namely that of an indexical. Again, these English

[36]Recall that AtPs by themselves are not non-indexical; they only receive a generic interpretation if they appear in the right context, i.e. a sentence that contains a GEN-operator. I will return to this issue in the discussion of the external syntax in section 4.

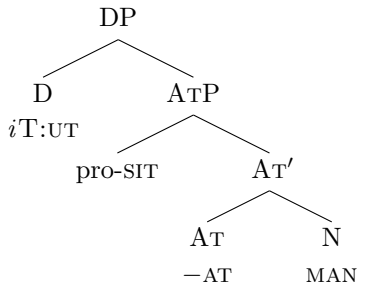
[37]Capitalization indicates focal stress.

data are paralleled in Standard German.[38] Importantly, the non-focussed counterpart in both languages is ambiguous between a generic and an indexical interpretation as shown in (36):

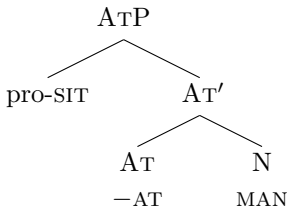
(36) a. If **you** leave the house in the winter, **you** have to put on a coat.
b. Wenn **du** im Winter außer Haus gehst, musst **du** einen Mantel anziehen.
if you in-the winter out-of house go must you a coat put-on

This, of course, is reminiscent of the Dutch data we saw earlier: one pronoun is restricted to an indexical interpretation, while the other one is potentially ambiguous between an indexical and a generic reading. There is also an additional parallel: it is well-known that weak elements generally resist focal stress (cf. Cardinaletti and Starke 1999); from this we can conclude that the focalized second person pronoun in (35) can definitely not be a weak element, i.e. it cannot be like Dutch 'je'. Therefore I propose that both English 'you' and German 'du' can map onto either an AtP or a DP structure as in (37) and again that phrasal spell-out applies.

(37) a.



b.



Even though the surface form cannot tell us which underlying structure we are dealing with, the linguistic context helps us distinguish between the two forms. Interestingly, some varieties of English actually differentiate between a weak second person pronoun 'ya' and a strong form 'you'. Preliminary evidence points to them corresponding to AtP and DP structures, respectively: only

[38] Hotze Rullman (p.c) pointed out to me that focussed pronouns do not always seem to be excluded from generic interpretations (cf. also Bolinger 1979). He provided the following example:

i. In the States you$_{generic}$ hire someone to do your$_{generic}$ taxes.

ii. In Europe, YOU$_{non-indexical}$ have to do them.

Some speakers showed the intuition that the second example gets a kind of distributive reading where 'you' seems to literally pick out the individuals having to do their taxes. Note that the Dutch equivalent can only employ the weak pronoun 'je', i.e. the one lacking a temporal restrictor, and would use a reflexive like 'yourself' for emphasis. Some English speakers share this judgment and would also employ a reflexive. I hypothesize that this sentence is not a true instance of a generic second person pronoun; however, at this point I cannot fully account for the data.

'ya' seems to be able to receive a generic reading, whereas 'you' appears to be restricted to indexical interpretations, as also briefly mentioned in Jackendoff (2007). This issue is, however, still subject to further empirical inquiry.

3.2.1 Two Different Structures: Further Support

An analysis that allows 'you' to map onto two different underlying structures is also supported by a recent proposal by Déchaine and Wiltschko (2010) who come to the same conclusion. Following up on their 2002 analysis, they consider the behaviour of indexicals in bound variable contexts, which were originally discussed by Partee (1989) and are illustrated in (38):

(38) Only I got a question that I understood (nobody else did).

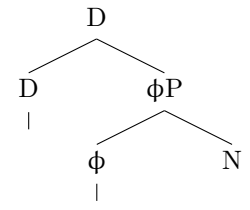
i. = λ [x got a question that $y_{speaker}$ understood]
(... nobody else got a question that I understood)

ii. = λ [x got a question that x understood]
(... nobody else got a question that they understood)

[Déchaine and Wiltschko 2010:1]

Here, the indexical pronoun 'I' can get both an indexical and a non-indexical, i.e. bound-variable, reading. Looking at specific contexts in which these non-indexical readings are available[39], Déchaine and Wiltschko (2010) ultimately conclude the following for English: indexical pronouns that map onto a DP structure are necessarily indexical, whereas if they map onto a ϕP structure they can participate in bound variable environments. The crucial difference between their conclusion and the one argued for throughout this thesis is the following: assuming that traditional person-features are responsible for the interpretation of the pronoun, Déchaine and Wiltschko (2010) propose that in indexical DPs these person features are associated with D, whereas they are associated with ϕ in non-indexical readings. This leads them to expect three different morphosyntactic patterns for pro-DPs: homophony, additive morphology and suppletion as illustrated in (39):

(39)



homophony	α	α
additive morphology	α-β	β
suppletion	α	β

[Déchaine and Wiltschko 2010:example 37]

[39] I will return to this issue in section 4.

If the person-features map onto ϕ, and the structure hence lacks D, they predict one specific spell-out; once D gets added and the person-features then map onto D instead of ϕ, then three different scenarios are possible: either spell-out does not change at all and the pronouns differ only with respect to the underlying structure (homophony), or D has its own spell-out that tags onto the spell-out of ϕ (additive morphology), or there are two different spell-outs for both structures (suppletion). Applying this to my analysis of English, German, and Dutch leads to the following: English and German instantiate homophony ('you' and 'du', respectively), whereas Dutch instantiates suppletion ('jij' and 'je').

What is crucially different in their proposal is the claim that mere ϕPs exclude indexical readings, i.e. that only full DPs can be interpreted indexically. This seems problematic for two reasons: First, it remains unclear how additive morphology can come about: if it is indeed the case that in indexical pronouns the person-features associate with D, but in non-indexical ones with ϕ then it follows that person-features cannot simultaneously be in both projections. However, if the spell-out of ϕ remains constant whether there is a dominating D or not, this raises the question what ϕ does spell out. Second, the analysis does not account for the fact that we observe ambiguity in the bound variable data they discuss, i.e. between strict and sloppy readings, just like we observe ambiguity in the generic data, i.e. between indexical and generic readings.[40] I will return to the discussion in Déchaine and Wiltschko (2010) in section 4.2.

3.3 Genericity and Temporality: Independent Support

We have already seen earlier that there is a principled distinction between generic and episodic sentences. Whereas generic statements report general facts about individuals and events as in (40a), episodic sentences report specific events as in (40b):

(40) a. Cats sleep most of the day.
b. My cat slept on the armchair last night.

This distinction becomes particularly relevant with respect to the behaviour of second person pronouns: whereas they can be ambiguous between an indexical and a generic interpretation in generic sentences as in (41a), no such ambiguity can arise in episodic statements as in (41b):

(41) a. In Wien frühstückst du im Kaffeehaus.
in Vienna have-breakfast you in-the café
'In Vienna, you$_{indexical}$ have breakfast in a café.'
also: 'In Vienna, one has breakfast in a café.'
b. Du bist in ihr Haus eingebrochen.
you are in their house in-broke
'You broke into their house.'

[40] See also the related discussion on the status of ϕP as a variable in chapter II, section 4.

In (41b) the second person pronoun necessarily gets interpreted as an indexical.[41] This interaction between episodic sentences and second person pronouns has also been observed by Kitagawa and Lehrer (1990); Alonso-Ovalle (2002); Egerland (2003b) for several languages. In what follows, I will take a closer look at the distinctions between generic and episodic sentences and argue that their behaviour with respect to temporal reference provides additional support for the exclusion of temporally restricted pronouns in generic contexts.

It has often been observed that generics have an "omnitemporal or atemporal character in that they do not speak of any particular time at all" (Carlson 1980:273). Episodic statements, on the other hand, not only permit specific time reference; given that they report specific events, they necessarily include temporal reference, be it explicitly by virtue of an adverbial phrase or implicitly by virtue of a contextually salient temporal location. Generic statements, however, report regularities and generalizations and are thus incompatible with any specific time. Witness the examples in (42):

(42) a. Alexis broke into the house.
b. Yesterday at 3 p.m., Alexis broke into the house.
c. A dog has four legs.
d. # Yesterday at 3 p.m., a dog had four legs.

(42a) is an episodic sentence with an implicit temporal reference. As you can see, the same statement in (42b) is perfectly fine with an overt adverbial phrase which explicitly locates the event of 'Alexis breaking into the house' at a specific time. However, (42d), a generic statement with an overt temporal location, is at best odd. Even though syntactically this sentence is grammatical, it is still an infelicitous statement: The generic sentence "A dog has four legs" being generally true of all dogs (as long as they have not lost one leg) at all times (at least as far as we can judge) cannot be restricted to a specific time. I suggest that this sentence under the intended generic interpretation fails at LF: as discussed earlier, I am assuming the presence of a generic operator GEN that binds the relevant variables in its scope. GEN binds an event-variable resulting in a generic interpretation of the eventuality, in other words it leads to an interpretation of the eventuality as recurring. But GEN can additionally also bind an indefinite noun phrase such as 'a dog' also resulting in a generalized interpretation. From this it immediately follows that in order to arrive at a generic reading, the predicate needs to allow for multiple eventualities which GEN can quantify over. This is clearly not the case in (42d) where we are only dealing with one single occurrence of dogs having four legs; I assume that quantification of GEN over single occurrences is ungrammatical and hence fails in these cases.

[41] As discussed at various points throughout the chapter, this falls under existential readings, a fact that carries over to impersonal pronouns in the broad sense, i.e. including elements like German 'man' or Italian 'si'. Under certain circumstances, they also can only get an existential reading, i.e. along the lines of 'someone', which has given rise to some discussion in the literature such as Cinque (1988); Chierchia (1995b); Kratzer (1998); D'Alessandro (2007); Malamud (2007).

It should be noted though that even two or three occurrences are arguably not enough to allow for a generic interpretation. How many eventualities would be enough, though, remains an open question and is beyond the scope of this research. The crucial point here is that if a reading with a single occurrence is forced, a generic interpretation is no longer possible. Consequently, this approach still allows for temporal specifications in generics as long as they allow for multiple occurrences of the eventuality. Thus a sentence like (43) is perfectly grammatical with a generic interpretation:

(43) In the 70ies, tomatoes were tasty.

Having established that temporal reference in generics is only felicitous if it allows for a sufficient generalization over events but ungrammatical otherwise, we can now turn back to second person pronouns. Recall example (6), repeated here for convenience, which was our first illustration of a generic use of a second person pronoun.

(6) In Holland, you learn to ride a bike before you even learn to walk.

Now let us consider this sentence but this time with adding a specific temporal reference as in example (44):

(44) Yesterday at 3 pm, you learned to ride a bike.

Again, we see that the only possible reading of the second person is an indexical one. Crucial for my proposal is the observation that in generic statements specific temporal reference to a single event is disallowed and that specific time reference in combination with a second person pronoun leads to an indexical interpretation. This is entirely in line with my proposal of obligatorily indexical pronouns: I argue that they contain temporal specification that limits the interpretation of the pronoun to a very specific moment in time. Consequently, they are incompatible with generic statements since they are no longer a variable that GEN can quantify and thereby generalize over.

In conclusion, generic environments disallow specific temporal reference in general. I argue that consequently they also disallow the use of a second person pronoun that contains a temporal feature which restricts the interpretation to a specific temporal stage. Importantly, genericity in the cases of interest here does not only pertain at the sentential level but also on the pronominal level: we are not only generalizing over events but we are generalizing over people in those events. Consequently, the generic operator GEN also needs to quantify over the pronoun and thus generic environments only support pronouns that lack the temporal D-layer and can behave like variables. It is therefore the interaction of internal and external syntax that makes it possible for an otherwise indexical pronoun to receive a non-indexical interpretation: the external environment induces the generic interpretation by means of the adverbial quantifier GEN, the internal syntax, on the other hand, facilitates such a reading due to the lack of temporal anchoring to the utterance time.

To sum up, I argue that the same structures are available in English, German, and Dutch: first and second person pronouns can either be AtPs or DPs and the latter can only be interpreted indexically. But whereas Dutch reflects these structures overtly in its morphosyntax, Standard English and Standard German do not: both languages assign one and the same morphophonological string to both underlying structures; which of the two structures is being used can only be determined by looking at the (un)available interpretations.

4 The External Syntax

So far I have primarily been concerned with the internal structure of indexical pronouns and claimed that they can be either AtPs or DPs. If the analysis is on the right track, then we expect the two types to also behave differently in the external syntax. In what follows, I will show that this prediction is indeed borne out. First, I will address the general question of whether there are any syntactic restrictions to the use of second person pronouns in generic contexts. I will show that even though there are no restrictions as to which syntactic argument they express, there is indeed a distinction once one takes well-established differences between weak and strong pronouns into account. Second, I will turn to their behaviour with respect to their binding-theoretic status as put forward in Déchaine and Wiltschko (2010). Refining their 2002 proposal, Déchaine and Wiltschko (2010) argue that a crucial difference between pro-ϕPs and pro-DPs lies in their behaviour with respect to binding theory. Lastly, I will discuss an exemplary derivation of a clause containing a pro-DP second person pronoun.

4.1 Syntactic Restrictions on Generic Second Person

Let us briefly return to the German impersonal 'man' of which we have seen that it can receive a generic interpretation; we have also seen that it is precisely these generic contexts in which it can be replaced by 'du'. With respect to syntactic restrictions, it is a well-known fact that 'man' can only appear as a nominative subject, but never as an object. Instead, German speakers have to resort to other strategies to convey the desired meaning, such as the indefinite 'einer' (one). This is illustrated in the examples in (45):

(45) Context: *Friends are discussing the hierarchy of a big company. One of them claims that the vice president doesn't have the authority to actually fire employees. Another one replies:*

a. Der Vizepräsident kann einen ganz sicher feuern.
the vice-president can one total sure fire
'The vice president can definitely fire people.'

b. *Der Vizepräsident kann **man** ganz sicher feuern.
the vice-president can man total sure fire

However, the same is clearly not true for a second person pronoun which can happily appear as the direct object instead of 'man' in the last example as shown in (46):[42]

(46) Der Vizepräsident kann **dich** ganz sicher feuern.
*the vice-president can you.*ACC *total surely fire*
'The vice president can definitely fire you.'

Again, this sentence can get both an indexical and a non-indexical reading, i.e. it is on par with all the other examples that we saw earlier, in which a second person pronoun can receive a generic interpretation. The same also holds for its passive version, which also allows for the generic interpretation of the second person pronoun as shown in (47):

(47) **Du** kannst ganz sicher vom Vizepräsidenten gefeuert werden.
you can total surely by vice-president fired get
'You can definitely be fired by the vice president.'

Likewise, a generic second person pronoun can appear as the indirect object (48), in reflexive constructions (49), within a prepositional phrase (50), and as a possessive (51):

(48) Österreich gibt **dir** kein Stipendium, wenn du über 35 bist.
*Austria give you.*DAT *no stipend when you over 35 are*
'Austria doesn't give you a stipend once you are over 35.'

(49) Als junger Mitarbeiter musst du **dich** immer extra anstrengen.
as young employee must you yourself always extra apply
'As a young employee, you always have to really apply yourself.'

(50) Gute Freunde fühlen **mit dir**, auch wenn du weit weg lebst.
*good friends feel with you.*DAT *also if you far away live*
'Good friends sympathize with you, even if you live far away.'

(51) Heutzutage musst du wirklich hart arbeiten, um **deine** Familie zu ernähren.
nowadays must you really hard work to your family to feed
'Nowadays, you really have to work hard to feed your family.'

Argument positions therefore do not pose a challenge for second person pronouns in generic contexts, neither in German nor in English, as can be seen from the translations of each of the previous examples. But next witness the examples in (52):

[42]See Egerland (2003b) for the same point with respect to the grammaticality of generic second persons in both subject and object position in Swedish, French and Italian.

(52) a. Auf dem Land gehst **du** jeden Sonntag in die Kirche.
on the country go you every Sunday in the church
'In the countryside, you go to church every Sunday.

b. Auf dem Land gehen **du und deine Familie** jeden Sonntag in die Kirche.
on the country go you and your family every Sunday in the church
'In the countryside, you and your family go to church every Sunday.'

Whereas the first sentence in (52a) is just like any other example that supports both an indexical and a generic interpretation, things are different with (52b): here, the second person pronoun appears within a coordinated structure together with 'und deine Familie' (and your family); in this case only one reading is available, namely the indexical interpretation of the second person pronoun, a generic interpretation of the pronoun is not possible. If one wants to express this sentence as a generic statement, a different structure, for instance a comitative as in (53), has to be chosen.

(53) Auf dem Land gehst **du** jeden Sonntag **mit deiner Familie** in die Kirche.
on the country go you every Sunday with your family in the church
'In the countryside, you go to church every Sunday with your family.'

Now the coordinated phrase is split into a second person subject and a prepositional phrase; once again, both a generic and an indexical reading are available. Note at this point that the same holds for the English translations of all these examples. It appears to be the case that second person pronouns in coordinated structures can only receive an indexical interpretation. This brings to mind the well-known fact that weak elements are generally excluded from coordinated structures (cf. Cardinaletti and Starke 1999). As expected then, the Dutch weak pronoun 'je' is impossible in the equivalent of (52b), only the strong pronoun 'jij' is licit in this context as shown in (54):

(54) Op het platteland gaan **jij** en je gezin iedere zondag naar de kerk.
on the country go you and your family every Sunday to the church
'In the countryside, you and your family go to church every Sunday.'

Again, this sentence can only receive an indexical interpretation; in order to express it as a generic statement, a different structure has to be chosen, (55):

(55) Op het platteland ga **je** iedere zondag met je gezin naar de
on the country go you every Sunday with your family to the
kerk.
church
'In the countryside, you go to church every Sunday with your family.'

These data support my analysis of Standard German and Standard English second person pronouns along the same lines as Dutch indexical pronouns: even though the first do not exhibit any morphophonological differences, they behave exactly the same as their Dutch counterparts, which do appear in two different forms. Likewise, none of these three languages allow topicalization of the generic pronoun as shown in (56), another well-established criterion for weak pronouns (cf. Cardinaletti and Starke 1999):

(56) a. Dich kann der Vizepräsident auf jeden Fall feuern.
you can the vice-president on every case fire
'You$_{indexical}$, the vice-president can fire in any case.'
not: 'The vice-president can fire someone in any case.'

b. Jou kan de vice-president in elk geval ontslaan.
you can the vice-president in any case fire
'You$_{indexical}$, the vice-president can fire in any case.'
not: 'The vice-president can fire someone in any case.'

We can therefore conclude that first of all no restrictions apply to second person generics with respect to the type of syntactic argument they express. They can freely appear as subjects, direct objects, indirect objects, reflexives and possessives; likewise, passivization does also not have any effect on the available interpretations.[43] However, there are restrictions with respect to coordinated structures and topicalization: if second person pronouns appear in either structure, they are necessarily interpreted indexically. From this I conclude that in those cases we are necessarily dealing with full DPs, an analysis that is in line with the restrictions on weak elements: as shown by Cardinaletti and Starke (1999) they are barred from either structure; only strong pronouns are licit in these environments.

4.2 Binding-theoretic Status

As already mentioned earlier, Déchaine and Wiltschko (2010) also come to the conclusion that the D-layer is responsible for an indexical interpretation of a

[43] In this section, I have illustrated the lack of syntactic restrictions for German and English. With respect to the crosslinguistic validity of this observation, the questionnaire distributed for this research contained examples with second person in direct object position and as a possessive. None of the cases in which second person was accepted as a generic in principle showed any significant sensitivity with respect to either one of these examples. It seems to hold crosslinguistically that once a second person can receive a generic interpretation, it can do so in any syntactic position. See also Egerland (2003b) for a similar conclusion.

first or second person pronoun; our proposals differ in two points: They argue that ϕP-pronouns only occur in non-indexical contexts.[44] Additionally, our accounts differ in which features are associated with the respective layers and how indexicality comes about: whereas in their account indexical readings follow from person-features being associated with D, I propose that indexicality follows from spatial anchoring to the utterance context located in the pronominal AtP; further I propose that pro-AtPs can appear in contexts in which they are interpreted non-indexically and that obligatory indexicality in German, English, and Dutch is due to D providing domain restriction associated with UTTERANCE TIME. Even though the technical implementations differ in various respects, the basic conclusion is strikingly similar. In section 3.2, I already discussed their proposal with respect to the internal structure of English pronouns in greater detail. Here I review some of the evidence they present concerning the external syntax of these pronouns and show how it extends to Dutch; I argue that ultimately my account is superior in that it allows for the ambiguity we observe in certain contexts, i.e. indexical and non-indexical readings of the same sentence.

It is a well-known fact that English indexical pronouns can be used as bound variables, a fact that prima facie is unexpected of indexical items and hence has given rise to several discussions in the literature (see Partee 1989; Kratzer 1998; Rullmann 2004; Kratzer 2006). A standard example is given in (57):

(57) I hope that I will win, but of course you do too. [Rullmann 2004:162]

Under the strict reading, 'you' also hope that 'I' will win; under the sloppy bound variable reading, 'you' hope that 'you' will win. Déchaine and Wiltschko (2010) discuss these facts and based on Reinhart (1983), they propose the diagnostic in (58) for identifying bound variable pronouns:

(58) The bound variable diagnostic
If α is a local domain form then α is a bound variable.
[Déchaine and Wiltschko 2010:6]

In this diagnostic, *local domain form* refers to the specific morphological form that a locally bound expression takes on. In classical binding theory, this was defined as an anaphor; however, it has been shown that there is considerable crosslinguistic variation in the sense that not every language has dedicated anaphors but may employ other expressions instead. For instance, whereas English has such a dedicated form, i.e. the reflexive in (59a), French uses a regular pronoun in the very same environment to achieve the same meaning (59b):

[44] In fact, they extend their analysis to third person pronouns which they argue can also be used indexically when accomanied by an act of ostension. However, what they refer to as indexical in the case of a third person pronoun is in fact still different from first and second person as pointed out by Kaplan (1989a) and discussed in chapter I: first and second person pronouns are pure indexicals in Kaplan's sense, whereas a third person pronoun counts as a demonstrative in the relevant use.

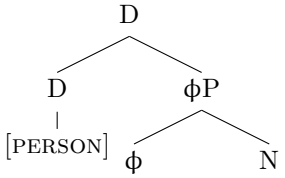
(59) a. I admire **myself**.
λx [x admires x]
b. Je **m'** admire.
*1*SG.NOM *1*SG.ACC *admire*
'I admire myself.' (lit.: I admire me.) λx [x admires x]
[Déchaine and Wiltschko 2010:5]

Both the English 'myself' and the French 'm(e)' are thus local domain forms in Déchaine and Wiltschko's (2010) sense: they are both locally bound and are thus identified as bound variables. Since in their account pro-DPs are indexical and pro-ϕPs are variables, both English 'myself' and French 'me' map onto ϕPs. Conversely, forms that map onto a full DP are necessarily indexical and cannot function as local domain forms, i.e. they cannot be locally bound. As already mentioned earlier, they conclude that English personal pronouns can be either a ϕP or a DP. They arrive at this conclusion based on the data in (60), which employs the accusative pronoun 'me'.[45]

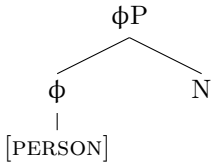
(60) a. Everyone suspects [$_D$ **me**].
b. ∀x (x suspects SPEAKER)
c. Even [$_\phi$ I] suspect [$_\phi$ **me**].
d. λx (x suspects x)

The structures Déchaine and Wiltschko (2010) associate with these pronouns then look as given in (61).

(61) a. indexical first person: 'me' (60a)



b. bound variable (=non-indexical) first person: 'me' (60c)



With this analysis in mind, I will now turn to Dutch. Recall that I argue that the weak second person pronoun 'je' maps onto an AtP, i.e. Déchaine and Wiltschko's (2002) ϕP, whereas the strong pronoun 'jij' maps onto a DP. Following Déchaine and Wiltschko's (2010) bound variable diagnostic, we thus

[45]The analysis extends to nominative forms, as well, since they can also appear as both indexical and bound variable pronouns, as shown in (38) and (57).

expect the weak pronoun to act as a local domain form wereas the strong pronoun should be barred from such a position.

This prediction is indeed borne out as shown by the data in (62) from Reuland (2001):

(62) a. Jij voelde **je** wegglijden.
you felt you_{weak} *slide-away.*
'You felt yourself slide away.'

b. * Jij voelde **jou** wegglijden
you felt you_{strong} *slide-away.*
[Reuland 2001:465; glosses adapted, translation added by BG]

As these examples illustrate, the weak second person pronoun can function as the reflexive, i.e. it is a local domain form under the relevant condition; the strong pronoun, on the other hand, is barred from this position, exactly as predicted by my analysis of this form as a DP. Similarly, van Koppen (2012) presents Dutch bound variable data as in (63).

(63) Jij voelde dat de vijand je zag en ik ook.
you_{sg} *felt that the enemy* you_{sg} *saw and I too*
'You felt that the enemy saw you and I did too.' [van Koppen 2012:143]

The target item is the weak pronoun 'je': under the strict reading the sentence is interpreted as '... and I also felt that the enemy saw *you*'; under the sloppy, i.e. bound variable, reading the sentence is interpreted as '... and I also felt that the enemy saw *me*'. The interesting piece of data now is the version of this sentence with the strong pronoun 'jij' in its accusative form *jou* as in (64):

(64) Jij voelde dat de vijand **jou** zag en ik ook.
you_{strong} *felt that the enemy* you_{strong} *saw and I too*
'You felt that the enemy saw you and I did too.'

This type of sentence gives rise to varying judgements: Out of ten speakers that I consulted, six categorically excluded a bound variable reading for the strong pronoun as predicted by my analysis; three considered it possible but only as long as 'jou' was not stressed and one speaker had no problems getting both a strict and a sloppy reading. In general, it appears to be the case that strong pronouns strongly favour a strict reading, but that sloppy interpretations are available for a non-negligible amount of speakers. A similar point is also made in Maier and de Schepper (2010) for Dutch and Déchaine and Wiltschko (2002) for French; Rullmann (2004) notes for similar examples in English that:

> [S]loppy identity readings of 1st and 2nd person pronouns are possible in principle [...], although individual speakers may differ in the extent to which they accept such examples. [Rullmann 2004:162]

Van Koppen (2005, 2012) takes the fact that sloppy readings can arise as evidence for the ϕP status of all Dutch pronouns, irrespective of whether they are weak or strong. In light of the evidence put forward throughout this chapter, I maintain that strong Dutch pronouns are DPs containing temporal restriction: I have shown that strong pronouns are obligatorily indexical in all instances where weak pronouns are possible and ambiguous between a generic and an indexical interpretation; furthermore, in line with the claim that only ϕPs can function as bound variables, Reuland (2001) shows that only weak second person pronouns can function as reflexives; additionally, since I propose that generic interpretations require the presence of a generic operator GEN that binds the relevant variables in its scope, these cases are yet another instance in which a ϕP acts as a bound variable. At this point, I cannot fully account for the fact that some speakers do allow sloppy readings of strong pronouns; however, since crosslinguistically the acceptance of bound variable readings is subject to considerable speaker variation, the question whether bound variable readings of the kind illustrated in (57) or (63) are in fact a good diagnostic for the distinction between pro-ϕPs/pro-AtPs and pro-DPs also might be warranted.

4.3 Putting the Pieces Together

The main claims that I argued for throughout this chapter can be summarized as follows: second person pronouns that map onto an AtP structure are per default addressee-related but can appear in generic contexts and receive a non-indexical, generic interpretation. Second person pronouns that map onto a full DP, on the other hand, are necessarily interpreted as indexical since they contain temporal specification that restricts the interpretation to the temporal stage of the individual present at UTTERANCE TIME. In what follows, I will show how these two different pronouns behave in the respective syntactic environments, i.e. obligatorily indexical and generic.

4.3.1 Indexical Readings

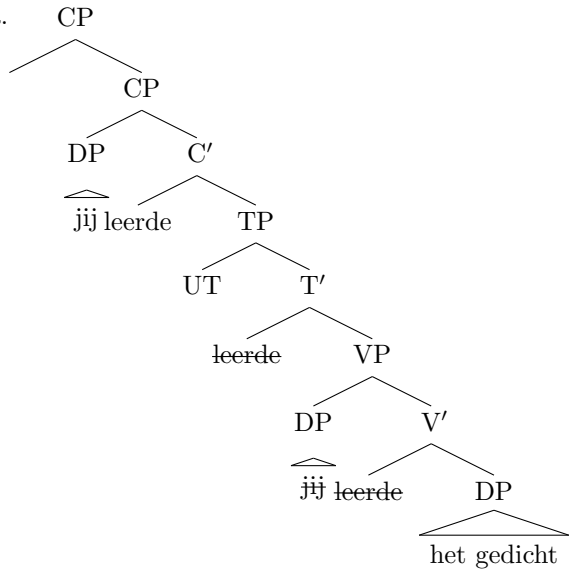
As argued for throughout this chapter, obligatorily indexical pronouns map onto a full DP structure. Following Gillon (2006), I take D to be responsible for domain restriction. Under the assumption of an ontology that not only contains individuals but also stages of individuals (Carlson 1980; Musan 1995), I propose that D in indexical pronouns picks out a specific temporal stage of the individual denoted in AtP. I argue that indexical pronouns in German, English, and Dutch contain a temporal feature in D that is linked to UTTERANCE TIME. Analytically, I adopt Pesetsky and Torrego's (2004a) feature system: they argue that features consist of two components: one referring to their interpretability, i.e whether or not they have any relevance at LF, the other one referring to their value. i.e. whether they are valued or unvalued. I propose that the temporal feature in D is an interpretable but unvalued feature: it has semantic impact as it is responsible for defining which temporal stage of the individual gets picked

out but it is unvalued prior to any syntactic operation since the actual time cannot be known before the pronoun is used in a given sentence. The value can then only be provided by the syntax. For English, German, and Dutch, I argue that the value is that of UTTERANCE TIME, which, following Zagona (1990); Stowell (1993, 2007); Demirdache and Uribe-Etxebarria (1997, 2000) among others, I take to be encoded in Spec-TP.

Abstracting away from the derivational details concerning the spatial component, the derivation of the sentence in (65) containing the strong second person Dutch pronoun 'jij' looks as given in (66): (66a) gives an overview of the final structure of the whole clause, and (66b) zooms in on the interaction between the pronoun and UTTERANCE TIME in Spec-TP prior to further movement to the CP. For expository reasons only, I follow Stowell (2007) in assuming that the subject bypasses Spec-TP and moves directly to Spec-CP.[46]

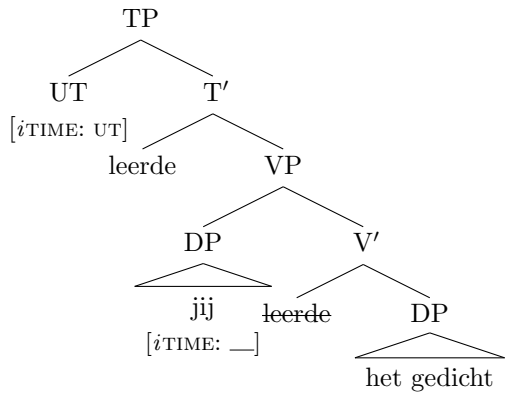
(65) Jij leerde het gedicht.
you$_{strong}$ *learned the poem*
'You$_{indexical}$ learned the poem.'

(66) a.



[46]For expository reasons, I also abstract away from little vP as the licenser of the external subject (Kratzer 1996; Chomsky 1995).

b.



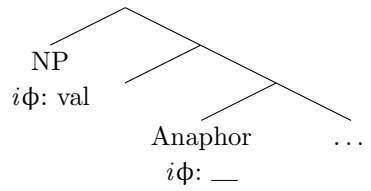
Following Wurmbrand (2012a,b), I argue that valuation takes place under Reverse Agree, which is defined as in (67).[47]

(67) A feature F:_ on α is valued by a feature F: val on β, iff
   i. β asymmetrically c-commands α AND
   ii. There is no γ, γ distinct from β, with a valued interpretable feature F such that γ commands α and is c-commanded by β.

As can be seen from the structure, UTTERANCE TIME in Spec-TP asymmetrically c-commands the pronoun in Spec-VP. UTTERANCE TIME is valued in Spec-TP and can value the unvalued TIME-feature in the pronoun under Reverse Agree since there is no intervening category carrying another TIME-feature that could potentially value the pronominal TIME-feature instead.[48] Once the subject pronoun is valued it then moves further up in the structure to its final preverbal position in the CP.[49]

This syntactic configuration of the indexical pronoun with an unvalued feature and the referential temporal expression with a valued feature is very much alike to what Wurmbrand suggests for anaphor binding as illustrated in (68).

(68) [Wurmbrand 2012a:15]



[47] Also see chapter II, section 3.

[48] This is a slight simplification of the matter for expository reasons. In chapter II, section 3.1, I proposed that UTTERANCE TIME is actually the default interpretation of pro-SIT in Spec-TP. In other words, there is no actual UTTERANCE TIME-feature encoded in the syntax. However, I assume that UTTERANCE TIME will always be the default value for any TIME-feature. Therefore the unvalued TIME-feature in pronominal D, even though it cannot find a suitable goal upon probing upwards, simply receives the default value UTTERANCE TIME.

[49] I take all clauses to be full CPs, that is I do not adopt an analysis of subject-initial verb second sentences that assumes the absence of a CP (cf. Travis 1984; Zwart 1997).

Here also we have two XPs that both carry interpretable features, but only in the higher one is this feature also valued. As already mentioned in chapter II, section 3.2, Wurmbrand (2012a) explicitly assumes that a valued feature can value more than one unvalued feature: configurations such as (69), in which two indexical pronouns appear and which both have an unvalued TIME-feature, therefore do not pose a challenge for this account.

(69) Ik mis jou.
I_{strong} miss you_{strong}
'I miss you.'

4.3.2 Generic Interpretation

As already argued earlier, I assume that indexical pronouns which only map onto an AtP structure get an indexical reading per default since the spatial component within them anchors them to the utterance context. However, since they are not also temporally restricted to a specific temporal stage of the individual denoted by them, they are susceptible to operations that can alter their indexical nature: for instance, a generic operator GEN can quantify over them and extrapolate from the addressee to people in general. In this respect they behave like bound variables as discussed in the preceding section. This implies that the link to the utterance context remains even in those contexts in which the interpretation is non-indexical. I suggest that evidence for this underlying link to the addressee of the utterance comes from the fact that generic uses of second person pronouns evoke the empathy of the hearer, as argued for by Malamud (2007) and shown in examples (9), repeated here for convenience.

(9) a. In those days, one could throw **you** in jail for this kind of thing.
(empathise with the victim)
b. ? In those days, **you** could throw one in jail for this kind of thing.[50]
(empathise with the jailer)
c. In those days, **one** could be thrown in jail for this kind of thing.
(empathy can go either way)
[Malamud 2007:11]

Following Carlson (1989); Carlson and Pelletier (1995) I take sentence level genericity to be subject to the presence of a generic operator GEN that binds the relevant variables in its scope. Taking a simple example as in (70a) and only considering the now relevant generic interpretation then corresponds to a meaning as in (70b).

(70) a. **Je** groet een buurman.
you_{weak} greet a buurman.
'One greets a neighbour.'

[50] The question mark refers to the use of 'one' in object position.

b. GEN[x,y,s;] (x=sentient individual not at UTTERANCE LOCATION; y=neighbour & x and y in s & x greets y)

Essentially this says that whenever there is a situation which has both a sentient individual not located at UTTERANCE LOCATION and a neighbour in it, this individual greets the neighbour.[51] Syntactically, it is generally assumed that sentence level genericity implies that GEN is encoded in the left periphery of the clause (cf., e.g. Moltmann 2006) and thus takes scope over all the relevant variables it needs to bind. Naturally, and as evidenced by the huge body of literature, there is much more to be said about genericity and how exactly the relevant meaning comes about. However, I am not attempting a semantic account of the interpretation of such sentences, but I limit myself to the following claim: a generic interpretation of an otherwise indexical pronoun is only possible if the indexical can be bound by a generic operator. Therefore, it needs to correspond to a pronominal structure that allows binding; according to the Déchaine and Wiltschko's (2002) account, which my analysis is based on, it therefore needs to be a pro-AtP, i.e. the equivalent to their pro-ϕP. Conversely, this excludes pro-DPs from such structures as they cannot function as bound variables; additional support comes from the fact that pro-DPs contain specific temporal information which is at odds with the property of generics of quantifying over multiple occurrences of the eventuality under discussion.

5 Two Related Phenomena

In this section, I briefly touch upon two phenomena that are related to the present discussion and have already been given some attention in the literature: first, I address the issue of second person pronouns that appear to be referring to the speaker rather than the addressee of the utterance; second, I turn to the issue of impersonal uses of first person pronouns that can be observed in some highly limited cases.

5.1 Second Person Pronouns Referring to the Speaker

The approach to first and second person pronouns argued for here also provides interesting options for the analysis of a related phenomenon left undiscussed so far. It concerns the interpretation of a second person pronoun as reference to the speaker of the utterance. Such cases have been given particular attention in the literature about Dutch 'je' (cf. Bennis 2004; Zeijlstra 2008).

'Je' cannot only give rise to generic readings as shown in this chapter but also to speaker-oriented readings, i.e. 'je' can be interpreted as 'I' instead of 'you', as illustrated in (71).

[51]The precise semantics of GEN are arguably more intricate than the representation in (70b) implies, since GEN does not universally quantify but allows for exceptions. Rather, as suggested by Heim (1982); Krifka et al. (1995) it is probably a modal operator that evokes a modal base with respect to which the statement is evaluated.

(71) Je kreeg de bal en toen zag je iemand vrijstaan en toen
you got the ball and then saw you someone free-stand and then
speelde je de bal direct.
played you the ball directly
'You got the ball and then you saw someone stand free and you played the ball directly.' [Bennis 2004:19, glosses and translation by BG]

This example is taken from an interview with a football player who was talking about himself using the weak second person pronoun 'je'. However, this type of interpretation of a second person pronoun cannot only be found in Dutch. Consider for instance the example in (72), which was part of my questionnaire:

(72) *A journalist asks Kate Winslet how she felt when she received the Oscar. She says:*
"You are just completely overwhelmed, you can't believe that this is actually happening to you and you are simply very grateful."

Clearly, this statement is not about the journalist who asked the question but about the interviewee who talks about her own experience. The survey conducted for this research showed that this kind of reading is readily available in a number of languages, e.g. Afrikaans, Catalan, German, Modern Greek, Italian, Indonesian, or Chinese, some of which are exemplified subsequently.

(73) Ests completament aclaparat, no pots creuret
*be.2*SG *completely overwhelmed, no can.2*SG *believe-are.2*SG.CL
que aix t est passant realment a tu i ests
*that this 2*SG.CL *be.3*SG *happening actually to you and be.2*SG
simplement molt agrat
simply very grateful
'You are just completely overwhelmed, you can't believe that this is actually happening to you and you are simply very grateful.'
[Catalan, Indo-European]

(74) Den boris na pistepsis oti afto to pragma su simveni
*Neg can-2*SG SUBJ *believe-2*SG *that this the thing you happen*
ondos! Ke niothis aperandi evgnomosini.
*really and feel-2*SG *endless gratitude*
'You cannot believe that this thing is really happening to you! And you feel endless gratitude.' [Modern Greek, Indo-European]

(75) Anda betul-betul sangat bahagia, anda tidak percaya bahwa ini
you really very happy you not believe that this
benar-benar terjadi pada Anda dan Anda sangat berterima kasih.
really happened to you and you very grateful
'You are really very happy, you can't believe that this is really happening to you and you are very grateful.'
[Indonesian, Austronesian]

With respect to my analysis of indexical pronouns, I predict that these cases also resort to the indexical structure lacking temporal anchoring and can hence get an interpretation that targets the speaker herself: at least for Dutch, this prediction is evidenced by such data as in (71) and the fact that the strong pronoun 'jij' is excluded from these contexts (cf. Zeijlstra 2008). As argued for throughout, the strong pronoun necessarily receives an indexical reading and is therefore not only unavailable in generic contexts but also as a reference to the speaker. From a semantic/pragmatic point of view, these examples are similar to generic contexts: the addressee is invited to put herself into the speaker's shoes; in generic contexts, she is invited to put herself into someone else's shoes, as shown in example (9) on page 122.

Zeijlstra (2008) also argues that the availability of speaker-reference is structurally conditioned: however, his proposal is based on the idea that the weak pronoun 'je' only carries a feature that encodes speech-act participation; consequently the interpretation can go either way. However, this account does not capture the fact that the default interpretation is still reference to the addressee and that the speaker-referring variation can only be deduced from the context. Furthermore, considering that the use of second person pronouns to refer to the speaker is not unique to Dutch but extends to numerous other languages if one considers the right context (see example (72)), I do not see how Zeijlstra's (2008) account could be extended to all those other languages: not every language has weak and strong pronouns like Dutch, many only have one paradigm and therefore only one type of second person pronoun. As we have seen, this does not exclude those languages from using second person pronouns in generic contexts. However, extending Zeijlstra's (2008) approach to these languages would imply that they all dispose of a second person pronoun that only carries participant-features and bears no relation to the addressee. This would turn second person pronouns into underspecified pronouns in a wide range of related and unrelated languages, which seems neither conceptually nor empirically desirable. I therefore suggest that my analysis of 'je' is superior, since it not only accounts for the pronoun's default interpretation but also straightforwardly extends to other languages.

At this point, I cannot account for how the speaker-referring interpretation comes about but I tentatively suggest that this lies outside the realm of syntax: It has been suggested by several speakers of different languages that the choice of the second person pronoun in such cases conveys some kind of modesty on the speaker's part, which strongly suggests a non-negligable pragmatic side of the phenomenon. To me, it therefore seems plausible to assume that these cases are subject to pragmatic inferences that lead to the relevant interpretation, rather than syntactico-semantic processes that influence the interpretation of the pronoun.

5.2 First Person Impersonals

The second related phenomenon concerns impersonal uses of first person pronouns: as reported in the literature (Kitagawa and Lehrer 1990; Zobel 2010), in some, though highly restricted, cases a first person pronoun may also receive a non-indexical interpretation, and it has been suggested that these cases are also instances of generic uses. Consider the example in (76):

(76) *Edith and Brigitte are talking about their sister Bettina who claims not to be able to come home for Christmas because she has to work on her dissertation. Edith says:*
Wenn ich zu Weihnachten wirklich zuhause sein will, dann schaff
if I at christmas really at-home be want then manage
ich das auch irgendwie.
I that too somehow
'If I really want to spend christmas at home, then I will somehow manage.'

This instantiates an impersonal 'I': It is not the speaker who is in the position of having to take a break from thesis writing in this case. She is making a general claim that if someone really wants something there is always a way. Kitagawa and Lehrer (1990) state Descartes' "Cogito ergo sum" as a prime example of an impersonal first person. However, they also point out that the use of first person as an impersonal pronoun is much more restricted than that of a second person pronoun. They suggest that:

> [T]he use of impersonal *I* is a safe choice because the speaker is offering himself as the role model, describing how the particular world he presents works. In fact, the use of impersonal *I* is felicitous only in a context where this 'role model' sense is called for in a purportedly hypothetical context. [Kitagawa and Lehrer 1990:753]

Zobel (2010) shows that in German these cases require specific modal contexts, otherwise no non-indexical interpretation of a first person pronoun can arise. One of her examples, which was taken from a discussion on the internet, is given in (77).

(77) Wenn ich als Mannschaft gewinnen will, dann muss ich motiviert auf
if I as team win.inf want then must I motivated on
den Platz gehen.
the field go.inf
'If (one as) a team wants to win, then one/they has/have to enter the field motivated.' [Zobel 2010:293]

Zobel (2010) sketches a semantic account with respect to the denotation of a first person pronoun and its interaction with modal contexts such that it ultimately results in an impersonal interpretation similar to that of the impersonal pronoun 'man' (one).

Even though I am not attempting to provide an account for this phenomenon here, I hypothesize that with respect to the theory of indexical pronouns argued for in this thesis only first person pronouns that lack the temporal layer, i.e. AtPs, can be used in impersonal contexts. It is well conceivable that in these cases the relevant interpretation then comes about through the interaction of the specific syntactic structure with the modal context it appears in. However, this is an issue that has to be left open for further research.

6 Factoring in Blackfoot

Before concluding this chapter, I will now attempt to connect the dots between the previous chapter, which was concerned with Blackfoot and its person proclitic system, and the current chapter, which primarily dealt with English, German, and Dutch. While both chapters addressed the D-layer of indexical pronouns, they were each concerned with different facets of this projection. As pointed out at various occasions throughout this thesis, the temporal feature in D is argued to give rise to crosslinguistic variation in indexical pronouns: the TIME-feature located in D is proposed to be interpretable but unvalued, receiving its value during the course of syntactic derivation from one of the syntactically represented TIME-arguments. Languages are proposed to parametrically differ in whether TIME in D gets valued by UTTERANCE TIME or by EVENTUALITY TIME. In this section, I first address the issue of how Blackfoot is expected to behave with respect to generic contexts. I start by briefly summarizing the main findings from the previous chapter before putting it into the context of the current chapter. Then I look at how English, German, and Dutch are predicted to behave with respect to the empirical domains discussed in the context of Blackfoot. Last, I briefly turn to some more general issues concerning crosslinguistic variation.

6.1 Blackfoot and Generics

Whereas this chapter discussed data from English, German, and Dutch, three languages whose indexical pronouns receive their temporal specification from UTTERANCE TIME, the previous chapter presented data from Blackfoot, a language whose indexical pronouns are temporally restricted by EVENTUALITY TIME. This was supported by a series of facts that concern the distribution of two sets of proclitics: Blackfoot has short and long form proclitics that are morphologically related to each other and map onto At/ϕPs and DPs, as shown in table IV.2:

Whereas the short forms were argued to map onto the ϕ/At-head, the long forms were argued to additionally comprise the D-head '-it-'; consequently, '-it-' is proposed to be the spell-out of the TIME-feature, specified by EVENTUALITY TIME. It was shown that the distribution of the two forms follows a specific underlying pattern that is directly linked to TIME in D: in all cases in which

	first person	second person	third person
short forms: pro-ATP/ϕP	*n-*	*k-*	*w-*
long forms: pro-DP	*n-it-*	*k-it-*	*w-it-* (=*ot-*)

Table IV.2: Blackfoot proclitics

the relation between the individual denoted by the proclitic and the eventuality denoted by the stem it attaches to is temporally restricted, we see the long forms; conversely, in all cases in which the relation between the individual and the eventuality is temporally unrestricted, we see the short forms. One straightforward example illustrating this principle is given in (78):

(78) a. kitááattsistaama
kit-aaattsistaama
2-rabbit
'your rabbit'

b. kiksíssta
k-iksíssta
2-mother
'your mother'
[Bliss and Gruber 2011b]

Whereas (78a) shows an alienably possessed noun, (78b) illustrates an inalienably possessed noun. Alienable possession is characterized as being transitory, or, temporally restricted, whereas inalienable possession is characterized as being inherent, or, temporally unrestricted. Accordingly, the first appears with a long form proclitic, whereas the second appears with a short form proclitic.

Returning to the topic of this chapter, it was argued that indexical second person pronouns in German, English, and Dutch that contain a D-layer are excluded from generic contexts: First of all, they contain a TIME-feature that restricts the interpretation of the indexical to UTTERANCE TIME. Therefore it picks out that stage of the addressee that is present at UTTERANCE TIME, and hence limits the interpretation to a very specific, narrow moment in time. Consequently, it is necessarily interpreted deictically. Second, this was supported by the more general observation that genericity and narrow temporal reference are incompatible to begin with: GEN requires the possibility of multiple occurrences that it can quantify over. This is not the case when there is reference to a specific point in time. Consequently, pronouns containing a D-layer that is related to UTTERANCE TIME are independently excluded from generic contexts.

This raises the question of how Blackfoot proclitics behave in generic contexts. As a first step, it needs to be established whether or not Blackfoot allows second person in these contexts to begin with: unfortunately, at the moment the answer to this question is still unclear. Some preliminary elicitations proved difficult and the results remain inconclusive.[52] But should Blackfoot turn out

[52]One sentence that could potentially be construed as a generic sentence and that was provided by the language consultant is given in (i):

i. *Context: There are certain times when one eats certain foods:*

to allow second person proclitics in generic contexts, then we expect the following: As for the short forms, I predict that they are always felicitous in generic statements. They do not contain any temporal restriction and hence it should always be possible for GEN to quantify over them. As such, the short form proclitics are expected to behave entirely like Germanic ATPs, e.g. Dutch 'je'. As for the long forms, the issue is slightly more intricate. Recall that the long form proclitics are argued to contain temporal restriction that is determined by EVENTUALITY TIME. Crucially, eventualities can have multiple occurrences. Although this is also true for utterances in general, it does not hold for the utterance time of one specific sentence: this will always be unique. Take again the sentence in (6), repeated below.

(6) In Holland, you learn to ride a bike before you even learn to walk.

Whereas this generic statement refers to multiple occurrences of the eventuality, the sentence clearly has only one UTTERANCE TIME. Since Blackfoot long form proclitics are argued to contain reference to EVENTUALITY TIME, we expect the same condition that generics pose on eventualities to extend to the proclitics: if the encoded EVENTUALITY TIME allows for quantification, then a long form proclitic should be felicitous in a generic statement; if it does not, then it should not be possible for the long form to be interpreted generically. As already pointed out earlier, these issues are still subject to empirical research.

6.2 Germanic and Restricted Relations

Considering the opposite case, i.e. how Dutch behaves with respect to the contexts in which Blackfoot only allows one of the two proclitic forms, the following is expected: In Blackfoot the distribution of the long and short forms is conditioned by the type of relation that holds between the argument denoted by the proclitic and the eventuality under discussion. In cases in which this relation is temporally restricted, the long forms appear; in cases in which the relation is temporally unrestricted, the short forms are used. Since English, German, and Dutch pronouns do not contain any link to the eventuality, we expect that both weak and strong forms can appear irrespective of the type of argument-eventuality relation. Therefore, I predict that there is no interaction between the type of pronoun (ATP or DP) and whether or not the relation to the eventuality is temporally restricted or not. One straightforward case in which Blackfoot proclitics distinguish between restricted and unrestricted relations is

Owaists kitsitwatoopiyaa ksikanaotonnists.
owai-istsi **kit**-it-a-owatoo-hp-yiyaa ikskanaotonni-ists
egg-PL *2-it*-IMPF-*eat*-DIR-*3*PL *morning*-PL
'You eat eggs in the morning.' [data from Heather Bliss, p.c.]

However, the sentence can easily be construed as a habitual instead of a true generic sentence, in which case quantification would only be over the eventuality and not over the pronoun. At this point, it is uncertain whether the context was sufficiently clear to the language consultant. A carefully constructed elicitation plan is yet to be developed and tested.

that of possession, as also repeated above in (78): inalienable possessive relations require the short form proclitic, whereas alienable possession is indicated by the use of a long form proclitic. As expected, Dutch does not exhibit any such restriction on the type of pronoun as a possessor: both AtPs and DPs are possible without resulting in any meaning difference, as shown in (79):

(79) a. je konijn
you$_{weak}$ rabbit
'your rabbit'

b. jouw konijn
you$_{strong}$ rabbit
'your rabbit'

c. je moeder
you$_{weak}$ mother
'your mother'

d. jouw moeder
you$_{strong}$ mother
'your mother'

As these examples show, whether or not the relation is temporally restricted does not influence the kind of possessive pronoun that appears. The only restrictions that hold in these cases are the ones that we have already seen throughout the chapter: the strong possessive pronouns are necessarily interpreted as indexical, whereas the weak ones can be part of a generic sentence and receive a non-indexical interpretation.

6.3 Crosslinguistic Variation

So far I have approached the difference between Blackfoot and Germanic by simply assuming that the variation is subject to parametric differences. Of course, this does not really explain why one language would choose EVENTUALITY TIME to restrict its indexical pronouns, but another chooses UTTERANCE TIME. Whereas at this point I cannot fully explain the underlying differences, I will briefly discuss some considerations pertaining to this issue.

Following Borer (1984); Chomsky (1995), crosslinguistic variation is nowadays often thought to reduce to lexical differences and grammatical parameters are taken to not exist. Variation then boils down to variation in the features that are associated with a given lexical item. From this point of view, the analysis of indexical pronouns put forward in this thesis could easily be accommodated in a non-parametric view of grammar: one could simply assume that whereas English, German, and Dutch indexical pronouns associate with an UTTERANCE TIME-feature, Blackfoot proclitics associate with an EVENTUALITY TIME-feature. However, this would be no more insightful than positing a parametric difference. Moreover, assuming that underlyingly it is parametrically rather than lexically conditioned opens up some interesting avenues for future research: On the one hand, the differences could potentially reduce to more basic workings of the grammar of a given language that happen to also apply to indexical pronouns; on the other hand, if pronominal D is associated with a non-specific TIME-feature we might find its reflexes also in regular, non-pronominal Ds, thus making it a general property of D. Trying to uncover such

links certainly promises to be an interesting endeavour that might lead to a better understanding of interdependencies within a given grammar.

7 Summary

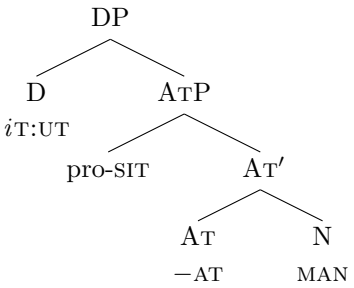
The table in IV.3 summarizes once more what I have argued for throughout this chapter with respect to second person pronouns in English, German, and Dutch.

		DP	ATP
English	*morphology*	**you**	**you**
	restricted by utterance time	✓	✗
	indexical reading	✓	✓
	generic reading	✗	✓
German	*morphology*	**du**	**du**
	restricted by utterance time	✓	✗
	indexical reading	✓	✓
	generic reading	✗	✓
Dutch	*morphology*	**jij**	**je**
	restricted by utterance time	✓	✗
	indexical reading	✓	✓
	generic reading	✗	✓

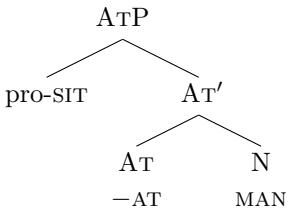
Table IV.3: Second person pronouns in English, German, and Dutch

The corresponding underlying syntactic structures look as given in (4), repeated below.

(4) a.



b.



Standard English and German second person pronouns can map onto either a full pro-DP or a pro-ATP structure. Since only the former but not the latter contains a restriction to the specific temporal stage of UTTERANCE TIME only the former but not the latter is obligatorily interpreted as an indexical. I

claim that whereas German and English do not show this distinction overtly in their pronominal morphology, Dutch does: the weak pronoun 'je', which can be used in generic contexts, maps on to a pro-AtP whereas the obligatorily indexical strong pronoun 'jij' maps onto a pro-DP. In both cases the structure is eventually spelt out in its entirety, i.e. the subparts are not associated with individual morphemes. As argued for in chapter V, the pro-AtP contains the spatial component and anchors the pronoun to the extralinguistic context. As such it always contains addressee-related information and can therefore always be interpreted as an indexical pronoun. The temporal component in D provides domain restriction over the individual denoted in the AtP: I propose that it picks out a specific temporal stage of that individual and limits the interpretation of the whole structure to this temporal slice. Since English, German, and Dutch indexical pronouns are all argued to be parametrically defined to pick out UTTERANCE TIME, their pro-DPs are all obligatorily indexical.

I provided evidence for this claim by discussing generic uses of second person pronouns. Well-known restrictions on genericity on the sentential level, i.e. the ban on specific temporal reference that restricts the event to a single occurrence, were shown to also pertain on the pronominal level. This led to the claim that DPs, which are argued to contain specific temporal reference, are excluded from generic sentences. I demonstrated that whereas English and German do not always immediately convey which underlying structure we are dealing with, Dutch shows the distinction between AtPs and DPs overtly: weak pronouns map onto the first, whereas strong pronouns map onto the second structure. Consequently, only the weak second person pronoun 'je' can receive a generic interpretation via binding by a generic operator GEN; the strong pronoun 'jij', on the other hand, is excluded from such environments since it cannot be bound and is restricted to a specific temporal stage.

In the next chapter, I now turn to the lower part of the structure, i.e. AtP and below. The main focus of this chapter lies on the exploration of the idea that indexical pronouns contain a spatial component.

Appendix to Chapter IV

In this appendix, I present the questionnaire that was designed and distributed for this research. Details on the specific methodology as well as a brief summary of the results have already been given in section 2.1, starting on page 122.

Dear linguist,

Thank you for helping me collect data for my PhD-project on second person. The main aim of this questionnaire is to get a first impression of the **second person reference shifts** various languages allow for. The English sentences below all include a second person pronoun which (in the relevant contexts) does **not** get interpreted as the actual addressee of the utterance, e.g. 'You have to be careful around dogs' referring to **'people in general'**. For each sentence, please provide the following information:

- If, in your language, you can also use second person (full pronoun/clitic/ reflexive/verbal inflection) in these contexts just like in English, please provide **the corresponding example**. If **word order** plays a role, please provide the relevant minimal pair.
- Additionally, if there are **more ways** of expressing the same sentence (e.g. example 1 below: 'one' instead of 'you'), please also provide the relevant variant(s) and indicate which one is **more likely to occur**.
- Please provide **glosses** for the examples.
- Should you be aware of any further data or phenomena relevant to this topic or should you have any other comments or suggestions, please feel free to add them at the end.

Thank you very much for your time and effort!

Language:
Name:
E-mail:

(1) *The following is a general statement referring to people in the Netherlands:*
In the Netherlands you learn to ride a bike before you even learn to walk.

(2) *The following is an existential statement as in "There are ":*
You have beautiful lakes in Austria.

(3) *The following is a general statement as in "If someone is ":*
If you are allergic to dogs, you are not necessarily also allergic to cats.

(4) *The following is an existential statement as in "There are ":*
In Wonderland you have the gnomes in the parks and the elves in the botanical gardens.

(5) *In a restaurant, a child starts playing with his food. His mother says:*
"Stop that! You don't play with your food!"

(6) *You are talking to the president of your country and hence addressing him or her very formally. You are talking about the current economic situation and say:*
"Nowadays you really have to work hard to feed your family."

(7) *A journalist asks Kate Winslet how she felt when she received the Oscar. She says:*
"You are just completely overwhelmed, you cant believe that this is actually happening to you and you are simply very grateful."

(8) *A friend is talking about her colleagues at work and tells you that one of them sold highly confidential data to a competitor. She is very upset about that incident and cant understand how anyone could do that. She says:*
"You just don't do that!"

(9) *Friends are discussing the hierarchy of a big company. One of them claims that the vice-president doesnt have the authority to actually fire employees. Another one replies:*
"The vice-president can definitely fire you."

(10) Please provide the full paradigm for all available subject pronouns (i.e. strong, weak, clitic as applicable for all persons and numbers) and indicate whether the language is a pro-drop language.

CHAPTER V

Locating Person

He pulled out the map again and saw, to his astonishment,
that a new ink figure had appeared upon it, labelled 'Harry Potter'.
This figure was standing exactly where the real Harry was standing,
about halfway down the third-floor corridor. Harry watched it carefully.
[...] The tiniest speech bubble had appeared next to his figure.
*The word inside said '*Dissendium*'. 'Dissendium!' Harry whispered [...]*

Harry Potter and the Prisoner of Azkaban, J. K. Rowling

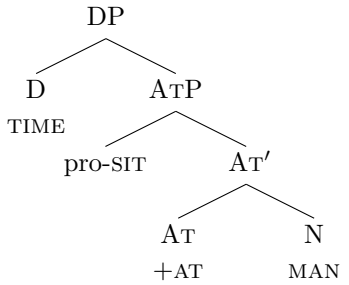
1 Setting the Stage

The main claim of this thesis is that the deictic category PERSON is a non-atomic category of language. In other words, I propose that the meaning of first and second person pronouns, i.e. the linguistic expressions representing PERSON, is derived via other primitives. In the previous two chapters, I showed that one such category is TIME: I argued that its function within indexical pronouns is to restrict their interpretation to a specific temporal stage of the individual denoted by the pronoun. This leaves open the question which other category might be involved in the meaning of indexical pronouns. More specifically the question is: which category allows us to derive all the interpretational aspects of first and second person pronouns? From a broader perspective, this chapter thus addresses the third research question stated in chapter I and repeated below:

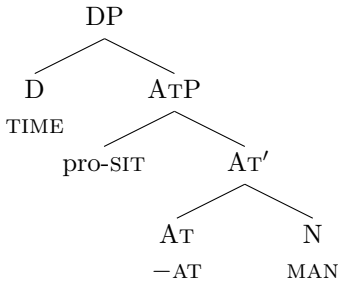
III. What is the connection between the pronominal structure of indexical pronouns and their indexical nature?

In this chapter, I explore the hypothesis that the respective component is the deictic category LOCATION. I intend to show that choosing LOCATION as a second component within indexical pronouns is not only an interesting avenue on conceptual grounds but also finds encouraging correlations in the morphosyntax of indexical pronouns across languages. The entire indexical pronominal structure I propose looks as in (1).

(1) a. First Person Pronoun



b. Second Person Pronoun



This chapter focusses on the lower part of the structure, i.e. everything within and below the ATP.[1] In short, I develop an account in which the relational AT-head ±AT creates a spatial relation between MAN, a phonologically null noun denoting a sentient individual, and the pronominal situation variable (pro-SIT) in the specifier of ATP. In the absence of a proper antecedent, pro-SIT is interpreted deictically, i.e. as UTTERANCE LOCATION.

I propose that the syntactic content of first and second person pronouns only differs minimally in the specification of the relational AT-head: whereas first person is characterized by the sentient individual being located *at* the utterance location, second person is characterized by the sentient individual *not* being at the utterance location.

Therefore, another way to view my ideas is that UTTERANCE LOCATION is the central parameter around which the utterance context is set up: speech act participants can be fully specified with reference to this one parameter, i.e. under this approach the encoding of the location of the hearer is taken to be superfluous. This way of thinking about the utterance context is not new at all, as for instance illustrated by the following quote from Lyons (1977):

> The canonical situation-of-utterance is egocentric* [*nb.: the asterisk marks a technical term,* BG] in the sense that the speaker [...] casts himself in the role of ego and relates everything to his viewpoint. He is at the zero-point of the spatiotemporal co-ordinates of what we will refer to as the deictic context [...] [and this] spatiotemporal zero-point (the here-and-now) is determined by the place of the speaker at the moment of utterance; [...] [Lyons 1977:638]

[1] Chapters III and IV both address the temporal component in D.

For the sake of completeness, I assume that third person pronouns are not subject to the same dependencies, as they are not part of the deictic category PERSON (cf., e.g. Benveniste 1966; Anderson and Keenan 1985; Fillmore 1997). As discussed in section 4 in chapter II, they crucially differ from first and second person pronouns in various important aspects. The main reasons, as given on page 47, are repeated here for convenience.

(2)
i. Third person pronouns do not refer to a speech act participant.
ii. Third person pronouns need to be introduced: they either require a discourse antecedent or an ostensive act.
iii. Third person referents depend on the linguistic context, not on the utterance context. Thus they are anaphoric, not indexical.
iv. Once introduced, the referent of a third person pronoun can remain constant, independently of which interlocutor is using it.
v. Third person pronouns can refer to both sentient and non-sentient individuals.

In what follows, I will therefore abstract away from third person pronouns and focus on the structure of indexical pronouns as put forward in this thesis. First, I outline the proposed analysis of that part of the structure that contains the spatial component, i.e. AtP. The related sections are primarily concerned with presenting the theoretical background assumptions and technical implementation. Second, I address the issue of morphological evidence for this hypothesis: I start with some conceptual considerations, and then precede to some data from Classic Armenian and Italian (both Indo-European). Finally, I conclude.

2 Location in the Pronoun

As discussed in greater detail in chapter I, in linguistics traditionally the term 'person' is used both to refer to the deictic category and to the grammatical category, with boundaries between the two often blurry due to lack of proper definition. With respect to indexical pronouns, however, the definition is fairly straightforward: indexical pronouns are grammatical elements that denote the deictic category PERSON, i.e. the speaker and the hearer, and simultaneously exhibit the grammatical category *person*. Indexical pronouns are thus the combination of both types of categories.

One angle to investigate them then is to view them in the context of deictic categories in general, i.e. LOCATION, TIME and PERSON. From this point of view, what then characterizes PERSON? First of all, it denotes a sentient individual (see section 2.2); second, its domain comprises two different individuals, namely the speaker and the hearer. This is a crucial difference between PERSON on the one hand, and TIME and LOCATION on the other hand: whereas there are two speech act participants, there is only one TIME and one LOCATION of utterance. To derive the distinction between speaker and hearer, I propose that instead

of introducing them as two additional deictic subcategories, we can make use of another category: I suggest that LOCATION provides us with the relevant information that allows us to derive both the speaker and the hearer, since they will never simultaneously occupy the exact same space. Importantly, this is not the case with the temporal dimension: while one is the speaker, the other participant is simultaneously the hearer; it is thus only the spatial dimension that provides the necessary parameter that allows us to distinguish between the two participants. Interestingly, this is also reflected in the domain of spatial and temporal expressions: whereas many languages distinguish between a location close to the speaker and a location close to the addressee (cf., e.g. Bühler 1934; Fillmore 1997; Diessel 2008), I am not aware of any language that has distinct lexical items for the 'now of the hearer' and the 'now of the addressee'. Note, however, that these two times might in fact be different: for instance, in written conversations or recorded messages. The speaker (or writer) then has two options: she can trust that when she uses 'now' that the context is clear enough for the hearer (or reader) to be able to disambiguate, or, she can use a paraphrase such as 'when you read this', instead. Crucially, she does not have the option of using a single dedicated lexical item that unambiguously encodes the time of perception.

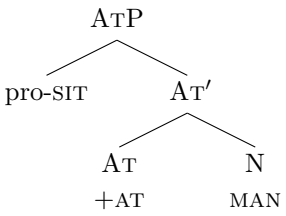
Before turning to the specifics of the structure, a terminological note is in order: It is a well-known fact that natural languages contain various lexical items whose interpretation depends on the spatial coordinates of the utterance context. Examples include locative adverbs such as 'here' and 'there' or 'right' and 'left', demonstratives such as 'this' and 'that', or directional adpositions that indicate movement relative to the location of the utterance. The terminology that is usually applied with respect to such elements generally uses the term *speaker* rather than simply *utterance location*. However, since all these elements are about spatial locations, we can raise the following question: What is really meant by "speaker" in the context of spatial expressions? It seems obvious that what is actually relevant is not the speaker himself but his location in space. The location indicated by the adverb 'here' is not merely the speaker himself detached from the spatial dimension but crucially the specific location. Since I propose that PERSON is in fact dependent on LOCATION, I do not employ the more traditional term "speaker location", but instead I simply use the term UTTERANCE LOCATION. Naturally, this will also be the location of the speaker, but this is merely a logical consequence of the fact that we are dealing with the utterance context.[2]

To sum up, the core point of the discussion so far is that whereas LOCATION and TIME are primitives of the deictic sphere, PERSON, which encompasses the two subcategories speaker and hearer, is hypothesized to be non-atomic: I suggest that it requires spatial information in order to become fully identified. I propose that this is reflected in the linguistic category representing PERSON,

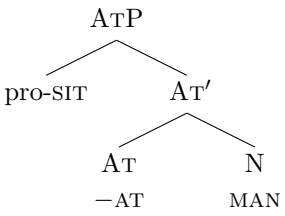
[2]Also note at this point that no one contests the use of UTTERANCE TIME although temporally it also coincides with the speaker uttering a sentence.

i.e. indexical pronouns. Their underlying structure is hypothesized to contain a spatial component that ultimately fulfills two basic functions: firstly, it establishes the relation to the extralinguistic utterance context, and secondly, it is responsible for the distinction between first and second person pronouns. Since arguably indexical pronouns are a universal linguistic category (cf. Greenberg 1963; Siewierska 2004), i.e. all languages have dedicated means to refer to the speaker and hearer of an utterance, respectively, I further speculate that the spatial component may be uniform across languages: in other words, I entertain the hypothesis that languages universally relate their indexical pronouns to the UTTERANCE LOCATION and thereby derive the distinction between first and second person pronouns. However, this is only the hypothesis in its strongest form: It is a well-known fact that many languages divide their deictic space more meticulously, i.e. languages might define spatial relations based on proximacy to the speaker, to the hearer, to both or to neither. It is thus well conceivable that languages simply base their indexical pronouns on deictic locational features. This allows for languages that, e.g. encode the speaker's and the addressee's location syntactically and consequently base deictic expressions on both locations. For the purposes of this thesis, I will only explore the former hypothesis further and focus on deriving indexical pronouns via a single location, i.e. UTTERANCE LOCATION. The respective part of the internal structure of indexicals that forms the centre of this chapter thus looks as in (3):

(3) a. First Person Pronoun



b. Second Person Pronoun



This section is dedicated to the discussion of issues related to this structure: I will start with a brief discussion of some ideas in the same spirit as my analysis. I will then proceed to the components of the structure and start with the nominal part, the complement of the AtP; even though it is not itself a locational phrase, it is crucial for the meaning of the whole AtP structure. Next, I turn to the actual spatial content, which is bipartite and located within the AtP: the relational head ±AT and the pronominal situation variable pro-SIT. Then I will address the issue of overt morphological evidence for a spatial component in indexical pronouns. I show that even though unambiguous morphological evidence proved hard to come by, there are indeed some languages whose indexical pronouns contain morphology that clearly show a link between the categories PERSON and LOCATION.

2.1 Historic Predecessors

Even though a systematic approach that links indexical pronouns to the spatial parameters of the utterance context has, to the best of my knowledge, not been attempted before, the basic idea behind it is not entirely new: For instance, Jespersen (1924:214) states that "[t]he local adverb corresponding to the first person is *here* [...]" and takes Italian as support for this idea: the locative adverb 'ci' (here) is often used as a first person plural dative and accusative pronoun.[3] He also refers to Bang (1893:9) who says: "L'esprit humain, il n'y a pas à le contester, avant d'avoir eu la conception de *moi* et de *toi*, a eu celle d'*ici* et de *là*."[4] Jespersen (1924) himself, however, does not go any further into this issue and contents himself with these brief notes. A much more recent remark on the potential link between spatial expressions and indexical pronouns was made by Kayne (2005b). He speculates about the morphological complexity of expressions like 'there', 'where', and 'here' and suggests that:

> "If both -r and th- are separate morphemes in *there*, [...], then so might be the vowel *-e-* between them. The possible morphemic status of that vowel is made more interesting by the observation that, despite the orthography, the vowel of *here* is not the same as that of *there* and *where*. This recalls Italian (and Spanish) pronominal possessives, which have second singular *tu-* and (third singular/)reflexive *su-* vs. first singular *mi-*. The fact that *here* and *mi-* share the status of being the odd man out in turn recalls the fact that *here* has, interpretively speaking, something in common with first person, [...]" (Kayne 2005b)

This is as far as Kayne goes with his speculations. Ioannidou (2012) expands Kayne's (2005b) reasoning a little further: She refers to '-e-', as introduced in the above quote, as a "locative vowel" also mentioning German 'hier' (here) and 'ich' (I), as well as Dutch 'hier' (here) and 'ik' (I).[5]

Much more elaborate and closer to the current proposal than any of the previously mentioned researchers was von Humboldt (1830).[6] As already briefly mentioned in chapter I, section 2.4, he hypothesized in a talk titled "Über die Verwandtschaft der Ortsadverbien mit dem Pronomen in einigen Sprachen"[7] that indexical pronouns were originally based on locative adverbs. He develops this idea largely based on conceptual considerations: His starting point is that conversation as such always presupposes that there is a speaker who identifies

[3] I will return to the Italian data in section 3 on page 198.

[4] "The human mind, there is no doubt, possessed the concept of *here* and *there* before the concept of *me* and *you*." [Translation: BG]

[5] She also mentions Greek 'εδο' (here) and 'εγο' (I) together with 'εκι' (there) and 'εσι' (you) claiming that in Greek there is also a parallel between 'there' and 'you'. However, these are the exact same vowels as in the first person cases. It is thus unclear to me how these show a connection between 'here, I' on the one hand and 'there, you' on the other hand.

[6] I am indebted to Martina Wiltschko for pointing me to this reference.

[7] "On the relation of locative adverbs with the pronoun in some languages"

an addressee and further, that language can only develop within this duality.[8] He further suggests that the second person pronoun only becomes necessary with respect to a speech act – as opposed to mere thinking – and that it only exists in relation to a first person pronoun; in fact, he says that one only perceives these two pronouns as an expression of the relation between them. Despite being interested in the origin of personal pronouns, von Humboldt is not trying to claim that personal pronouns only evolved diachronically after spatial expressions, quite the opposite: given their nature as just discussed, they necessarily need to be a primary ingredient of any human language. However, his main interest lies in uncovering the true nature of personal pronouns:

> Gelänge es, den Ursprung der Pronominallaute auch nur in mehreren Fällen richtig nachzuweisen, so würde man alsdann sehen, ob und in welchem Grade der ächte Character dieser Pronomina schon in der Bezeichnung selbst liegt, oder ihr nur erst durch den Gebrauch gegeben ist. [von Humboldt 1830:6]
>
> If one succeeded in detecting the origin of pronominal forms even in just a few cases correctly, one would then see, if and to what extent the true character of these pronouns lies in the denotation itself or whether it is only given to them by usage. [Translation: BG]

These considerations tie in with my own questions about the category PERSON: my initial starting point was the question of whether PERSON could be complex, i.e. non-atomic, or, using von Humboldt's terminology: what is the true character of PERSON? Whereas my route to the present proposal was dominated by considerations concerning the deictic space and its components, von Humboldt's route led via a theoretical discussion of the function of personal pronouns. He concludes his conceptual debate with what he considers the basic requirements of a potential source for personal pronouns:

> Der für die persönlichen Pronomina zu wählende Ausdruck muss [...] auf alle möglichen Individuen, da jedes zum Ich und Du werden kann, passen, und dennoch den Unterschied zwischen diesen beiden Begriffen bestimmt und als wahren Verhältnis-Gegensatz angeben.
>
> Er muss von aller qualitativen Verschiedenheit abstrahieren, und dennoch ein sinnlicher Ausdruck sein, und zwar ein solcher, der, indem er das Ich und das Du in zwei verschiedene Sphären einschliesst, auch wieder die Aufhebung dieser Trennung und die Entgegensetzung beider zusammen gegen ein Drittes möglich lässt.
>
> Alle diese Bedingungen erfüllt nun der Begriff des Raumes, und ich kann Thatsachen nachweisen, welche deutlich zeigen, dass man in einigen Sprachen diesen auf den Pronominalbegriff bezogen hat. [von Humboldt 1830:7]

[8] "Die Sprache [...] kann dennoch nur an und vermittelst einer Zweiheit entstehen." (von Humboldt 1830:1)

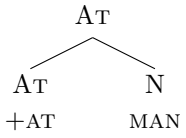
> The term that is being chosen for personal pronouns needs to be applicable to all possible individuals, as each one can become an I and a you, and yet it needs to assert the difference between both notions as a true relational contrast.
>
> It has to abstract away from all qualitative differences, and needs to still be a meaningful expression, one that while including the I and the you in two different spheres also allows for cancelling this separation and contrasting both together with a third entity.
>
> All these conditions are met by the concept of space, and I can demonstrate facts, which clearly show, that in some languages pronouns relate to it. [Translation: BG]

Thus, despite different starting points and different foci in the individual considerations, I independently reached the same conclusion as von Humboldt: the spatial dimension provides us with the type of information that allows us to distinguish between individual pronouns. The facts that he refers to as supporting this view come from the personal pronouns in several languages, most prominently Armenian, which I will turn to in greater detail in section 3.

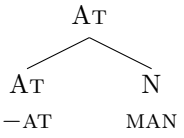
2.2 More on the Nominal Component MAN

As introduced in chapter II, section 2.1, the nominal complement of the indexical AtP is occupied by MAN, a silent nominal denoting a sentient individual; the relevant part of the structure is repeated in (4):[9]

(4) a. First Person Pronoun



b. Second Person Pronoun



Since third person pronouns can refer to both sentient and non-sentient individuals (cf. chapter II, section 4), the nominal component MAN is restricted to indexical pronouns. It is modelled after Elbourne's (2005) phonologically empty noun ONE, which, contrary to MAN, can occur in third person pronouns. By extension, since the referent of an indexical pronoun is restricted to sentient individuals, I claim that ONE cannot occur in their nominal complement; rather, the head ±AT selects the silent nominal MAN that is restricted to sentient individuals.[10]

Elbourne presents a unified account for definite descriptions, (third person) pronouns, and proper names. Specifically, he proposes an analysis with a hidden definite description in the nominal component of a pronoun; as for the pronoun

[9] As already pointed out in footnote 4 in chapter II, MAN is a purely terminological choice and bears no connection to the Germanic impersonal 'man'.

[10] Elbourne (2005) does not discuss indexical pronouns.

itself, he takes it to be located in D as notably argued for by Postal (1966). This description in the nominal complement is identical to the noun phrase the pronoun refers to and is subject to NP-deletion. Thus, a pronoun like 'she' that refers to 'the girl' is underlyingly represented as [[she] girl], with 'girl' being elided. In certain cases, however, the noun phrase that the pronoun refers to cannot be recovered. One such example is the following:

> Imagine the following scenario. We are walking through Boston, and come across someone with the following characteristics: early twenties, male, skateboarding, wearing a Red Sox cap, smiling broadly. [...] [S]uppose [I] said ["He looks happy!"] [Elbourne 2005:124]

Elbourne points out that it would be almost impossible to provide a suitable NP for 'he' as it would be unclear of which of the properties the speaker is actually thinking: he the guy, or he the Red Sox fan, or he the skateboarder. Consequently, Elbourne suggests the implementation of the silent nominal ONE[11], which he refers to as

> a kind of default item which is always available and does not need to be recovered by means of a linguistic antecedent or overwhelming contextual salience. [Elbourne 2005:124]

A very similar proposal regarding empty nouns is that of Panagiotidis (2003): He seeks to unify accounts of different types of empty nouns, such as the phonologically empty *pro* or the semantically empty English *one*, and proposes that they all constitute a closed-class lexical category; these nouns are argued to be listed in the lexicon like any other noun, but "they do not denote concepts, they are devoid of any descriptive features." They do, however "encode other semantic features interpretable at LF [and] [...] do not need licensing or identification [...]." (Panagiotidis 2003:389) For instance, for all cases of English noun ellipsis such as "All errors are mine e_N" he proposes an empty noun that is only specified for the categorial feature [N]; for Romance, Slavic, and Germanic languages, which all exhibit gender agreement, he suggests that for each gender there is also a corresponding empty noun. In short, his proposal crucially contains empty nouns which can carry fairly precise specifications that restrict their use.

Returning to the present proposal, the silent nominal MAN is in the same vein: there is no need to recover it by means of a linguistic antecedent; it is an empty noun with the specification [+sentient]. Furthermore, I argue that the actual referent will be identified by means of the spatial relation that is created in the AtP. As already introduced in chapter II, the denotation of MAN is as given in (5):

[11] In this particular example, the silent nominal MAN would be equally possible since the referent of 'he' in the quote above is a sentient individual. However, as already pointed out, this is not necessarily the case with third person pronouns, which is why Elbourne's (2005) less specified ONE is suggested in this case.

(5) $[\lambda x : sentient(x).x \in D_e]$

Consequently, an indexical pronoun necessarily denotes a sentient individual.

The term *sentience* refers to consciousness or the ability to think, reflect, and feel. This particular choice is based on the idea that [sentient] provides the most accurate attribute for speech act participants. For instance, compared to [human], it allows more easily for the accommodation of non-human speech-act participants in, e.g. stories or cartoons; while such characters are not necessarily taken to be humans, they are certainly taken to be able to think, reflect, and feel. Even though the feature [human] has been theoretically more widely implemented (e.g. Postal 1966; Cinque 1988; Chierchia 1995b; Cardinaletti and Starke 1999; Corver and Delfitto 1999; Egerland 2003b), I suspect that in many of these cases the feature [sentient] would capture the facts more accurately.[12] While this implies that [human] and [sentient] may indeed be different types of features referring to slightly different concepts, it is very well conceivable that we are dealing with a purely terminological issue. I remain impartial on this matter, maintaining that with respect to MAN [sentient] is more accurate than [human].

Sentience as a relevant linguistic concept has been argued for by a number of scholars, e.g. Kuno and Kaburaki (1977); Reinhart (2002); Speas and Tenny (2003); Marelj (2004); Bliss (2005); Tenny (2006); Smith (2010).[13] Some researchers specifically argue for the relevance of a grammatical feature [sentient], e.g. Rivero (2002); Bliss (2005) or Tenny (2006): they propose that it is a formal feature on certain lexical items, such as Slavic impersonals (Rivero 2002), Blackfoot direct/inverse markers (Bliss 2005), or a Japanese long distance anaphor (Tenny 2006). As such it needs to be checked syntactically and hence triggers syntactic operations. As opposed to this literature, the specification for sentience on the silent nominal MAN is not argued to be both a formal and a semantic feature but is taken to be a purely semantic feature in the sense of Chomsky (1995). Thus it does not trigger any syntactic operations but is only relevant for semantic computation.

Before concluding this discussion a note on the basic idea of positing an empty category inside a pronominal structure is in order: such an analysis is, of course, not new. A number of scholars have argued for the presence of a phonologically empty element within pronouns (e.g. Cardinaletti 1994; Uriagereka 1995; Corver and Delfitto 1999; Koopman 2000), typically referred to as *pro*. However, these theories slightly differ from the one outlined here in that *pro* typically needs to be licensed or identifiable via some other overtly present element. Put differently, *pro* is a phonologically and semantically empty category, whose function and feature content essentially gets identified by its syntactic

[12] This might even extend to the implementation of a feature [animate] in some cases.

[13] Not all of these researchers actually use the term 'sentience'; Kuno and Kaburaki (1977), for instance, talk about empathy and Smith (2010) about subjectivity. However, since these abilities can only be attributed to sentient beings, these publications essentially also argue for the relevance of *sentience* irrespective of the individual terminology. See also Speas and Tenny (2003) for a similar point.

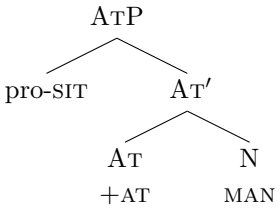
environment (Chomsky 1981; Rizzi 1986). Aside from various theoretical and analytical problems the theory of *pro* runs up against (cf. Panagiotidis 2003), the pronominal structure argued for in this thesis is arguably not able to properly identify a *pro*-type empty element: there is no head present in the structure that carries the necessary semantic feature, i.e. sentient, to pass on to *pro*.[14]

To sum up, the nominal component within the indexical pronoun's structure is proposed to be a fully lexical silent noun MAN, which is specified for sentient individuals by a corresponding feature.

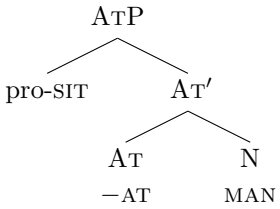
2.3 The Content of AtP: Spatial Relation and Information

The core of the ideas explored in this chapter is that the deictic category PERSON is directly dependent on the spatial parameters of the utterance context. It is hypothesized that this dependency is reflected in the morphosyntactic structure of the linguistic category representing PERSON, i.e. indexical pronouns. I propose that the spatial component is syntactically located within the AtP-projection and reflected in both the head and the content of the specifier. The relevant part of the internal structure of indexical pronouns looks as in (3), repeated here:

(3) a. First Person Pronoun



b. Second Person Pronoun



As already discussed in chapter II, section 2, the pronominal structure in this thesis is modelled after Déchaine and Wiltschko's (2002) analysis of pronouns. They suggest that pronouns can map onto either a DP, a ϕP, or merely an NP and propose a number of syntactic and semantic criteria that allow us to distinguish between the different pronominal structures. Most importantly

[14]The phonologically empty MAN suggested here therefore also differs from proposals Richard Kayne argues for in a series of publications (e.g. Kayne 2003, 2005b,a, 2010): He postulates a number of silent nouns, such as NUMBER, COLOR, PLACE, THING. However, again these silent nouns need to be recoverable by means of a suitable linguistic antecedent, for instance in the form of a matching feature on an overt lexical item (e.g. [+number] on 'few'). This condition does not hold for the silent noun MAN, which, following Elbourne (2005), I take to be fully lexical but without phonological content. Thus, it also differs from proposals for silent nouns by Emonds (1985, 2000), who argues that they are so-called semi-lexical categories, situated between lexical and functional items void of any semantic features, and proposals such as van Riemsdijk (2002, 2003) for whom recoverability is also a crucial factor, or Corver (2008) who argues for a silent semi-lexical noun PERSON in the sense of both Kayne and Emonds in a number of Dutch dialects.

for the present discussion, there is a category intervening between N and D whose primary function is to identify the relevant referent: in Déchaine and Wiltschko's (2002) system this is achieved via ϕ-features that associate with this intervening category, i.e. ϕP. Since the current proposal for indexical pronouns does not rely on the traditional approach to ϕ-features, specifically to *person*, the functional category intervening between N and D is proposed to be AtP: this category is dedicated to indexical pronouns and reflects the idea that a spatial component is involved in their structure. Its head, the abstract preposition ±AT, is responsible for establishing the spatial relation that ultimately leads to the identification of the pronoun's referent.[15]

This approach requires addressing the issue of at least two more ϕ-features: As discussed in chapter I, section 2.3.1, the set of ϕ-features minimally consists of *person, number, gender*. Some researchers, e.g. Déchaine and Wiltschko (2002), assume them to appear as a feature bundle that is associated with one single projection, such as ϕP. However, another group analyzes them as being associated with individual syntactic projections. For number, this has repeatedly been argued for in Ritter (1995); Lobeck (1995); Panagiotidis (2002); Wiltschko (2008). I follow this second line and assume that number is encoded in a separate functional projection below the D-layer. As for gender, I assume that it is associated with the noun itself, either lexically (Panagiotidis 2002) or syntactically by means of noun formation via merger with a root (Ferrari 2005; Lowenstamm 2007).

With respect to the original proposal by Déchaine and Wiltschko (2002), it has already been shown in chapters III and IV that the behaviour of the pronouns in the languages under consideration corresponds to these structures as follows: pronouns that I analyze as containing a temporal component largely show the behaviour of pro-DPs in Déchaine and Wiltschko's (2002) sense; pronouns that I analyze as merely containing the spatial component appear to correspond to their pro-ϕPs: for instance, they can function as bound variables (chapter III) or be bound by a generic operator (chapter IV), and in both cases these are also the pronouns that are morphologically less complex than their DP counterparts.

In addition to the above noted reasons for equalling AtP with Déchaine and Wiltschko's (2002) ϕP, there is another interesting correlation: it has often been proposed that DPs and CPs are parallel to each other in the sense that corresponding projections fulfil comparable tasks within the respective extended projection; this idea is also referred to as the *cross-categorial parallelism hypothesis*. Following the line of research that argues that the DP in the nominal structure corresponds to the CP in the clausal structure (e.g. Szabolcsi 1987,

[15]The dedicated label AtP has primarily been chosen to highlight the projection's specific function. Note, however, that one could also maintain the category ϕP as originally suggested by Déchaine and Wiltschko (2002): first, second, and third person pronouns would then only differ in the specific content associated with their respective ϕ-projection. Cf. Ritter and Wiltschko 2009 for a similar view on functional categories in general.

1994; Ritter 1991; Longobardi 1994; Bernstein 2001; Alexiadou et al. 2007)[16], I analyze the pronominal ϕP/AtP as fulfilling the same function as clausal IP/TP: since Enç (1987) it is widely accepted that within the clausal domain the IP is responsible for anchoring the utterance to the extralinguistic context, i.e. it establishes a relation between these two components and thus allows us to successfully interpret any utterance. In light of the cross-categorial parallelism hypothesis, we thus expect the ϕP/AtP within the extended pronominal projection to fulfil the same function, namely anchor the pronoun to the context. This is precisely what I suggest as shown in the structures in (3) and detailed in the remainder of this section. Abstracting away from additional, potentially present projections both within the clausal and the nominal domain, the picture thus looks as schematized in (6).

(6) [CP ... [IP ... [VP ...]]]
[DP ... [AtP ... [NP ...]]]

As already mentioned earlier, this lower part of the structure, the spatial component, is not only proposed to fulfill the anchoring function in that it establishes the relation to the extralinguistic utterance context, but also to render the distinction between first and second person pronouns. Next, I will detail some ideas on how these two roles could be modeled syntactically.

2.3.1 Relational Heads and the Notion of Coincidence

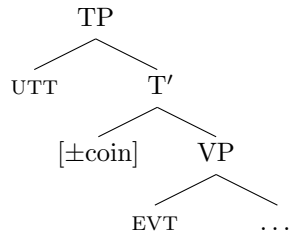
I propose that the head of the AtP projection is a relational head: its function is to create a relation between its two arguments, i.e. the external argument in the specifier and the internal argument in its complement. The specific content of the head defines the kind of relationship that is being established. Specifically, I propose that the abstract prepositional head ±AT defines the spatial relation between a sentient individual (MAN) and the locative variable pro-SIT. As already introduced earlier, in the absence of a proper antecedent this variable gets interpreted deictically, i.e. as UTTERANCE LOCATION. The distinction between first and second person is then derived as follows: If the individual is at UTTERANCE LOCATION, the pronoun refers to the speaker; if it is not at UTTERANCE LOCATION, the pronoun refers to the hearer.

Technically, this is modelled after the kind of relational head that is being argued for in, e.g. Stowell (1993); Demirdache and Uribe-Etxebarria (1997, 2000); Ritter and Wiltschko (2009). For instance, Demirdache and Uribe-Etxebarria (2000) propose that the content of the head of the inflectional phrase (INFL)

[16]There is also a second view, which assumes that DP is dominated by KP and that hence KP is the nominal equivalent of clausal CP (cf. Abney 1987; Grimshaw 1991; Wiltschko 2011). Following this approach, Wiltschko (2011) explicitly suggests that in the nominal domain D fulfils the anchoring function, i.e. contains a relational head, and is universally associated with an unvalued 'identity'-feature. This leaves open the question what happens in pronominal structures that are not full DPs in the sense of Déchaine and Wiltschko (2002). For the reasons listed above, I take a different approach with respect to pronouns and leave open the question of how this relates to non-pronominal DPs.

is associated with the feature [± coincidence]. Its contribution to the interpretation is therefore the information whether the content of its specifier coincides with the content of its complement [+coincidence], or does not [−coincidence]. More concretely, following Zagona (1990); Stowell (1993), they assume that the specifier of the TP encodes UTTERANCE TIME and that the complement, VP, contains EVENTUALITY TIME.[17] The head of INFL is argued to be relational in that it establishes a particular relationship between these two arguments. The relevant part of the structure thus looks as in (7):

(7)



Importantly, there are only two basic relations that this head can induce: it can either establish that the eventuality coincides with the utterance context, or, that the two do not coincide. Both options are exemplified in (8).

(8) a. I am writing my dissertation on the couch.
b. I wrote my dissertation on the couch.

In (8a) the event of writing my dissertation and my talking about it happen simultaneously, i.e. event and utterance time coincide.[18] In (8b), on the other hand, the event of writing happened before my talking about it, i.e. event and utterance time do not coincide.

The specific idea of a relation based on coincidence goes back to Hale (1986). As already mentioned in chapter II, section 2.2, Hale's idea was that universally languages are endowed with the basic concept of "central" versus "non-central" coincidence. This specific terminology can be illustrated on basis of one aspect of the semantics of spatial relations, as in (9).

(9) a. The horses are standing in the shade.
b. He (just) cleared out from this place . . .

[Hale 1986:239f.]

In (9a) an individual spatially coincides with a place, i.e. the horse centrally coincides with the shade. In (9b), on the other hand, the relation between 'he' and the place is non-central in that the two do not occupy the same space (any

[17] See the detailed discussion of these theories of temporal interpretation in chapter II, section 3.1.

[18] I am abstracting away from the aspectual component in this example. But see Demirdache and Uribe-Etxebarria (1997, 2000) for an analysis of aspect along the same lines as tense.

longer).[19] According to Hale, coincidence is "an abstract and general semantic category", which "comprises the fundamental theory of relations" (op.cit.:242). He refers to it as a grammatically underlying "theme" or "motif" (op.cit.:234) and suggests that it can be detected in areas as diverse as complementizers, case morphology, or tense-aspect morphology. Hale's empirical focus lies on Warlpiri (Austronesian), which he argues to manifest the coincidence-theme overtly in its morphology. To illustrate this, witness the following examples, one with an infinitival complementizer representing coincidence (10a) and one with an infinitival complementizer representing non-coincidence (10b).[20]

(10) a. Wawirri karna nyanyi parnka-**kurra**.
kangaroo PRES *see* *run*-COMP
'I see a kangaroo running.'

b. Karrku kalu rdakangku manyamani ngapangku yarlirninja-**rla**.
ochre PRES *hand* *soft* *water* *wet*-COMP
'They soften the ochre with their hands, having wet it with water.'
[Hale 1986:246f.; glosses and highlighting adapted by BG]

Example (10a) illustrates the suffixal complementizer '-kurra', which encodes coincidence. Hence, it indicates that the eventuality of the matrix clause (seeing a kangaroo) and the infinitival clause (running of the kangaroo) coincide, i.e. happen at the same time. The second sentence, (10b), shows a complementizer encoding non-coincidence. Consequently, the eventuality of the matrix clause (softening of the ochre) does not happen at the same time as the eventuality of the infinitival clause (wetting with water).

In some languages, Hale argues, this theme is visible in overt morphology. Put differently, morphemes within one domain, e.g. complementizers as illustrated above, come in two different guises: one corresponds to central coincidence and the other to non-central coincidence. In other languages, however, the theme remains morphologically unexpressed and is only underlyingly present. Since his insight is based on data from the Austronesian language Warlpiri he says:

> [...] Warlpiri differs from English, say, not by virtue of the presence of the theme but rather by virtue of its constancy in distinct areas of grammar and the relative purity with which it is represented.
> [Hale 1986:238]

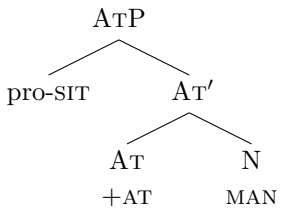
[19] Applying this to the domain of temporal interpretation, Demirdache and Uribe-Etxebarria (2000) translated the opposition into a bivalent feature ±coincidence, which is also how it is implemented in my proposal.

[20] For ease of exposition, I omitted all morpheme breakdowns and corresponding grammatical glosses except the relevant ones. Also, Warlpiri has more than just the two complementizers exemplified in the sentences in (10); Hale (1986) argues that all of them can be divided into the two basic classes shown in the examples here, which primarily serve to illustrate the theme of coincidence.

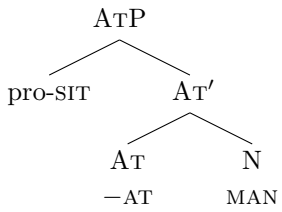
In other words, whereas Warlpiri has overt morphology that can be characterized by the principled opposition of ±coincidence, one will have to take a closer look at a language like English in order to detect the theme.

It is precisely this principled opposition that I propose to also be at work in the domain of indexical pronouns. I suggest that it is manifested in the relational head ±AT which relates a sentient individual to the utterance location. Syntactically, this is represented as given in (3) and repeated below.

(3) a. First Person Pronoun



b. Second Person Pronoun



To summarize, I propose that the head of ATP encodes the relation between a sentient individual and UTTERANCE LOCATION: whereas a first person pronoun is defined by central coincidence of the two (+AT), a second person pronoun is defined by their non-central coincidence (−AT).

2.3.2 The Situational Pro-Form in Spec-AtP

As discussed in detail in the previous section, the function of the head of ATP is to establish a relation between the content of its complement and the content of its specifier. Specifically, it is a spatial relationship that encodes whether MAN is centrally or is non-centrally located at UTTERANCE LOCATION. Crucially, I propose that the pronominal structure itself does not directly contain UTTERANCE LOCATION, but rather that it contains a pronominal situation variable, which I refer to as pro-SIT. *Variable* pertains to the fact that it is a syntactic object whose interpretation is not lexically determined but depends on a semantic assignment function (cf. Heim and Kratzer 1998:116); *pronominal* implies that it can but need not have an antecedent that determines its referent. As already introduced in chapter II, this pro-form is adopted from Ritter and Wiltschko (To appear) who propose that the variable always gets interpreted deictically when lacking a proper antecedent. Since the variable is pronominal in nature, this will always be the case in matrix clauses; no matter where the pronoun is base generated, the variable needs to be free in its domain. Again following Ritter and Wiltschko (To appear), I assume that the relational head determines which situational parameter gets interpreted: as discussed previously, the head is the abstract spatial preposition ±AT, hence the spatial dimension of the situation gets picked out. As we are dealing with a deictic interpretation, this will always refer to UTTERANCE LOCATION.

This captures the fact that the actual UTTERANCE LOCATION differs from sentence to sentence and can only be determined relative to the given context.

In all the cases discussed in this thesis, the pro-form will be interpreted as the actual UTTERANCE LOCATION, and for ease of exposition I often simply refer to it as such. It should be noted, though, that given that we are dealing with a pronominal form, we expect to find cases in which there is a syntactic antecedent that can potentially lead to a different interpretation of pro-SIT. Since here I am primarily concerned with the implementation of a locational pro-form in the internal syntax, I will return to this issue in the chapter VI.

The locational pro-form in the indexical structure is thus the component that establishes the link to the utterance context. Put differently, and as a partial answer to the research question in (III), it is responsible for contributing the indexical nature of first and second person pronouns.

3 Morphological Evidence

As detailed in the previous sections, the current proposal suggests that a spatial component universally forms part of the underlying structure of indexical pronouns. I propose that indexical pronouns are distinguished from each other through the specific type of relation that their internal syntax establishes to UTTERANCE LOCATION: first person pronouns are characterized by locating a sentient being at UTTERANCE LOCATION, whereas second person pronouns are characterized by locating a sentient being *not* at UTTERANCE LOCATION. One obvious question then is the following: If this hypothesis proves to be correct, can we ever actually see such a locational component in indexical pronouns? Or, put differently, are there languages whose indexical pronouns contain a morphological marker that can unmistakably be identified as spatial morphology? I should already point out here that this task proved more challenging than the analysis might lead us to expect. In what follows, I will therefore not only address the empirical aspects of this question but also two conceptual ones: First of all, I argue that the absence of morphological evidence in a given language does not necessarily negate my main claim. Secondly, I discuss another domain in which abstract spatial relations have been argued to play a role, namely possessive structures. Lastly, I present two languages that lend support to this idea in that they show a clear morphological connection between spatial and pronominal expressions, namely Armenian and Italian.

3.1 The General Issue of Morphological Evidence

First of all, consider the type of approach to pronouns that this proposal is couched in: it follows a long line of researchers in assuming that pronouns can be internally complex and that different pronouns can have underlyingly different syntactic structures. The concrete proposal that I chose for this analysis is that of Déchaine and Wiltschko (2002), but there are also others such as the well-known analysis of Germanic and Romance pronouns by Cardinaletti and Starke (1999). Even though these proposals differ in their specific details,

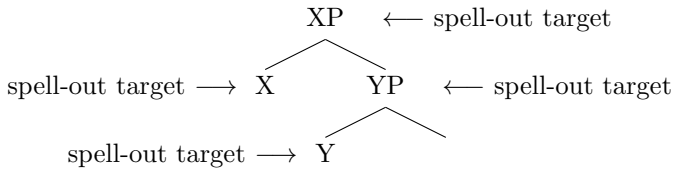
they all have in common that a morphologically simplex pronoun may spell out a syntactic structure that contains more than just one syntactic projection. For instance, Déchaine and Wiltschko (2002:421) propose that the English pronoun 'we' instantiates a full DP structure since it can occur in phrases like 'we linguists'. Their corresponding structure then looks as in (11).[21]

(11) $[_{DP}\ [_{D}$ we] $[_{\phi P}\ [_{\phi}\ \emptyset]\ [_{NP}\ [_{N}\ \emptyset$/linguists]]]]

This example suggests that we also have to take factors other than morphology into account in order to be able to determine which underlying structure we are dealing with. Déchaine and Wiltschko (2002), for example, propose that pronouns can map onto DPs, ϕPs, or NPs, i.e. all the projections contained in the example in (11). They define sets of criteria for each of the three different pronominal structures concerning their semantic interpretation, binding properties, and argument status.[22] Cardinaletti and Starke (1999) take a very detailed look at the distributional, phonological, phonetic, semantic, and syntactic properties of different types of pronouns to identify three different classes of pronouns. Even though these three different structures essentially correspond to clitic, weak, and tonic pronouns, this does not necessarily imply that pronouns with a richer internal structure are also necessarily morphologically complex. This is for instance evidenced by their analysis of the German personal pronoun 'sie' (they): According to Cardinaletti and Starke (1999) it can function as either a weak or a strong pronoun, and thus map onto two different underlying structures.[23] However, despite these examples it also needs to be acknowledged that neither of these theories exclude morphological complexity of richer structures.

Besides visible morphological complexity of pronouns, there is also another directly related issue, namely spell-out mechanisms. As already introduced in chapter II, I follow Weerman and Evers-Vermeul (2002); Neeleman and Szendröi (2007); Barbiers et al. (2009) in assuming that spell-out need not necessarily target terminal nodes but can also target whole levels of projections. This principle is schematized in (12).

(12)



[21] Their analysis of 'we' is thus very similar to Abney's (1987) who first argued that all pronouns spell out the D-head and have a silent nominal complement that can be spelt out in some cases, as in (11). The crucial difference to Déchaine and Wiltschko's (2002) analysis is that they do not subscribe to this generalization for all pronouns but show that certain pronouns can also map onto structures that are smaller than full DPs.

[22] See chapters III and IV for concrete examples.

[23] See also van Craenenbroeck and van Koppen (2008) for a case study of a Dutch dialect in which they analyze certain clitics as DPs and strong pronouns as ϕPs.

X and Y are terminal nodes and usually taken to be the target of spell-out; additionally, however, in some cases spell-out can also target non-terminals, i.e. the whole XP or the YP. This is best illustrated with Dutch wh-pronouns. Barbiers et al. (2009) discuss wh-doubling in Dutch dialects, of which two examples are given in (13).

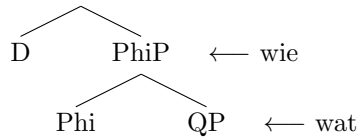
(13) a. **Wat** denk je **wie** ik gezien heb?
what think you who I seen have
'Who do you think I saw?'

b. **Wat** denk je **die** ik gezien heb?
what think you REL.PRO *I seen have*
'Who do you think I saw?'

[Dutch dialect of Overijssel, Barbiers et al. 2009:2]

In these sentences the wh-element 'wat' originates from the object position of the embedded verb and moves via the intermediate CP-layer into its final position of the matrix CP. Interestingly, the intermediate landing site gets spelt out, as well; however, the two pronouns that surface in each position are not identical. Barbiers et al. propose that this is due to partial copying of the whole pronominal structure and phrasal spell-out. Specifically, spell-out has the following options:

(14) [Barbiers et al. 2009:6]



This straightforwardly accounts for the fact that the highest wh-pronoun in the sentences in (13) surfaces as 'wat', since subextraction can only target the lower part of the pronominal structure thereby leaving the higher part behind. Importantly, if spell-out targets a phrase, no terminal nodes dominated by it can be spelt-out additionally (Weerman and Evers-Vermeul 2002:317). Applying this to the structure put forward in this thesis implies that if spell-out targets the phrasal level, then we will not see any morphology that can specifically be attributed to AT or N, i.e. to the spatial component or the sentient individual MAN.[24]

A third and last point regarding overt morphological evidence concerns the amount of information one specific morpheme carries. Natural language is full of phenomena where one morpheme provides more than just one piece of information, or, put differently, one morpheme carries several features. This is a characteristic of so-called "fusional" languages (Comrie 1981:44f.), of which Indo-European languages are a typical example. Take, for instance, Russian which has two numbers and six different cases both of which are expressed in one

[24] Also see chapter II, section 2.5 for a related discussion.

single morpheme. This is exemplified in table V.1 on the basis of the words 'stol' (table) and 'lipa' (lime-tree), which belong to two different declension classes:

	Singular	Plural	Singular	Plural
Nominative	*stol*	*stol-y*	*lip-a*	*lip-y*
Accusative	*stol*	*stol-y*	*lip-u*	*lip-y*
Genitive	*stol-a*	*stol-ov*	*lip-y*	*lip*
Dative	*stol-u*	*stol-am*	*lip-e*	*lip-am*
Instrumental	*stol-om*	*stol-ami*	*lip-oj*	*lip-ami*
Prepositional	*stol-e*	*stol-ax*	*lip-e*	*lip-ax*

Table V.1: Russian fusional case and number morphology (Comrie 1981:44)

In these examples, nominal inflection expresses *number* and *case* simultaneously, i.e. one single morpheme is associated with different pieces of information. These facts are most explicitly reflected in the theory of Distributed Morphology (cf., e.g. Halle and Marantz 1993; Halle 1997; Marantz 1997; Harley and Noyer 1999), a framework about morphology and the syntax-PF interface. The core idea in a nutshell is that syntax operates with abstract features only and that lexical items only get inserted once the syntactic structure is mapped to the Phonological Form (Principle of Late Insertion). The abstract functional features, such as [plural], [past], or [feminine], are listed in a Lexicon from where they enter syntactic derivation; the phonological form matching a given bundle of functional features is drawn from a list during Vocabulary Insertion. This insertion process heavily relies on the idea that lexical items can match a syntactic structure that contains more features than the item itself. This is commonly referred to as the "Subset Principle", which was introduced by Halle (1997):[25] Put differently, a feature that is part of a syntactic feature bundle might not be present on the Vocabulary Item that spells out said bundle.

Given all these considerations concerning pronominal structure and spell-out, we may therefore allow for indexical pronouns not necessarily morphologically exhibiting spatial information, even though I explore the idea that underlyingly they crucially rely on it.

3.2 The Possession-Location Connection

Essentially, the analysis of indexical pronouns put forward in this thesis is based on the idea that location can be used to bring about a meaning that is not spatial per se. This brings to mind an interesting correlation that has a long-standing tradition in linguistics: the link between possessive structures and locative structures. The connection has been drawn by many scholars, e.g. Benveniste (1966); Huang (1966); Lyons (1967); Jackendoff (1990); Freeze

[25]The Subset Principle is very similar to the *Elsewhere Principle*, which was introduced to generative grammar by Kiparsky (1973) in the domain of phonology.

(1992). The basic idea is that sentences like those in (15) are all essentially locative in nature and derived from the same underlying syntactic structure.

(15) a. The book is on the bench.
b. There is a book on the bench.
c. Lube has a book.

[Freeze 1992:553]

Under such a view, the possessor in (15c) is essentially a location which is base-generated as the complement of a (silent) preposition and moves to its surface subject position by means of predicate inversion. Simplifying the details somewhat, the sentence is thus derived from the underlying structure in (16):

(16) $[_{PP}$ a book [to [Lube]]] $\longrightarrow$
$[_{IP}$ Lube $[_{I}$ to $[_{PP}$ $[_{NP}$ a book $[_{P}$ t_{to}] $[_{NP}$ t_{Lube}]]]]]

Freeze (1992), comparing the sentences in (15) and noting that no preposition surfaces in (15c), hypothesizes that the preposition gets incorporated in the copula position in the head of the IP and thus results in the spell-out 'have' as opposed to 'be' in (15a) and (15b). This is essentially the analysis of 'have' already suggested by Benveniste (1966:194ff.): on the basis of French, he argued that the possessive copula 'avoir' (have) corresponds to 'être+(be+to).[26] But as the English example in (15) illustrates, the correlation between possessives and locations need not be obvious from the surface structure we get to observe. Evidence for the plausibility of such an analysis comes from languages that code possession in a very similar, sometimes even identical fashion as spatial relations as shown in (17) and (18).

(17) a. Na stole byla kniga.
on table COP *book*.NOM
'There was a book on the table.'
b. U menja byla sestra.
at 1.SG.GEN COP *sister*.NOM
'I had a sister.' [Russian, Freeze 1992:577]

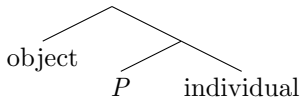
(18) a. Pöydä-llä on kynä.
table-ADESSIVE COP *pencil*
'There is a pencil on the table.'
b. Liisa-lla on mies.
Lisa-ADESSIVE COP *man.*
'Lisa has a husband.' [Finnish, Freeze 1992:577]

In the Russian examples, both the locative and the possessive construction involve an overt spatial preposition, 'on' and 'at', respectively, a copula and

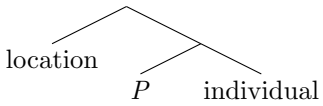
[26]This analysis of 'have' has also been adopted by Kayne (1993).

a nominative noun; the Finnish examples are entirely identical employing a locative case-marker and a copula. These examples support an analysis of possession as an abstract locative relation also for languages like English where the correlation cannot be deduced by simply looking at the surface string. Additionally, if a possessive construction involving a copula like 'have' can be analyzed as a locative structure, so can simple possessive structures like 'John's book' or 'my book': they correspond to 'book to John' and 'book to me', respectively. In fact, such an analysis has most notably been argued for by den Dikken (1998, 2006). Taking these observations one step further, I suggest that my analysis of indexical pronouns is just another case where language makes use of an abstract spatial relation in order to express a relation between two entities. Looking at the underlying structures and abstracting away from the respective details, this can be schematized as in (19), where P stands for an abstract preposition representing the spatial relation.[27]

(19) a. POSSESSIVE



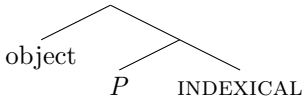
b. INDEXICAL



These structures illustrate a possessive relation under a locative approach and an indexical structure as argued for in this thesis: in (19a) the combination of an abstract preposition with an individual results in a possessor, e.g. 'John's'; in (19b) the relation of an individual to a location results an indexical pronoun, e.g. 'I'. Freeze (1992) also makes the interesting observation that crosslinguistically there appears to be a strong preference, in some languages even condition, on the locative possessor: it necessarily needs to be [+human].[28] This is in line with the analysis of the silent nominal complement in the indexical structure which I argue to be specified for [+sentient].[29]

The structures in (19) can then be further extended to possessive constructions with a pronominal possessor: essentially, the two structures simply need to combine to result in the combination of an abstract preposition with an indexical structure as in (20).

(20) POSSESSIVE



I propose that the combination of the abstract preposition and the indexical is then equivalent to the combination schematized in (19a), resulting in either 'my'

[27] This constitutes a different type of possessive structure than the one argued for in chapter III. I assume that both structures can be found in natural languages, as for instance argued in Alexiadou (2003).

[28] Only inalienable relations allow for the locative possessor to be [-human], as in "The tree has branches". (Freeze 1992:583).

[29] See the discussion on the specific terminology in section 2.2.

or 'you' depending on which indexical structure appears in the complement. Of course, this raises the question of what exactly the internal structure of an indexical possessive pronoun looks like, an issue that will be left open for future research.

To summarize, possessive constructions are another area of grammar in which an abstract spatial relation has been independently argued for. This is additional support for the idea that language makes use of spatial relations in order to express certain meanings which themselves are not necessarily purely spatial in nature.

In the next two sections, I discuss some languages that lend morphological support to the idea that there is a relation between indexical pronouns and locative expressions. I should point out immediately, though, that the evidence albeit clearly showing a connection between the two categories cannot be unambiguously identified unidirectionally. That is to say that currently I cannot demonstrate that it is indeed LOCATION that is contained in PERSON rather than the other way round. However, given the conceptual considerations discussed earlier, I aim at showing that this novel formal approach to PERSON is also plausible from an empirical perspective. I will start with Armenian, and then proceed with Italian. For each I will offer a preliminary analysis of the respective personal pronouns showing how they could be accounted for within the framework outlined in this thesis.

3.3 Armenian

As already mentioned earlier in this chapter, von Humboldt's (1830) essay on the relation between personal pronouns and locative adverbs constitutes the most explicit predecessor of the ideas formalized in this thesis. After a number of conceptual considerations, which were summarized earlier, von Humboldt proceeds to briefly discuss data from several languages that in his view provide evidence for his claims. Lastly, he presents the main piece of evidence which comes from Armenian (Indo-European). The basic observation is essentially that Armenian personal pronouns and spatial expressions share one morpheme each.[30] The idea that deictic expressions in Armenian are all morphologically related is considered uncontroversial amongst researchers working on Armenian (Klein 1996; Sigler 1996): this is primarily due to the fact that the morphemes 's', 'd', 'n' appear throughout the system of deictic expressions and can be traced back throughout the history of the language.[31]

In general, most of the research on Armenian has been conducted from a

[30]It is even assumed that the locative meaning associated with these morphemes antedates their association with the pronominal system (Jared Klein, p.c.).

[31]Armenian is particularly interesting in that respect as these morphemes also appear in determiners (cf. Sigler 1996) and anaphoric elements (cf. Klein 1996; Vaux 1994-1995). Their whole distribution within the grammar is far beyond the scope of this thesis; for the present purposes, I only focus on their appearance in personal pronouns and some locative expressions.

diachronic perspective and deals with Classical Armenian[32]; likewise, most of the research on deictic elements is on Classical Armenian and from a diachronic perspective rather than on its two modern varieties, Eastern and Western Armenian. I will therefore primarily discuss Classical Armenian, heavily drawing on Klein's (1996) monograph on its deixis. Klein starts his study, which is based on the Gospels of the New Testament, as follows:

> One of the most remarkable features of Classical Armenian is its elaborate system of deixis. A host of forms built to the pronominal stems (-)s(-), (-)d(-), and (-)n(-) [...] index items and events in space and time relative to the speaker, the addressee, and the non-speech-act-participant, respectively. [Klein 1996:1]

As an example, table V.2 shows the personal pronouns (nominative singular) and one set of demonstratives.[33] Even though the morphemes in question are associated with a considerable number of other deictic expressions, I will limit the discussion to these two examples.

personal pronouns	*demonstratives*
e**s**	ay**s**
I	*this*
du	ay**d**
you	*that (by you)*
na	ay**n**
he/she/it	*that (neutral)*

Table V.2: Armenian deictic expressions

As we can see, the morphemes 's', 'd' and 'n' appear throughout both paradigms; and as becomes obvious from the previously mentioned quote from Klein (1996), they are standardly taken to be associated with first, second, and third person, respectively. As for the morpheme 's', Klein (1996:47) characterizes the associated forms as "very strongly marked by association with *ego, hic,* and *nunc*." The 'd'-forms are taken to be associated with the addressee. One example using a d-demonstrative is given in (21).

(21) əndēr? oč' ewɫd **ayd** vačaṙec'aw [...]
'Why was **that** oil (on thee) not sold ...'
[Klein 1996:101, Jh 12.5; presentation modified by BG]

As for the third type, Klein (1996:3) says that "[(-)n(-) forms] are the unmarked members of the three-way opposition, functioning overwhelmingly as neutral deictic anaphors rather than as distal deictics." One such example is given in (22).

[32]For a concise overview see Vaux (2006).

[33]The personal pronouns are taken from Krause et al. (2011), the demonstratives from Klein (1996:2).

(22) [. . .] orpēs zi č'ēr hnar anc'anel owmek' ənd **ayn** čanaparh [. . .]
'(When he passed to the other side into the land of the Gergesenes, two men possessed by demons met him) [. . .] so that it was not possible for anyone to pass by **that** way.'
[Mt 8.28; Klein 1996:5f.; presentation modified by BG]

This example illustrates a non-deictic, anaphoric use of an 'n'-form: it refers to the way he is on and bears no relation to the speech act context, i.e. it is non-deictic.

Interestingly, these deictic elements, i.e. 's', 'd', and 'n', also appear by themselves as suffixes to nouns; in that case they function as a demonstrative determiner as shown in (23).

(23) a. mard
man

b. mard-s
this man (by me)

c. mard-d[34]
this man (by you)

d. mard-n
that man (over there)

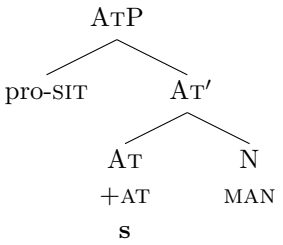
[Vaux 1994-1995:21]

To sum up so far, Classical Armenian disposes of three elements, 's', 'd', and 'n', that indicate proximity to the speaker, proximity to the hearer, and no relation to either. These morphemes appear in the pronominal system as well as in the locative system, e.g. in various demonstratives and in adverbs. I take the fact that these morphemes also occur independently, as illustrated in (23), as an indication for their status as independent morphemes and propose that they spell out the head of a functional projection. Specifically, with respect to the indexical pronouns 'es' (I) and 'du' (you), I hypothesize that they spell out the relational head ±AT as illustrated in (24).

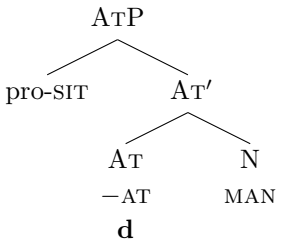
[34]This is the example provided by Vaux (1994-1995), which is, unfortunately, not entirely transparent since both the word-final consonant and the deictic suffix are identical. For the sake of clarity, see the following example, taken from a sentence provided in op.cit., where the clitic demonstrative attaches onto an accusative marker:

i. z-nšan-s-d
ACC-*miracle*-ACC.PL-*d*

(24) a. First Person: 'es'



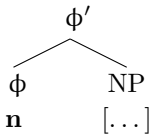
b. Second Person: 'du'



As for the vowels in 'es' and 'du', a number of options are available: They might be semantically vacuous and phonologically conditioned; however, it is then unclear why in one case the vowel precedes the deictic marker, whereas in the other case it follows it. Alternatively, we might be dealing with phrasal instead of terminal spell-out. However, this option has the disadvantage of obscuring the deictic markers '-s' and 'd-'. Yet another option is that the vowels might also be associated with D. Again, this leaves open the question of the different linear order in the two cases; also, it would then have to be shown that the vowels are indeed associated with temporal meaning.

Another issue that still begs addressing concerns third person pronouns. In line with my view of third person pronouns outlined in chapter II, section 4, and parallel to the structure of Armenian indexical pronouns given above, I propose that 'na' maps onto the head of ϕP; however, in this case it is simply the spell-out of ϕ without any abstract locational head ±AT and a hidden definite description in its complement, as in (25).

(25) Third Person: 'na'



As for the vowel, the same speculations as given above apply. Recall that this is also in line with Klein's (1996) observation that 'na' is mostly used anaphorically, which also indicates that it does not actually contain a locative component. Interestingly, this finds support in Modern Western Armenian: Michele Sigler, p.c., reports that "the use of 'an' [the Western Armenian third person pronoun and according to descriptive grammars also demonstrative pronoun, BG] to mean 'that' is mostly used when it heads a relative clause, so not so much indicating a spatial location." This behaviour finds a natural explanation in my analysis of third person versus indexical pronouns: only the latter, but not the former actually refer to a location.

As a final step, I briefly introduce a tentative proposal for the Armenian demonstratives in table V.2 which is based on the analysis of definite adnominal demonstratives of Leu (2008).[35] Following a number of scholars in analyzing

[35] All references therefrom are based on the single-spaced version that is available online.

demonstratives as internally complex and involving an adjectival component (e.g. Dryer 1992; Delsing 1993; Chomsky 1995; Bernstein 1997; Julien 2005), he proposes the structure for demonstratives in (26):

(26) [$_{xAP}$ the-AGRA HERE] N [Leu 2008:15]

xAP marks the extended adjectival projection, AGRA indicates the agreement marker on the determiner-element, and HERE is a silent deictic adjective in the sense of Kayne (2005a). Specifically, this is the proposed structure for proximal demonstratives; distal demonstratives are argued to contain silent THERE.[36] Leu arrives at this structure starting with the examples in (27):

(27) a. d rosä
the rose

b. d-i rot rosä
the-AGR *red rose*

c. d-i rosä
the-AGR *rose*
'this rose'

[Swiss German; Leu 2008:19]

The appearance of agreement on the demonstrative in (27c) is taken as an indicator for the existence of a silent adjective. Leu identifies this silent element as HERE/THERE, which he supports with Scandinavian data:[37] Colloquial Norwegian, for example, has demonstratives that are overtly composed of a determiner and a here/there-element that carries adjectival inflection, as in (28):

(28) a. den her(r)-e klokka
the here-AGR *watch*-DEF

b. det der(r)-e huset
the there-AGR *house*-DEF

[Coll. Norwegian; Leu 2008:22]

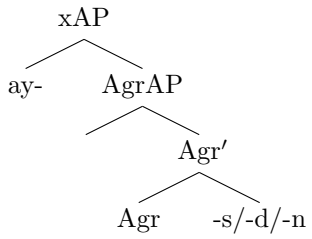
Returning to Armenian, I hypothesize that it might present us with another instance of overt marking of the adjectival deictic element, similar to the Colloquial Norwegian data above. Recall that the demonstratives I am seeking to account for are the following: 'ays', 'ayd', and 'ayn'. I suggest to analyze

[36] More generally, Leu makes the following claim: "[D]emonstrativity can be arrived at in more than one fashion. Demonstrative formation involves the combination of a definite marker morpheme and a functional adjective. There is a limited range of options with regard to the choice of adjectives such that a demonstrative reading results." (Leu 2008:40) He thus allows for demonstratives to contain silent adjectives other than HERE/THERE; one such example that he briefly discusses is silent OTHER in elements such as the Swiss German demonstrative 'dis-' (the other one). See Leu (2008) for details.

[37] He further proposes that in the course of the derivation, HERE moves to the left periphery of the extended adjectival projection, where it is licensed for non-pronounciation following Kayne (2005a). This is left aside from the current discussion since it is not directly relevant.

the morpheme 'ay-' as the D-element that combines with the deictic markers '-s, -d, -n', i.e. the deictic morphemes are an overt instantiation of Leu's (2008) silent HERE/THERE; the proposed structure then looks as in (29):[38]

(29) a.



As already briefly mentioned earlier, the Classical Armenian demonstratives under discussion are adnominal. As such, they also agree with the noun they appear with and display overt agreement morphology, which occurs to the right of the deictic marker. This ordering is thus similar to the Norwegian examples in (28).[39] I propose that the deictic marker moves into the specifier of AgrP which leads to it preceding the agreement morpheme. However, at this point I cannot account for the trigger of the movement.

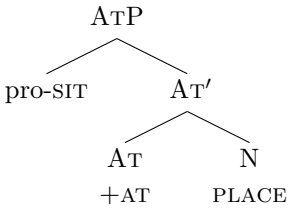
In the context of the indexical pronouns discussed in this dissertation, the analysis of demonstratives just discussed, of course, begs the question of the connection between HERE/THERE in above analysis and the relational head ±AT proposed for indexical pronouns. First of all, the function of HERE/THERE can basically be described as contributing deicticity to the demonstrative. As such, its purpose is entirely parallel to that of the relational head proposed for the pronouns: both establish a relation to the utterance context. Next, we need to ask what HERE/THERE actually mean. Even though they are silent elements, they contribute a particular dimension to the interpretation of the demonstrative, and the choice of terminology is not arbitrary: they are explicitly based on the overt English counterparts 'here/there'. These, in turn, have also been argued to be complex and contain a silent PLACE in their internal structure: This idea dates back to Katz and Postal (1964). They structurally decomposed 'here' into 'at this place', and 'there' into 'at that place'. The idea was then further developed by Kayne (2005b) who observed that English 'here, there' behave similar to a dialectal counterpart 'this here place' and 'that there place'. He attributes the locative interpretation of 'here, there' to the presence of a silent PLACE in their internal structure. This perspective opens up an interesting way of extending the proposal outlined in this thesis to locative expressions, which

[38]The structure in (29) now implies that the deictic markers are phrasal. I will return to this issue shortly.

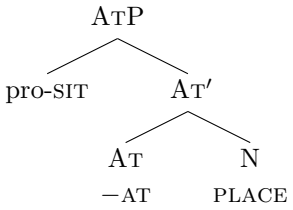
[39]The only difference is that in the Norwegian examples the determiner also agrees with the noun. In these cases we are possibly dealing with two different agreement projections, i.e. the higher one carrying the agreement features of the determiner and the lower one those of the adjective (Leu, p.c.).

I can only begin to sketch here:[40] if the locational nature of 'here, there' stems from a silent location within their structure, then this is reminiscent of my proposal that the interpretation of an indexical as referring to a sentient individual stems from the silent nominal MAN.[41] 'here/there' may then be decomposed as suggested in (30):

(30) a. Here



b. There



Just like in the indexical pronouns, deicticity is contributed by the relational head ±AT in combination with the pronominal situation variable in the specifier. The only difference between the core of an indexical pronoun and a deictic adverb would then lie in the complement: the silent nominal MAN, lexically defined as a sentient individual, versus the silent nominal PLACE, resulting in a location as the interpretational output. This idea brings indexical expressions extremely close to each other. Note that there is a long tradition of viewing 'there, here' as PPs rather than DPs (cf. van Riemsdijk 1978; Bennis 1986; Ioannidou 2012). From this perspective, the above given structure becomes particularly interesting since I tentatively propose that they underlyingly contain an abstract spatial preposition. However, in order to fully understand the ramifications of these ideas in connection with previous accounts, the details will obviously have to be worked out much further. At this point, this endeavour will be left open for future research. To finally close the circle and return to the question of the demonstrative structure and how it relates to my theory of indexical pronouns, I hypothesize that silent HERE, THERE in demonstratives might also be internally complex and structurally encode their interpretational contribution.

Even though this section left many details open, both empirically and theoretically, I hope to have shown that the clear morphological connection between pronouns and spatial expressions in Armenian could well be accommodated within the ideas developed in this dissertation.[42]

[40] I am setting aside the issue of expletive 'there', which arguably does not convey any spatial information (cf., e.g. Barbiers and Rooryck 1998).

[41] Recall, however, that there is an important difference between the silent nominal MAN and Kayne's silent elements: the first is argued to be fully lexical, whereas the second are argued to require identification by means of overt syntactic elements. See also footnote 14 on page 179.

[42] The same holds for Turkish which shows a similar pattern to the one just discussed for Armenian: Singular personal pronouns are 'ben' (I), 'sen' (you), 'o' (he, she, it); demonstratives are 'bu' (this),'şu' (that), 'o' (that further away). However, given the different morphemes in the second person ('sen') and the non-proximal demonstrative ('şu'), matters are more intricate and set aside from the present discussion.

3.4 Italian

Italian (Romance) presents another interesting case of a morphologically obvious connection between personal pronouns and spatial expressions. It is often mentioned in the literature that the first person plural clitic in the oblique case is identical to the locative/expletive adverb denoting 'here, there' (Jespersen 1924; Cinque 2005; D'Alessandro 2007), both of which are 'ci'. The first detailed study that addresses the question of the relation between the pronominal and the locative use is Ferrazzano (2003). She not only discusses the diachrony of 'ci' but also that of a second, less often mentioned element, 'vi'. Just like 'ci', it is also both a locative/expletive adverbial and a person clitic, in this case for second person plural for oblique cases. The different uses are exemplified in (31) with the more widely used 'ci':

(31) a. C'è modo e modo di farlo.
there-is way and way of doing.it
'There are better ways of doing it.' [Ferrazzano 2003:4]

b. Rimani qua? Si, ci rimango.
*remain-2*SG *here? yes here remain-1*SG
'Are you staying here? Yes, I am staying here.' [Ferrazzano 2003:4]

c. Ci vediamo domani.
*us see-1*PL *tomorrow*
'We'll see each other tomorrow.'

(31a) illustrates 'ci' as an expletive in sentence initial position, much like English 'there', (31b) shows 'ci' as a locative adverb, and (31c) illustrates a prototypical use of 'ci' as a first person plural pronoun. According to Ferrazzano (2003), the same holds for 'vi': it can also occur as an expletive, as a locative adverb or as an oblique pronoun. Interestingly, and in line with the general proposal put forward in this thesis, these homonyms only occur for indexical pronouns; the whole pronominal paradigm for the oblique cases looks as in table V.3.

SINGULAR	*Accusative*	*Dative*	*non-clitic*
First	mi	mi	me
Second	ti	ti	te
Third m./f.	lo/la	gli/le	lui/lei

PLURAL	*Accusative*	*Dative*	*non-clitic*
First	ci	ci	noi
Second	vi	vi	voi
Third m./f.	li/le	gli	loro

Table V.3: Italian oblique pronouns (Ferrazzano 2003:2)

This table shows that the entire singular clitic paradigm as well as the third person plural clitics are morphophonologically similar to their non-clitic counterpart. However, this is not the case for first and second person plural. Following the etymologists Cortelazzo and Zolli (1999), Ferrazzano (2003) claims that 'ci' derives from the proximal Latin adverb 'hic' (here); as for the second person plural, the morphophonological difference between the strong pronoun 'voi' and the clitic version 'vi' may not be immediately obvious, but again following Cortelazzo and Zolli (1999), Ferrazzano maintains that 'vi' derives from the distal Latin adverb 'ibi/ivi' (there); thus, all instances of 'ci' and 'vi', i.e. both adverbial and pronominal, are diachronically related to the locative adverbials. But whereas in Modern Italian the locative forms 'ci' and 'vi' have lost their original deictic meaning – proximal and distal, respectively – and are ambiguous between 'here' and 'there', the pronominal forms have retained them: the one deriving from the proximal adverb refers to first person plural, the one deriving from the distal adverb refers to second person plural.

Based on these facts, Ferrazzano (2003) concludes that while the pronominal forms have retained the deictic core of their Latin origin, the adverbials have entirely lost them. She further proposes that the pronominal forms contain a functional projection, DeixisP above NP, which hosts either the features [speaker] (ci) or [hearer] (vi) and argues that this corresponds to the diachronically underlying distal/proximal distinction. Put differently, the dichotomy proximality/distality is entirely attributed to DeixisP. Under the assumption that the pronoun is base-generated in NP and raises to DeixisP in order to check its [speaker]- or [hearer]-feature, the pronominal structures she proposes look as in (32):

(32) a. $[_{DeixisP}$ ci$_{[speaker]}$ $[_{NP}$ ~~ci~~]]
b. $[_{DeixisP}$ vi$_{[hearer]}$ $[_{NP}$ ~~vi~~]]

Ferrazzano (2003) supports the postulation of a DeixisP above the NP by word order facts of fully referential DPs that are used as proxies for a first person, in comparison to the word order in regular fully referential DPs. The basic idea is fairly straightforward: regular referential DPs are generally third person phrases, hence they do not contain any [speaker]/[hearer]-features; consequently these DPs also do no contain a functional projection DeixisP, in which these features would have to be checked. If an otherwise referential DP is used to refer to a speech act participant, the NP is argued to carry a corresponding feature that has to be checked in DeixisP. Consequently, an NP that refers to the speaker is expected to move to DeixisP, whereas a regular referential NP is expected to stay lower in the structure. This reasoning seems to be confirmed by the examples in (33) and (34):

(33) a. Vostro **servo umilissimo** è d'opinione che si deve bere solo
your servant very.humble is of-opinion that one must drink only
ai pasti.
at meals

b. ?? Vostro **umilisssimo servo** è d'opinione che si deve bere
your very.humble servant is of-opinion that one must drink
solo ai pasti.
only at meals
'Your very humble servant is of the opinion that one should drink only at meals.'

(34) a. ?? Ho salutato il vostro **servo umilissimo** nel corridoio.
*have.1*SG *greeted the your servant very.humble in.the corridor*

b. Ho salutato il vostro **umilissimo servo** nel corridoio.
*have.1*SG *greeted the your very.humble servant in.the corridor*
'I greeted your very humble servant in the hallway.'
[Ferrazzano 2003:8; glosses and emphasis added by BG]

In the first example, the DP 'vostro servo umilissimo' refers to the speaker; in this case the NP is analyzed as carrying a [speaker]-feature and therefore raising to DeixisP; hence it appears in front of the adjective 'umilissimo'. In the second example, the phrase 'vostro umilissimo servo' is a regular referential DP referring to an actual servant; here, there is no [speaker]-feature on the NP 'servo' and hence no reason for it to raise; therefore, it appears after the adjective 'umilissimo'. Crucially, Ferrazzano (2003) assumes that functional projections without any content are not present in the structure: hence DeixisP only appears in pronouns or referential DPs that either refer to the speaker or the hearer. Since there is no evidence that 'ci' and 'vi' move any further than DeixisP, she concludes that they are DeixisP, i.e. a category situated between NP and DP.

Support for the existence of intermediate positions in noun phrases comes from Cinque (1994) who famously argued for partial N-movement in Romance DPs to a position above certain types of adjectives but below others. Witness the examples in (35).

(35) a. La loro brutale aggressione all'Albania
the their brutal aggression to-Albania

b. La loro aggressione brutale all'Albania
the their aggression brutal to-Albania
'Their brutal aggression against Albania'
[88 Cinque 1994; glosses added by BG]

Cinque proposes that in the second example the noun raises above the adjective. Both orders result in subtle interpretational differences: whereas the first example has a subject-interpretation and can be paraphrased as "It was brutal of them to attack Albania", the second example receives a manner-interpretation and corresponds to the manner of the aggression being brutal (Cinque 1994:88). Even though Cinque does not discuss examples that involve a potential DeixisP, as suggested by Ferrazzano (2003), examples such as (35) lend support to

the idea that there is an intermediate landing site and that this may result in different interpretations of the whole noun phrase.[43]

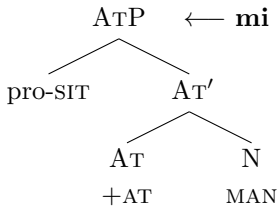
What remains unaccounted for in this proposal is the difference between the singular and plural clitics, i.e. 'mi' (Sg.) versus 'ci' (Pl.) and 'ti' (Sg.) versus 'vi' (Pl.), as well as the difference between the clitic and the non-clitic pronouns. Further, it appears that even though Ferrazzano aims at capturing the underlying distal/proximal opposition, an essentially spatial relation, these concepts get entirely lost by being replaced by [speaker]- and [hearer]-features, respectively. I propose that recasting Ferrazzano's (2003) basic insights into the proposal outlined in this thesis is superior to an account that reduces the differences to the traditional notions of *speaker* and *hearer*. Recapitulating her main conclusions, results in the picture in (36):

(36) a. Pronominal 'ci' (first person plural) and 'vi' (second person plural) encode proximity and distality, respectively.

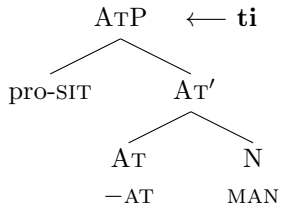
b. 'ci' and 'vi' are neither bare NPs nor full DPs.

Applying these conclusions to the analysis put forward in this thesis, leads to the conclusion that we are likely to be dealing with pro-AtPs. This move straightforwardly satisfies both observations listed in (36): what is argued to be proximity and distality is encoded as an actual spatial relation between a sentient individual and UTTERANCE LOCATION; and the clitics are attributed a status that is intermediate between NPs and DPs. As for number, I suggest that it is encoded in a separate syntactic head below DP (cf. Ritter 1995; Panagiotidis 2002; Wiltschko 2008), which is only present in the plural pronouns. Assuming that these pronouns are subject to phrasal spell-out[44], this results in the structures in (37) for both the singular and the plural clitics.

(37) a. First Person Singular: 'mi'



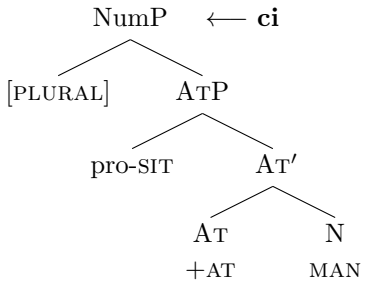
b. Second Person Singular: 'ti'



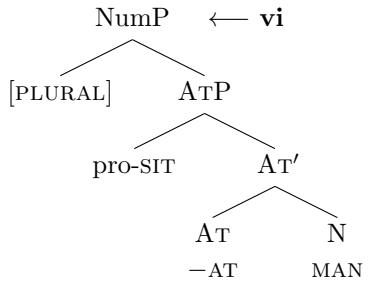
[43]However, it should be pointed out that Ferrazzano's (2003) reasoning with respect to fully referential DPs used as proxies for the speaker is not without problems. The appearance of both a syntactic projection (DeixisP) and feature ([speaker]) are conditioned by the interpretation of the sentence. The reasoning, thus, seems circular: the interpretation as a proxy rather than as a referential NP is attributed to the existence of the feature/projection; the feature/projection are attributed to the intended interpretation. Therefore, even though the account that I will sketch further on cannot account for the word order facts in (33), I do not consider this problematic. In fact, these kinds of expressions are possibly more complex than the limited data provided by Ferrazzano (2003) suggests and provide an interesting avenue for future research in light of the proposal outlined in this thesis. For some discussion of the topic see Collins and Postal (2008); Cattaneo (2009).

[44]See the related discussion in chapter II, section 2.5 as well as this chapter, section 3.1.

c. First Person Plural: 'ci'

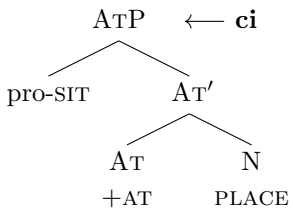


d. Second Person Plural: 'vi'

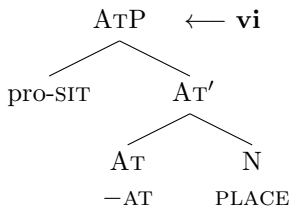


This analysis now gives a straightforward account of the spatial core of these items and presents a good reason why underlyingly spatial elements may turn into pronominal elements: as already discussed in the previous section on Armenian, I speculate that spatial adverbs only minimally differ from indexical pronouns: they also encode a spatial relation by means of a relational head such as ±AT and deictic reference, i.e. a pro-SIT, but instead of a silent nominal specified as [+sentient], they contain a silent nominal PLACE.[45] This is given in (38).

(38) a. Adverb: 'ci'



b. Adverb: 'vi'



From this point of view, it is not particularly surprising that they turned into pronominals at some point in the history of Italian.[46] What this structure does not capture is the fact that both adverbs do not appear to have a deictic core anymore, an issue that I leave open for future research.

Additionally, the following questions arise: First of all, why would these adverbs turn into plural pronouns rather than into singular pronouns? Second, the structures of the non-clitic pronouns still remain open. Under the account laid out in this thesis, a straightforward option would be that they map onto a full DP structure, thus containing a D-head that restricts the interpretation of the full pronouns to a specific moment in time, as outlined in chapter II, section 2.4, and discussed in greater detail in chapters III and IV. Preliminary evidence suggests that this might indeed be the case and that the TIME that values the temporal feature in D might be UTTERANCE TIME: As shown by

[45] Ferrazzano (2003) also assumes that the adverbials are NPs and proposes that since they have entirely lost their underlying deictic core they simply lack DeixisP altogether and are bare NPs.

[46] In fact, this begs the question why we do not see this occur more often in the languages of the world.

Cinque (1988), a non-overt second person *pro* can be interpreted impersonally; strong indexical pronouns, on the other hand, seem to always receive an indexical interpretation as illustrated in (39).

(39) a. Con questa crisi devi lavorare veramente sodo per sfamare
*With this crisis must.2*SG *work really hard to feed*
la famiglia.
the family.
'With this crisis, one must work really hard to feed the family.'

b. Con questa crisi tu devi lavorare veramente sodo per
*With this crisis you must.2*SG *work really hard to*
sfamare la famiglia.
feed the family.
'With this crisis, you$_{indexical}$ must work really hard to feed the family.' [Marco Coniglio, p.c.]

Under the approach outlined in this thesis, this implies that the Italian strong pronoun 'tu', and thus possibly also 'noi' and 'voi', contain a D-head that is linked to UTTERANCE TIME.[47] However, in order to be able to fully determine whether this might indeed be the case, a thorough investigation of the behaviour of both strong and weak indexical pronouns in Italian is necessary; since this would lead too far afield from the current topic, it is left aside for future research.

Even though the analysis presented so far is sketchy, it allows us to ask a number of empirical and analytical questions that may turn out to shed more light on the pronominal and the adverbial system of Italian. In any case, 'ci' and 'vi' illustrate in a fairly straightforward way that a link between spatial deixis and indexical pronouns can indeed be established and, more importantly, that the underlying form is locative rather than pronominal.

With these examples, I conclude the discussion of the internal structure of indexical pronouns. Although the exploration of my hypothesis is not as detailed as in the spatial domain as it is in the temporal domain, I still hope to have shown that the core of the idea is not only interesting on the conceptual level but also finds promising correlations on the empirical level. Delving deeper into this domain is one of the main issues for further research that I will discuss in a little more detail in the final chapter.

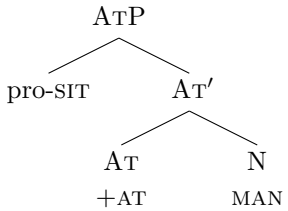
4 Conclusions

The main idea pursued in this thesis is that the deictic category PERSON is dependent on spatial and in some cases also temporal parameters and that this complexity is reflected in the internal structure of the linguistic category

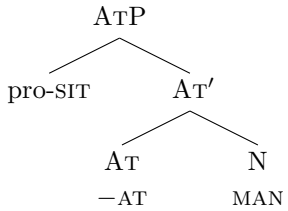
[47] For a detailed account of three languages that are also argued to relate their D-head to UTTERANCE TIME see chapter IV.

expressing PERSON, namely indexical pronouns. This chapter explored the first part of this hypothesis, i.e. the spatial component. I started with discussing its role in the internal structure of indexical pronouns, which I propose to be two-fold: on the one hand it is responsible for rendering the distinction between first and second person, and on the other hand it is the part that is responsible for establishing the link to the extralinguistic utterance context. It is in the latter sense that it functions as an anchor to the discourse. Both functions are accomplished via UTTERANCE LOCATION: first and second person pronouns only differ in whether their referent, specified as a sentient individual, is located at UTTERANCE LOCATION (first person) or not located at UTTERANCE LOCATION (second person). This specification is established via a relational syntactic head in the sense of Stowell (1993); Demirdache and Uribe-Etxebarria (1997); Ritter and Wiltschko (2009) and a pronominal situation variable. The corresponding indexical structures thus look as in (3), repeated below.

(3) a. First Person Pronoun



b. Second Person Pronoun



I further presented some conceptual considerations that outline the background of the idea of a spatial component in indexical pronouns. While the exploration of this idea is less explicit and detailed than in the temporal domain, I still attempted to show its plausibility by presenting empirical data from Classical Armenian and Italian. Both languages show a clear connection between personal pronouns and spatial deictic expressions that provide encouraging support for the ideas outlined at the beginning of the chapter.

This chapter leaves open a number of questions that provide interesting avenues for future research. I will turn to some of these issues in the next and final chapter, in which I also summarize and conclude.

CHAPTER VI

Conclusion

So, with just the briefest look at the
spatial and temporal context of our lives,
we are utterly insignificant.
f**k it, John C. Parkin

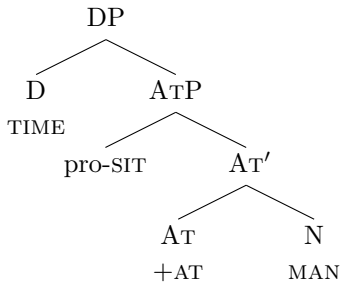
1 Summary

The deictic category PERSON and its corresponding linguistic expressions, indexical pronouns, formed the empirical, analytical, and theoretical centre of this thesis. The research was primarily guided by the central research question (I).

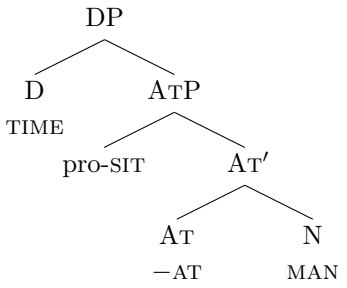
I. What does the internal structure of linguistic expressions denoting PERSON, i.e. indexical pronouns, look like?

Answering this question, I proposed that the internal structure of indexical pronouns consists of a spatial and in certain cases also a temporal component. Based on Déchaine and Wiltschko's (2002) analysis of pronouns, I argued that indexical pronouns maximally map onto the structures depicted in (1).

(1) a. First Person Pronoun



b. Second Person Pronoun



Looking at the structure in the order of the chapters of this thesis, it consists of the following components: TIME in D represents the temporal component. Assuming an ontology that consists of individuals as well as stages of individuals (Carlson 1980; Musan 1995), I argued that the main function of D is to restrict the interpretation of the pronoun to a specific temporal stage of the individual denoted in the lower part of the structure, namely AtP. I hypothesize that this lower component is essentially spatial and attribute this to the head of the projection: ±AT is proposed to be an abstract spatial preposition that functions as a relational head. As such it relates the content of its specifier to the content of its complement (cf. Ritter and Wiltschko 2009). Its complement is MAN, a silent noun that denotes an individual specified for [+sentient]. Its specifier is occupied by a pronominal situation variable in the sense of Ritter and Wiltschko (To appear), which, in the absence of a suitable antecedent, gets interpreted deictically. The specific situational parameter that gets interpreted is determined by the relational head itself: since this is argued to be spatial in nature, pro-SIT gets interpreted as UTTERANCE LOCATION. The entire AtP thus encodes whether the sentient individual MAN is or is not located AT the location encoded in its specifier. I proposed that first person pronouns contain the information that the sentient individual is located at the utterance location (+AT), and second person pronouns are defined by the sentient individual not located at the utterance location (−AT). Related to the main question in (I), this research was further guided by the questions in (II) and (III).

II. What is the connection between the pronominal structure of indexical pronouns and their indexical nature?

III. Is there a universal structure of indexical pronouns that can account for crosslinguistic variation with respect to their morphosyntax, syntax and semantics, and if so, what does it look like?

As for (II), following a number of conceptual considerations, I suggested that the indexical nature could be linked to the spatial component contained in AtP. The main idea was that this is the part of the structure that anchors the pronoun to the extralinguistic context, since it directly links the pronoun to the utterance location.

With respect to research question (III), I proposed that the structures in (1) are universal in that the basic content and order are valid across languages. Crosslinguistic variation in the form and interpretational ranges of indexical pronouns was attributed to the specific TIME associated with D. I proposed that TIME is instantiated by an interpretable but unvalued feature (Pesetsky and Torrego 2004a) that must receive a value during syntactic computation. Under the assumption that both UTTERANCE TIME and EVENTUALITY TIME are encoded syntactically (Enç 1987; Stowell 1993, 2007; Demirdache and Uribe-Etxebarria 2007, 2000), I proposed that languages differ parametrically in whether UTTERANCE TIME or EVENTUALITY TIME provides the value for TIME in D.

The main hypothesis of this thesis can thus be summarized as in (A).

(A) The category PERSON is derivative and dependent on spatial and *in certain cases* also temporal parameters that are present in the morphosyntactic structure of its linguistic exponents, indexical pronouns.

This hypothesis together with the proposed structure formed the basis for the outline of this dissertation.

Chapter I contained some background discussion and defined the empirical domain of this thesis. Specifically, I argued that first and second person pronouns fundamentally differ from third person pronouns: whereas the former are inherently linked to the extralinguistic utterance context and always available without any prior introduction to the discourse, the latter are linked to a discourse antecedent that needs to be introduced first. The core proposal of this thesis is thus restricted to indexical pronouns: only they are proposed to be dependent on spatial and in certain cases also temporal specification.

In chapter II, I introduced the core ingredients of the indexical structure as already summarized at the beginning of this chapter. I discussed each individual component in turn and presented some of the relevant background literature. Further, I presented the components of the clausal syntax necessary for providing the information required by the indexical pronoun: UTTERANCE TIME and EVENTUALITY TIME. Specifically, I presented the analysis of temporal interpretations put forward by Stowell (1993, 2007) who argues that UTTERANCE TIME and EVENTUALITY TIME are encoded as referential arguments in Spec-TP and Spec-VP, respectively.

The following two chapters were then dedicated to the discussion of TIME in D. In chapter III, I argued that Blackfoot instantiates a language whose person proclitics contain a D-head linked to EVENTUALITY TIME. Blackfoot has two sets of person proclitics that are morphologically related to each other: following Bliss and Gruber (2011b), I argued that the short forms, 'n-, k-', are ATPs and denote first, and second person, respectively; the long forms, 'nit-, kit-' additionally contain the morpheme '-it-' which I showed to be located in D and related to EVENTUALITY TIME. This claim was empirically supported by data from both the nominal and the verbal domain: In the nominal domain, the

short forms appear as possessors in inalienable relationships whereas the long forms appear as possessors in alienable relations. I proposed that in the latter '-it-' picks out the temporal slice of the individual denoted in AtP at which the possession relationship holds. In inalienable relationships, on the other hand, there is no such temporal stage available since the relation is inherently atemporal. In the verbal domain, the short forms appear with the perfect marker 'ikáá-', whereas the long forms appear with all other tense-markers. I argued that this reflects the fact that 'ikáá-' turns the eventuality denoted in VP into a property that becomes inherently attributed to the individual denoted by the proclitic. Much like in inalienable possession, this inherent relationship is reflected by the choice of proclitic.

The second chapter concerned with TIME in D was chapter IV, which dealt with generic interpretations of second person pronouns. The primary data came from English, German, and Dutch. The core claim of the chapter was that these languages use UTTERANCE TIME to restrict the interpretation of their indexical pronouns. I argued that only pronouns that map onto AtPs can appear in generic sentences and receive a non-indexical interpretation. Pronouns that map onto DPs, on the other hand, necessarily get interpreted as indexical: they contain a TIME-feature that receives its value from UTTERANCE TIME, which restricts the interpretation to the temporal stage of the individual denoted in At present at the utterance time. I proposed that English 'you' and German 'du', while not displaying any differences in their morphophonological form, can map onto either a full DP or an AtP. Which of the two versions one is dealing with can then only be uncovered by looking at the available interpretations. This claim was empirically supported by data from the closely related language Dutch: as opposed to English and German, Dutch has both a weak ('je') and a strong ('jij') second person pronoun. I showed that only the former but not the latter can receive a non-indexical, generic interpretation. Consequently, I claimed that the weak pronoun maps onto a mere AtP, whereas the strong pronoun maps onto a full DP.

The core of chapter V was dedicated to the spatial component. I explored this idea by delving into some historical background and conceptual considerations. I also presented data from Armenian and Italian: both languages have indexical pronouns that display a morphological relation to locative expressions. Although unambiguous evidence for a spatial component in indexical pronouns could not be presented, the data are encouraging for future research.

In sum, the core claims of this thesis are the following:

i. The deictic category PERSON is dependent on spatial and in certain cases also temporal specification.

ii. This dependency is reflected in the internal structure of indexical pronouns, i.e. the linguistic expressions denoting speaker and hearer, respectively (cf. research question I).

iii. A temporal feature is syntactically located in the D-head. Its function is to restrict the interpretation of the pronoun to a specific temporal stage of the

individual identified by the lower part of the structure. Languages parametrically differ in whether the interpretation of their indexical pronouns gets restricted by UTTERANCE TIME or by EVENTUALITY TIME. The temporal part is therefore the component responsible for crosslinguistic variation (cf. research question II).

iv. Besides the temporal component, I assume that indexical pronouns also contain a spatial one. The difference between speaker and hearer is derived as follows: first person pronouns contain the information that their referent is a sentient individual that is located at the location of the utterance; the referent of second person pronoun is a sentient individual that is *not* located at the location of utterance. The spatial part is thus the component responsible for the indexical nature of first and second person pronouns (cf. research question III)

2 Avenues for Future Research

This thesis presented a novel account of indexical pronouns, which opens up interesting new avenues for further research. In what follows I pick three domains that each relate in different ways to the analysis: The spatial component constitutes an obvious starting point, since the exploration of this particular angle of my main hypothesis was the least detailed. Next, I devote some space to the issue of honorifics, i.e. polite personal pronoun forms that identify the addressee by means distinct from regular second person pronouns. As a last point, I introduce an entirely new topic, namely Sign Languages.

2.1 Spatial Relations

The discussion of the spatial component in indexical pronouns presented in this thesis was largely conceptual; the empirical aspect, though present, did not conclusively support the unidirectional connection between LOCATION and PERSON that I proposed. The spatial dimension is therefore the first and most important avenue for future research that I am planning to pursue. Aside from expanding on the issues already raised in chapter V, there are a number of additional questions that I would like to address in future research.

In the languages of the world, there is a multitude of phenomena that make direct or indirect reference to this location: For example, crosslinguistically, "deictic motion verbs" (Fillmore 1997:82) such as English 'come' and 'go' are typically oriented towards or away from the utterance location when an overt reference location is missing (cf. Anderson and Keenan 1985; Levin and Rappaport-Hovav 1992; Fillmore 1997; Talmy 2000). Likewise, locational adverbs like 'here' or 'left' and directional adverbs like the Norwegian 'hit' (to here) or 'dit' (to there) (cf. Beermann and Hellan 2004) also reference the utterance location, in the literature typically referred to as "speaker's location", by

default.[1] In light of the theory put forward here, all these expressions provide an interesting topic. I hypothesize that their syntax could be recast using the primitives employed in the analysis of indexical pronouns. This line of further research has already been started in Gruber (2012): In this paper, I discuss Austro-Bavarian directionals, which adhere to the following pattern: preposition plus suffix '-a' or '-i', e.g. 'auffa' (upwards-a) and 'auffi' (upwards-i). These directionals indicate that movement occurs either towards the speaker's location ('-a') or towards a location crucially distinct from the speakers location ('-i'). I propose that this alternation is an overt manifestation of Hale's (1986) semantic universal of central versus non-central coincidence. Consequently, I propose that they also contain a relational head of the type proposed in this thesis, namely ±AT. In light of these data, it will be interesting to also examine similar expressions in other closely related languages to see whether they might underlyingly also adhere to the same syntactic and semantic principles.

But there is yet another angle which makes locative expressions particularly interesting with respect to the theory outlined in this thesis: whereas English only displays a bipartite opposition in its locative adverbs and demonstratives, 'here' versus 'there' and 'this' versus 'that', it is a well-known fact that many languages have a much more elaborate system of dividing space. Instead of simply encoding proximity and distality with respect to UTTERANCE LOCATION, these languages encode proximity and distality with respect to both speech act participants and an elsewhere location.[2] For instance, Japanese has a system of place deictic terms that indicates closeness to the speaker (*kore*), closeness to the addressee (*sore*), and distance from both (*are*) (cf. Fillmore 1997; Imai 2003; Tsujimura 2007). Other examples are Tagalog (Philippine; cf. Online Tagalog Grammar 2010) or Spanish (Indo-European; cf. Schroten 1994). Diessel (2008) dubs languages like English "distance-oriented" and languages like Japanese "person-oriented". In his typological study of spatial deixis based on samples from more than 400 languages, Imai (2003) reaches a particularly interesting conclusion: universally "[a]ll languages use the "speaker" as a primary anchor", where *anchor* is defined as "the basis on which distance or other parameters of deictics are calculated" (Imai 2003:171). Put differently, he claims that every language will have a spatial expression that is relative to the speaker's location. In light of languages like Japanese or Tagalog, I speculate that languages with a more elaborate deictic system might also encode a location related to the addressee within their grammar. These systems present an interesting challenge for my hypothesis that there is one single spatial parameter that allows us to define spatial relations, namely UTTERANCE LOCATION. Investigating spatial expressions from the point of view presented in this thesis thus appears to be a promising line of further research, in particular when investigated in connection with the respective personal pronoun system of these languages.

From an analytical point of view, my specific approach also raises a number

[1] See also the related discussion in chapter II, section 2.3.

[2] Some languages have an even more fine-grained system with intricate references to the specifics of the physical world of their communities (cf., e.g. Fillmore 1997).

of questions with respect to embedded clauses. Indexical pronouns are proposed to contain a pronominal situation variable in their internal structure. As already established at various points, this variable can but need not have an antecedent. So far we have only discussed matrix clauses in which there is no suitable antecedent; hence the variable gets interpreted deictically. The issue could potentially be different in embedded clauses: if the matrix clause contains an argument that presents a suitable antecedent this should have an effect on the embedded pronoun.

I hypothesize that languages with shifted indexicals present such a case. The phenomenon can be illustrated with the well-known data from Amharic (Semitic) as in (2a) in comparison to English as in (2b).

(2) a. *Amharic* (lit.): John$_i$ says that I$_i$ am a hero.
b. *English*: John$_i$ says that he$_i$ is a hero. [Schlenker 2003:31]

In (2a), the embedded first person pronoun does not refer to the speaker of the entire sentence but to the speaker that is reported in the matrix clause, i.e. John; the English equivalent is thus as given in (2b). I tentatively suggest that in languages with shifted indexicals the matrix event situation may function as an antecedent for the embedded pronoun.[3] Why the matrix event situation argument can serve as an antecedent for the pronominal situation variable in some but not in all languages is unclear at this point. As reported in the literature (Schlenker 2003; Anand and Nevins 2004; Shklovsky and Sudo 2009; Sundaresan 2012), whether or not an indexical shifts in embedded clauses is highly dependent on the main clause predicate (e.g. in Amharic only specific verbs of saying can induce it), subject to crosslinguistic variation, and not necessarily obligatory. The details of the phenomenon are clearly more intricate than can be done justice to here, but this topic certainly constitutes an interesting area for future research.

2.2 Honorifics

I have presented evidence that the deictic category PERSON is not an atom of the deictic sphere but draws on two other categories standardly associated with it, namely TIME and LOCATION. However, there are possibly more deictic categories present in natural language. Fillmore also lists the following:

> [...] (5) the social relationships on the part of the participants in the conversation, that determine, for example, the choice of honorific or polite or intimate or insulting speech levels, etc., which we can group together under the term *social deixis*. [Fillmore 1997:61]

[3] For Ritter and Wiltschko (To appear), the embedded situation variable in Spec-TP always depends on the matrix event situation that is taken to be encoded in the VP. See also the related discussion in chapter II.

This is immediately reminiscent of honorifics and polite forms available in a vast number of languages; for instance, German 'Sie', the third person plural pronoun, or French 'vous', the second person plural pronoun, both used to refer to an addressee politely. These forms do not only identify the hearer, but also reflect the social relationship between the speaker and hearer. Since this additional information leads to the use of a form distinct from a regular second person pronoun, it raises the question if and how this information is computed syntactically. At the same time, as evident from the German and French examples above, these forms need not necessarily be dedicated honorific forms but can be identical to other personal pronouns of the language. Since these forms still identify the hearer of the utterance, the question is if and how the social component interacts with the spatial and potentially temporal layers argued for in this thesis.

2.3 Sign Languages

In the analysis set forth in this thesis, SPACE plays a vital role: UTTERANCE LOCATION is proposed to form the core of indexical pronouns in that it is crucial for deriving the distinction between first and second person and in that it constitutes the primary anchor that relates the pronoun to the extralinguistic context. This heavy focus on a spatial component evokes an association with sign languages: these languages heavily rely on the physical signing space between the interlocutors that can serve to locate and identify events, objects, and people.[4] While it has become more widely accepted that sign languages rely on the same underlying principles of an innate language faculty as oral languages and only differ in the specific output modality, personal pronouns still give rise to much debate: researchers do not agree on whether personal pronouns as grammatical elements even exist in sign languages to begin with (see for instance Berenz 2002; McBurney 2004; Quer 2011). One of the challenges in reconciling analyses of sign and oral languages lies in the fact that the actual physical space between the interlocutors forms a defining part of the grammar of sign languages; but it does not appear to do so in oral languages. This becomes particularly important with respect to pronouns, since their referents are typically assigned by pointing gestures either to the actual interlocutors or to points in the signing space that serve as visual anchors for their referents. However, the proposal put forward in this thesis attributes a vital role to the space of the speech act. It thus presents us with an interesting avenue of research that might prove to be able to bring theories of sign and oral languages one step closer to each other and provide us with insights into the faculty of language taking both perspectives into account.

While exploring new paths towards the nature of PERSON allowed me to take a fresh look at a range of phenomena, it also forced me to walk past many alleys and streets that I could sometimes only briefly glimpse into. I hope to

[4] See Emmorey (1996) for an overview of the use of space in American Sign Language.

have shown that there is some plausibility to this novel perspective and that it provides exciting new angles from which to look at the fascinating human capacity for language.

Ich erschrak,
als die erste Münze in meinen Hut fiel:
es war ein Groschen, er traf die Zigarette,
verschob sie zu sehr an den Rand.
Ich legte sie wieder richtig hin
und sang weiter.

Ansichten eines Clowns, Heinrich Böll

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Samenvatting in het Nederlands (Summary in Dutch)

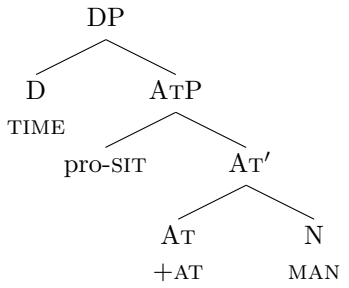
Dit proefschrift is in de eerste plaats gericht op de deiktische en grammaticale categorie *persoon* en de daarbij behorende talige expressies, de zogenoemde *indexicale voornaamwoorden*. Dit zijn de persoonlijke voornaamwoorden (of pronomina) voor de eerste en tweede persoon, zoals het Engelse 'I' en 'you', die respectievelijk de spreker en de hoorder van een uiting aanduiden. Het belangrijkste doel van dit proefschrift is om te laten zien dat PERSOON geen primitieve categorie is, maar is afgeleid uit twee andere grammaticale categorieën. Ik beargumenteer dat temporele informatie (informatie over tijd) de eerste categorie is die een cruciale rol speelt in de interpretatie van PERSOON. Ik laat bovendien zien dat deze temporele informatie ook morfosyntactisch gerepresenteerd is in de indexicale voornaamwoorden. De tweede categorie die belangrijk is voor het interpreteren van PERSOON is locationele informatie, dus informatie over ruimte.

De centrale vraag die aan dit onderzoek ten grondslag ligt, is:

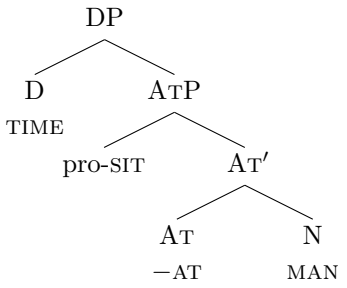
I. Hoe ziet de interne structuur van talige expressies die PERSOON (i.e. indexicale voornaamwoorden) aanduiden eruit?

Deze vraag gaat uit van de wijdverbreide aanname dat voornaamwoorden intern complex zijn (zie o.a. Postal 1966; Abney 1987; Cardinaletti en Starke 1999; Déchaine en Wiltschko 2002; Van Koppen 2005). Mijn antwoord op deze vraag is dat de interne structuur van indexicale voornaamwoorden bestaat uit een locationele en in bepaalde gevallen ook een temporele component. Gebaseerd op de analyse van voornaamwoorden zoals voorgesteld door Déchaine en Wiltschko (2002), beargumenteer ik dat indexicale persoonlijke voornaamwoorden de volgende structuren hebben.

(1) a. Eerste Persoon



b. Tweede Persoon



Deze structuur bestaat uit de volgende componenten: TIME ('tijd') in D vertegenwoordigt de temporele component. Uitgaande van een ontologie die bestaat uit zowel individuen als stadia van individuen (Carlson 1980; Musan 1995), beargumenteer ik dat de belangrijkste functie van D is om de interpretatie van het voornaamwoord te begrenzen tot een specifiek temporeel stadium van het individu dat wordt uitgedrukt door het lagere deel van de structuur, namelijk AtP. Ik neem aan dat deze lagere component in wezen locationeel is en ik schrijf dit toe aan de eigenschappen van het hoofd van de projectie. Preciezer, ik stel voor dat ±AT ('op') een abstracte locationele prepositie is die functioneert als een relationeel hoofd. Als zodanig relateert het de inhoud van zijn specificeerder aan de inhoud van zijn complement (vgl. Ritter en Wiltschko 2009). Het complement van AT is MAN ('mens'), een leeg naamwoord dat een individu met het kenmerk [+gevoel] uitdrukt. De specificeerderpositie van ±AT wordt ingenomen door een pronominale situatievariabele in de zin van Ritter en Wiltschko (te verschijnen). Als er geen geschikt antecedent aanwezig is, wordt deze variabele deiktisch geïnterpreteerd. Het relationele hoofd zelf bepaalt welke deiktische parameter er wordt gebruikt voor de interpretatie: omdat aangenomen wordt dat dit hoofd locationeel is, wordt pro-SIT geïnterpreteerd als LOCATIE VAN UITING ('utterance location'). De gehele AtP drukt dus uit of het bewuste individu MAN wel of niet gelokaliseerd is op de locatie die is geëncodeerd in de specificeerder. Ik stel voor dat voornaamwoorden voor de eerste persoon de informatie bevatten dat het bewuste individu gelokaliseerd is op de plaats van de uiting (+AT), terwijl voornaamwoorden voor de tweede persoon de informatie bevatten dat het bewuste individu niet gelokaliseerd is op de plaats van de uiting (−AT). Gerelateerd aan de centrale vraag in (I), werd het onderzoek verder geleid door de vragen in (II) en (III).

II. Wat is het verband tussen de structuur van indexicale voornaamwoorden en hun indexicale karakter?

III. Is er een universele structuur van indexicale voornaamwoorden die een verklaring kan geven voor de morfosyntactische, syntactisch en semantische variatie die we aantreffen tussen talen, en zo ja, hoe ziet die structuur er dan uit?

Wat betreft vraag (II), stel ik, op basis van een aantal conceptuele overwegingen, voor dat het indexicale karakter van het voornaamwoord kan worden gerelateerd aan de locationele component in AtP. De idee is dat dit gedeelte van de structuur het voornaamwoord verankert aan de buitentalige context omdat het een directe verbinding vormt tussen het pronomen en de spreeklocatie.

Met betrekking tot de onderzoeksvraag in (III) stel ik voor dat de structuren in (1) universeel zijn en dat de fundamentele inhoud en volgorde in alle talen hetzelfde is. De variatie tussen verschillende talen in de vorm en interpretatie van indexicale voornaamwoorden wordt toegeschreven aan de specifieke TIME die geassocieerd is met D. Ik implementeer dit door aan te nemen dat TIME een interpreteerbaar kenmerk zonder waarde (Pesetsky en Torrego 2004a) is dat tijdens de syntactische derivatie een waarde moet verkrijgen. Ik volg o.a. Enç (1987); Stowell (1993, 2007); Demirdache en Uribe-Etxebarria (2007, 2000) en neem aan dat zowel de TIJD VAN UITING ('utterance time') als de TIJD VAN DE EVENTUALITEIT ('eventuality time') syntactisch gecodeerd zijn. Op basis hiervan stel ik voor dat talen parametrisch van elkaar verschillen en dat ofwel TIJD VAN UITING ofwel TIJD VAN DE EVENTUALITEIT de waarde voor TIME in D bepaalt.

De belangrijkste hypothese van dit proefschrift kan dus als volgt samengevat worden:

A. De categorie PERSOON is afgeleid en afhankelijk van locationele en *in bepaalde gevallen* ook temporele parameters die aanwezig zijn in de morfosyntactische structuur van de relevante talige expressies, de indexicale voornaamwoorden.

Deze hypothese vormt, samen met de structuren in (1), de basis voor de opbouw van dit proefschrift.

Hoofdstuk I presenteert de relevante achtergrondinformatie en definieert het empirische domein van dit proefschrift. Meer specifiek, in dit hoofdstuk beargumenteer ik dat voornaamwoorden voor de eerste en tweede persoon fundamenteel verschillen van voornaamwoorden voor de derde persoon: terwijl de eerste inherent verbonden zijn aan de buitentalige context en altijd beschikbaar zijn zonder eerdere introductie in de discourse, worden de laatste verbonden aan een antecedent in de discourse dat eerst geïntroduceerd moet worden. Het kernvoorstel van dit proefschrift beperkt zich dus tot indexicale voornaamwoorden: alleen voor deze voornaamwoorden wordt voorgesteld dat ze afhankelijk zijn van locationele en in bepaalde gevallen ook temporele specificatie.

In hoofdstuk II introduceer ik de belangrijkste ingrediënten van de structuur van indexicale voornaamwoorden, zoals hierboven kort samengevat. Ik bespreek de verschillende componenten in detail en presenteer bovendien de relevante achtergrondliteratuur. Verder introduceer ik de relevante aspecten van de syntaxis van de zin die nodig zijn voor het verstrekken van de informatie die vereist wordt door het indexicale voornaamwoord: TIJD VAN UITING en TIJD VAN DE EVENTUALITEIT. In het bijzonder presenteer ik de analyse van temporele interpretaties zoals voorgesteld door Stowell (1993, 2007), die

stelt dat TIJD VAN UITING en TIJD VAN DE EVENTUALITEIT gecodeerd zijn als referentiële argumenten in respectievelijk Spec-TP en Spec-VP.

De twee volgende hoofdstukken zijn gewijd aan de bespreking en discussie van TIME in D. In hoofdstuk III geef ik argumenten voor de stelling dat Blackfoot een taal is waarin proclitica voor persoon een D-hoofd bevatten dat verbonden is aan TIJD VAN DE EVENTUALITEIT. Blackfoot heeft twee sets van proclitica die morfologisch aan elkaar gerelateerd zijn. Ik volg Bliss en Gruber (2011) en beargumenteer dat de korte vormen, 'n-, k-', AtPs zijn en respectievelijk eerste en tweede persoon aanduiden; de lange vormen, 'nit-, kit-', bevatten het extra morfeem '-it-' waarvan ik laat zien dat het zich in D bevindt en gerelateerd is aan TIJD VAN DE EVENTUALITEIT. Deze claim wordt empirisch ondersteund door data uit zowel het nominale als het verbale domein. In het nominale domein verschijnen de korte vormen als possessieven in onvervreemdbare bezitsrelaties, terwijl de lange vormen dienst doen als possessieven in vervreemdbare bezitsrelaties. Voor de lange vormen stel ik voor dat '-it-' dat temporele deel van het individu aangeduid in AtP selecteert waarop de bezitsrelatie van toepassing is. In onvervreemdbare bezitsrelaties is er daarentegen niet een dergelijk temporeel stadium beschikbaar omdat de relatie inherent niet-temporeel is. In het verbale domein verschijnen de korte vormen met de perfectiefmarkeerder 'ikáá-' en de lange vormen met alle andere tijdsmarkeerders. Ik beargumenteer dat dit het feit weerspiegelt dat 'ikáá-' de eventualiteit aangeduid in de VP in een eigenschap verandert die inherent toegeschreven wordt aan het individu dat aangeduid wordt door het procliticum. Net als met onvervreemdbaar bezit, wordt deze inherente relatie weerspiegeld in de keuze voor het procliticum.

Het tweede hoofdstuk dat zich richt op TIME in D is hoofdstuk IV, waarin generieke interpretaties van voornaamwoorden voor de tweede persoon behandeld worden. De primaire data zijn afkomstig uit het Engels, Duits en Nederlands. De belangrijkste stelling van dit hoofdstuk is dat deze talen TIJD VAN UITING gebruiken voor de interpretatie van indexicale voornaamwoorden. Ik beargumenteer dat alleen voornaamwoorden die AtPs zijn in generieke zinnen kunnen verschijnen en een niet-indexicale betekenis kunnen krijgen. Voornaamwoorden die DPs zijn worden daarentegen verplicht geïnterpreteerd als indexicaal: zij bevatten een TIME-kenmerk dat zijn waarde ontvangt van TIJD VAN UITING waardoor de interpretatie van het voornaamwoord beperkt wordt tot het temporele stadium van het individu aangeduid in At op het moment van de uiting. Ik stel voor dat het Engelse 'you' en het Duitse 'du' zowel een DP als een AtP structuur kunnen hebben, alhoewel de morfofonologische vorm in beide gevallen gelijk is. Met welke van beide versies we te maken hebben kan daarom alleen bepaald worden door te kijken naar de beschikbare interpretaties. Deze claim wordt empirisch ondersteund door data uit het nauw verwante Nederlands: in tegenstelling tot het Engels en het Duits, heeft het Nederlands zowel een zwakke vorm ('je') als een sterke vorm ('jij') van het voornaamwoord voor de tweede persoon. Ik laat zien dat de zwakke maar niet de sterke vorm een niet-indexicale, generieke interpretatie kan krijgen. Op basis daarvan stel ik dat het zwakke voornaamwoord een AtP structuur heeft, terwijl het sterke

voornaamwoord een DP structuur heeft.

Hoofdstuk 5 is gewijd aan de locationele component. Ik onderzoek de idee van een locationele component via de historische achtergrond en enkele conceptuele overwegingen. Verder presenteer ik data uit het Armeens en het Italiaans: talen die indexicale voornaamwoorden hebben die morfologisch gerelateerd zijn aan locatieve uitdrukkingen. Hoewel ondubbelzinnig bewijs voor het bestaan van een locationele component in dit stadium niet gepresenteerd kan worden, zijn de vondsten bemoedigend voor verder onderzoek.

Samengevat zijn de belangrijkste stellingen van dit proefschrift de volgende:

i. De deiktische categorie PERSOON is afhankelijk van locationele en in bepaalde gevallen ook temporele specificatie.

ii. Deze afhankelijkheid is weerspiegeld in de interne structuur van indexicale voornaamwoorden, dat wil zeggen de talige expressies die respectievelijk spreker en hoorder aanduiden (zie onderzoeksvraag I).

iii. In het D-hoofd bevindt zich een temporeel kenmerk. De functie van dit kenmerk is om de interpretatie van het voornaamwoord te beperken tot een specifiek temporeel stadium van het individu dat uitgedrukt wordt door het lagere deel van de structuur. Talen verschillen parametrisch van elkaar met betrekking tot de interpretatie van hun indexicale voornaamwoorden. Deze kan beperkt worden door de TIJD VAN UITING of door de TIJD VAN DE EVENTUALITEIT. Het temporele deel is daarom de component die verantwoordelijk is voor variatie tussen talen (zie onderzoeksvraag II).

iv. Naast de temporele component neem ik aan dat indexicale voornaamwoorden ook een locationele component bevatten. Het verschil tussen spreker en hoorder wordt als volgt afgeleid: voornaamwoorden voor de eerste persoon bevatten de informatie dat hun referent een individu is dat gelokaliseerd is op de plaats van de uiting; de referent van voornaamwoorden voor de tweede persoon is een individu dat *niet* gelokaliseerd is op de plaats van de uiting. Het locationele deel is dus de component die verantwoordelijk is voor het indexicale karakter van voornaamwoorden voor de eerste en tweede persoon (zie onderzoeksvraag III).