

You and me against the world?

First, second and third person in the world's  
languages

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## Contents

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<b>Abbreviations</b>	<b>ix</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Person patterns: first and second vs. third? . . . . .	1
1.2 Person patterns: innate or learned? . . . . .	4
1.3 Overview of this dissertation . . . . .	4
<b>2 How many persons are there?</b>	<b>7</b>
2.1 Preliminaries: person markers . . . . .	8
2.1.1 The universality of person markers . . . . .	9
2.1.2 Pronouns vs. affixes . . . . .	10
2.1.3 Summary . . . . .	15
2.2 The inclusive—a fourth person value . . . . .	15
2.2.1 Person and number in pronouns . . . . .	16
2.2.2 Four is the maximum . . . . .	21
2.2.3 The inclusive is not universal . . . . .	25
2.2.4 Summary . . . . .	28
2.3 Person in sign language . . . . .	29
2.3.1 Second person=third person in sign language . . . . .	29
2.3.2 Index elements and symbol elements . . . . .	32
2.3.3 First person in sign language . . . . .	36
2.3.4 Summary . . . . .	38
2.4 Less than three persons in spoken language . . . . .	38
2.5 Singular-plural or minimal-augmented? . . . . .	40
2.5.1 The inclusive as a problem for number . . . . .	40
2.5.2 Suppletion in person paradigms . . . . .	43
2.5.3 Number in non-suppletive paradigms . . . . .	44
2.5.4 Number in suppletive paradigms . . . . .	47

2.5.5	Summary . . . . .	49
2.6	Conclusion . . . . .	50
<b>3</b>	<b>Rigid person patterns</b>	<b>51</b>
3.1	Addressee shift and speaker shift . . . . .	54
3.1.1	Addressee shift . . . . .	54
3.1.2	Speaker shift and multiple speakers . . . . .	55
3.1.3	INTERLOCUTORFIXATION . . . . .	57
3.1.4	Summary . . . . .	59
3.2	Quantifier DPs and person . . . . .	59
3.2.1	First- and second-person quantifiers . . . . .	60
3.2.2	Pronominal nouns and the DP hypothesis . . . . .	63
3.2.3	Summary . . . . .	69
3.3	Binding and person—the basics . . . . .	69
3.3.1	Bound versus referential . . . . .	70
3.3.2	Singular pronouns . . . . .	71
3.3.3	Plural pronouns . . . . .	72
3.3.4	Kratzer's (2009) <i>the only one who</i> construction . . . . .	75
3.3.5	Summary . . . . .	79
3.4	Accommodational binding . . . . .	79
3.4.1	Third-person pronouns . . . . .	80
3.4.2	Names . . . . .	82
3.4.3	First- and second-person pronouns . . . . .	83
3.4.4	Summary . . . . .	85
3.5	The vocative . . . . .	85
3.5.1	The vocative as a person pattern . . . . .	86
3.5.2	First- and second-person determiners . . . . .	87
3.5.3	Third-person vocatives . . . . .	93
3.5.4	Imperatives and vocatives . . . . .	96
3.5.5	Summary . . . . .	98
3.6	Sign language and rigid person patterns . . . . .	99
3.6.1	Sign language and vocatives . . . . .	99
3.6.2	Sign language and interlocutor fixation . . . . .	100
3.6.3	Summary . . . . .	103
3.7	Conclusion . . . . .	103
<b>4</b>	<b>Person hierarchies</b>	<b>107</b>
4.1	Person hierarchies and predictability . . . . .	108
4.1.1	Predictability and morphological reduction . . . . .	109
4.1.2	The inclusive, the plural and person hierarchies . . . . .	111
4.1.3	Summary . . . . .	113
4.2	Person hierarchies I: semantic roles . . . . .	113
4.2.1	Silverstein (1976) and the agent–patient reversal . . . . .	113

4.2.2	Against Silverstein (1976) . . . . .	114
4.2.3	The agent–patient reversal in individual languages . . .	115
4.2.4	Summary . . . . .	116
4.3	Person hierarchies II: illocutionary force . . . . .	117
4.3.1	The marking of illocutionary force . . . . .	117
4.3.2	Assertions and questions . . . . .	118
4.3.3	Commands . . . . .	120
4.3.4	Summary . . . . .	125
4.4	Person hierarchies III: evidentiality . . . . .	125
4.4.1	Types of evidentiality . . . . .	126
4.4.2	Person and source of information . . . . .	127
4.4.3	Person and topic of the predicate . . . . .	128
4.4.4	Summary . . . . .	130
4.5	Person hierarchies IV: nominal categories . . . . .	130
4.5.1	Spatial deixis . . . . .	131
4.5.2	Gender . . . . .	132
4.5.3	Politeness . . . . .	132
4.5.4	Summary . . . . .	135
4.6	Predicting the hierarchies . . . . .	135
4.6.1	How primitives work . . . . .	136
4.6.2	Against Ackema and Neeleman (2011) . . . . .	138
4.6.3	An approach without primitives . . . . .	139
4.6.4	An approach with EGO and TU . . . . .	141
4.6.5	Summary . . . . .	143
4.7	Rigid patterns, hierarchies and innateness . . . . .	144
4.7.1	Co-existence . . . . .	144
4.7.2	The differences . . . . .	147
4.7.3	Summary . . . . .	148
4.8	Conclusion . . . . .	148
<b>5</b>	<b>Conclusions</b>	<b>151</b>
5.1	Summary of main findings . . . . .	151
5.2	First and second versus third: conclusion . . . . .	155
	<b>Bibliography</b>	<b>159</b>
	<b>Samenvatting</b>	<b>169</b>
	<b>Acknowledgments</b>	<b>175</b>
	<b>Curriculum Vitae</b>	<b>177</b>



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## Abbreviations

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$\frac{1}{2}$	inclusive person	M	male gender
1	first person	N	neuter gender
2	second person	NEG	negation
3	third person	NOM	nominative case
ACC	accusative case	OBJ	object
AUGM	augmented number	PERF	perfective aspect
COP	copular verb	PFRM	performative evidentiality
DAT	dative case	PL	plural number
DECL	declarative mood	POINT	pointing sign/gesture
DEF	definite	POSS	possessive
DS	different subject	PRS	present tense
DUAL	dual number	PST	past tense
EMPH	emphatic	PTCP	participle
F	female gender	PUNCT	punctual aspect
FAM	familiar politeness	Q	question
HON	honorific politeness	REFL	reflexive
IMP	imperative mood	REP	reportative evidentiality
IMPF	imperfective aspect	SBJ	subject
INDEF	indefinite	SBJV	subjunctive mood
INDIC	indicative mood	SENS	sensory evidentiality
INF	infinitive	SG	singular number
INFER	inferential evidentiality	THM	theme
INTR	intransitive	TOP	topic



# CHAPTER 1

---

## Introduction

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In 1977 John Lyons wrote rather firmly: “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 1977:638). Is the split between first and second person and third person really that big? In this dissertation I will argue that it is not. The issue will be introduced more thoroughly in Section 1.1. In Section 1.2 I will investigate the additional question whether person splits are innate or learned. Finally, in Section 1.3, I will give an overview of the remainder of this dissertation.

### 1.1 Person patterns: first and second vs. third?

Person is the topic of this dissertation and personal pronouns are the most prominent example of linguistic elements associated with the concept of person in English. In (1) we find an overview of personal pronouns in English (restricted to singular number and nominative case for the sake of convenience).

(1) English personal pronouns

first person	<i>I</i>
second person	<i>you</i>
third person	<i>he, she, it</i>

A first-person pronoun like *I* is the dedicated means to refer to the *speaker* of the sentence, a second-person pronoun like *you* is the dedicated means to

refer to the *addressee* of the sentence, and a third-person pronoun like *he* is the dedicated means to refer to an entity that is neither the speaker nor the addressee of the sentence, an *other*.

All three persons can be seen as *values* of the grammatical category of person (see Section 2.2 for the fourth value, the inclusive). Among the values of a grammatical category there are patterns to be observed. Take for example the grammatical category of tense, which expresses the semantic concept of time. In Dutch, verbs that refer to events in the past exhibit one type of tense marking (conveniently called past tense marking), see *had* ‘had’ in (2).

DUTCH

- (2) *Ik had gisteren een afspraak*  
 1SG.NOM had yesterday an appointment  
 ‘I had an appointment yesterday’

The present and the future may also be marked. In roughly half of the languages there are separate inflectional markers for the present and the future (Dahl and Velupillai 2005a). Dutch, however, belongs to the other half and has one type of tense marking for present and future (present tense marking), see *heb* ‘have’ in (3) and (4).

- (3) *Ik heb nu een afspraak*  
 1SG.NOM have now an appointment  
 ‘I’m having an appointment right now’
- (4) *Ik heb morgen een afspraak*  
 1SG.NOM have tomorrow an appointment  
 ‘I have an appointment tomorrow’

Thus, for Dutch verbs it can be said that the present and the future pattern together, while the past is different.

There are also patterns to be observed in the category of person. One example is the pattern in which first and second person behave the same with respect to some linguistic phenomenon. We find an example of such a phenomenon in the data in (5a-c).

- (5) a. We scientists like to know the facts  
 b. You scientists like to know the facts  
 c. \*They scientists like to know the facts

The construction [X scientists] is possible for first- and second-person pronouns, but not for third-person pronouns (see Section 3.5.2 for more on this phenomenon).

This phenomenon clearly has a first/second vs. third pattern, the pattern that is postulated by Lyons (1977). This pattern also features in (6), where all potential patterns with three person values are listed.

(6) Possible patterns within the category of person

Lyons pattern	1/2 vs. 3
Allowed by Lyons	1=2=3 1 vs. 2 vs. 3
Disallowed by Lyons	1/3 vs. 2 2/3 vs. 1

Another pattern that Lyons's theory allows is a pattern where all person values are on equal footing. In other words, the first/second vs. third person split does not always apply, but if there *is* a split it should be this one. Lyons's theory most probably also allows a third pattern: a pattern where all persons are different from each other. This could be analyzed as follows. The primary split is between first and second person on the one hand and third person on the other hand. The secondary split, then, is between first and second person. When analyzed in this way the pattern is compatible with Lyons's theory.

The final two patterns in (6), however, are predicted by Lyons not to occur. The same predictions are independently made by theoretical linguists (Benveniste 1966:163), formal semanticists (Kaplan 1989) and typologists (Siewierska 2004:5-7). This will be the central question of this dissertation: **do the final two patterns in (6) occur, and in what phenomena?**

Some scholars already claim to have found such occurrences; an example is Croft (1990:149-150), building on work by Greenberg (1966:44-45, 96). Croft mentions a first/third vs. second pattern for imperative/hortative constructions, for example. Imperative/hortative constructions will be investigated in Section 4.3.3. One of my own examples involves demonstrative adverbs, see Section 4.5.1. In English the demonstrative adverb *here* refers to a place that is close to speaker, while *there* refers to a place that is further away from the speaker. Many languages have a demonstrative adverb system like this, where only the speaker is considered as the point of orientation (see Diessel 2005). As second- and third-person individuals are apparently not that important for demonstrative pronoun systems, we can say that demonstrative pronouns are subject to a first vs. second/third person split. This split is one of the two final splits in the overview in (6).

The occurrence of the first vs. second/third pattern and the second vs. first/third pattern undermine the alleged predominance of the first/second vs. third person split. The remainder of this dissertation is therefore dedicated to finding and investigating these two patterns. My main conclusion will be that any person pattern is possible, and that the nature of the pattern depends on the associated phenomenon.

## 1.2 Person patterns: innate or learned?

The difference of opinion—as stated in the previous section—is whether there are three person patterns in language (Lyons’s view) or more than three person patterns (my view). That person patterns exist is not in doubt. Yet, the existence of person patterns brings up the question of the exact nature of these patterns. One question is whether the attested person patterns are *innate* or *learned*. In other words, are person patterns part of the human genome and are children born with them, or are these patterns only present in some form in the world such that children pick up on them?

This discussion is of course part of a broader linguistic discussion on *Universal Grammar*. This linguistic discussion is in turn part of a broader cognitive debate, the *nature versus nurture* debate. I do not claim to solve either of the debates with this dissertation, but I can nevertheless contribute to them by sharing my empirical findings on the behavior of person patterns. The behavior of a person pattern may suggest whether it is a language-internal (innate) phenomenon or a language-external (learned) one. I will resume this discussion in Section 4.7 and argue that for person both language-internal and language-external patterns may be discerned.

## 1.3 Overview of this dissertation

Until now I have only looked at three person values: first person, second person and third person. These are the classical three person values, but I think that a study on person should not be restricted to these three. In Chapter 2 I will show that there are good reasons to adopt a fourth person value, the inclusive. The existence of this fourth person has important consequences for the central question of this dissertation, because with four person value the number of potential patterns within the grammatical category of person increases drastically.

In Chapters 3 and 4, I will investigate the actual person patterns that occur in language. Chapter 3 will deal with *unitary person patterns*, patterns that only allow one type of language. One of these patterns is that there are restrictions on multiple first-person occurrences and multiple second-person occurrences. It is, for example, not always possible to have two or more different addressees in one sentence, see (7). This phenomenon—*addressee shift*—will be looked into in Section 3.1.

- (7) \*Why do <sub>[point at A]</sub> you agree with <sub>[point at B]</sub> you ?

Another phenomenon can be found in constructions like *you scientists*, which we already saw in Section 1.1. The second-person expression *you scientists* necessarily includes all addressees, while a third-person expression like *America’s*

*scientists* does not necessarily include all things belonging to America, see Section 3.5.2.

Chapter 4 will deal with *person hierarchies*, patterns that allow for more than one type of language. Such hierarchies occur when person interacts with other grammatical categories. The grammatical categories that will be discussed are spatial deixis, gender, politeness, sentence mood and evidentiality. Sentence mood encodes whether a sentence is a statement, a question, a command, or some other speech act. In commands, for example, person is important because second-person commands (i.e. imperatives) are on average shorter than commands to other persons, see Section 4.3.3. The grammatical category of evidentiality encodes how the information expressed by a predicate is obtained. In the sentence in (8), for example, there is the direct-evidence marker *-n*, which conveys that the bread-eating event was seen by the speaker herself (Faller 2002).

CUZCO QUECHUA

- (8) *Pilar-qa t'anta-ta-n mikhu-rqa-n*  
 Pilar-TOP bread-ACC-SENS eat-PST-3  
 'Pilar ate bread (and I saw that)'

For obvious reasons there are only evidentials for direct evidence gathered by the speaker. This shows that a speaker–non-speaker distinction is encoded in evidentials, see Section 4.4.

Chapter 5, finally, will provide the conclusion of this dissertation. I will summarize the main findings and conclude that first/second vs. third is not the only person split that may occur in language.



## CHAPTER 2

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### How many persons are there?

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The grammatical category of person has values like first person and second person and these values may pattern in certain ways, which is the main topic of this dissertation. But if we want to know what person patterns exist we first have to know how many person values there are. If there are, for example, three person values (first, second and third person) then there are only five potential patterns, as was shown in the previous chapter.

The only way to know how many values of some grammatical category a language has is to look at the *markers* that a language employs for the grammatical category. The *-s* marker of *games* in (1), for example, shows that this English noun distinguishes between a plural and a singular number value.

(1) He play-s game-s

In the sentence in (1) we also see that person is marked by two morphemes, *he* and the *-s* from *plays*. Does this mean that person is marked twice in this sentence? In Section 2.1 I will argue that the two morphemes should be seen as one marker.

The classical view—based on languages like Greek, Latin and English—is that all languages have three person values. And indeed, when one looks at the singular in spoken languages this view holds. English, for example, has a first-person pronoun *I* which is associated with the speaker (S), a second-person pronoun *you* which is associated with the addressee (A), and a third-person pronoun *he* (or *she* or *it*) which is associated with an other (O; someone who is neither speaker nor addressee). In (2) I present an overview of the English system of singular pronouns, once again restricted to singular, nominative forms.

- (2) English singular pronouns

Syntactic value	Pronoun	Semantics
1	I	S
2	you	A
3	he/she/it	O

The system in (2) shows that the person values of first person, second person and third person really are sufficient to describe the English singular pronouns, and they also suffice for the singular pronouns in other spoken languages. However, when we look at cross-linguistic data on plural pronouns (Section 2.2), we will see that languages with *inclusive pronouns* have four person values, while the classical view predicts a maximum of three.

Moreover, when we look at data from sign languages (Section 2.3), we will see that languages may also have less than three person values. This is a violation of Greenberg's Universal 42 (Greenberg 1963), as cited in (3).

- (3) Greenberg's Universal 42  
All languages have pronominal categories involving at least three persons and two numbers.

There is also incidental data from spoken languages that violates Greenberg's Universal 42. In Section 2.4 we will deal with these data.

The importance of inclusive pronouns for the category of person may lead to some reanalyses in our theory of language. Some scholars have for example argued that the category of number should be reanalyzed accordingly. In Section 2.5 I will argue that this is not necessary.

## 2.1 Preliminaries: person markers

This dissertation is about the semantic concept of person, and about the syntactic means to express it. The overt expression of a semantic category is often called a *marker*, so the overt expression of the category of person should be called a *person marker*. The morphological status of person markers varies greatly; on the one hand there are independent pronouns like *she*, and on the other hand there are affixes like *-s*, see (4).

- (4) She know-s

In Section 2.1.1 we will see that every language has these markers in one form or another, and in Section 2.1.2 we will find out that person markers may consist of two or more non-adjacent morphemes.

### 2.1.1 The universality of person markers

Person shall be regarded as a *grammatical category* in this dissertation. I define the term grammatical category as a semantic concept that is obligatorily encoded on a subset of linguistic items in one or more of the world's languages. *Tense* is an example of a grammatical category for English verbs: the semantic concept of time is obligatorily expressed on the English verb, see (5a-b). If the state of being cold was in the past, the speaker has to choose the past-tense copula, even if she does not want to put emphasis on the time of the event, see (5a). But, if the state of being cold is in the present, the present-tense copula has to be chosen, see (5b). In other words, you cannot describe an event in English without expressing tense.

- (5) a. The water *was* cold.  
b. The water *is* cold.

For Indonesian verbs, on the other hand, tense is *not* a grammatical category. In other words, the semantic concept of time is not obligatorily encoded on Indonesian verbs. For example, the state of being cold in (6) can be in the past, in the present, or in the future (Dahl and Velupillai 2005b).

INDONESIAN

- (6) *Air itu dingin*  
water that cold  
'The water is/was/will be cold'

Does this mean that there is no tense at all in Indonesian? Well, there are of course words like *kemarin* 'yesterday', which obviously express the concept of time. This makes the answer to a question like *Do all languages have tense?* rather trivial: the answer is yes if every language has a word for 'today' or 'yesterday' or even 'now'. Therefore, it is more informative to take a certain subset of linguistic items in every language—e.g. verbs—and investigate for every language whether a grammatical category like tense is present on this subset. Note that this involves a cross-linguistic definition of the concept of verb.

An assessment of the grammatical category of person resembles the previous discussion on tense. There are languages like Japanese that do not obligatorily express person with their verbs. Therefore, in these *topic-drop* languages the grammatical category of person is not marked on verbs. In (7) there is a Japanese example; note that the first-person is not expressed syntactically at all, because it is clear from the context that the person is talking about herself (Neeleman and Szendrői 2007).

JAPANESE

- (7) [A person talking about herself]  
*siken-ni otita*  
 exam-DAT failed  
 ‘I failed the exam.’

Yet, there are contexts in which there is emphasis on the identity of a participant. In (8) there is emphasis on the identity of the speaker, because it could also have been the mother herself who failed the exam.

- (8) A: Why is your mother sad?  
 B: I failed the exam.

In a similar emphasis context in Japanese there will also be a marker of the category of person present. In the example in (9) this is *watashi* ‘I’. I predict accordingly that every language in the world has an obligatory person marker in such an emphatical context.

JAPANESE

- (9) [Answer to *Why is your mother sad?*]  
*watashi siken-ni otita.*  
 1SG exam-DAT failed  
 ‘I failed the exam.’

Thus, not every language marks person obligatorily in all environments, e.g. on verbs. There is, however, no language that lacks a manner to explicitly state that some person is the speaker or the addressee (Siewierska 2004:8-13). In other words, no language completely lacks person.

### 2.1.2 Pronouns vs. affixes

Now that we have seen that all languages have person markers somewhere in their syntax, we can look at the *form* of these person markers more closely. The problem that I want to address is sentences that have two morphemes to mark person (e.g. a pronoun and an affix).

The markers of a grammatical category often have dependent forms, such as an affix form or a clitic form. Take, for example, the grammatical category of *definiteness*, which encodes the semantic concept that can be described as “being known in the context”. In French the definiteness marker *le/la*—the definite article—is a clitic. Clitics are usually seen as different from affixes because they can attach to different parts of speech depending on their position in the phrase, see (10a-b)

## FRENCH

- (10) a. *le=vin blanc*  
 the=wine white  
 ‘the white wine’  
 b. *le=bon vin blanc*  
 the=good wine white  
 ‘the good white wine’

Clitics also differ from independent words, because they cannot occur autonomously, see (11).

- (11) A: *Qui avez vous vu?*  
 who have 2.HON seen  
 ‘Who did you see?’  
 B: *\*Le*  
 him

Nothing hinges on my definition of clitic, however. The only reason that I bring them up is to show that there is more to the morphological form of a marker than the prototypical affix form or the prototypical independent-word form.

Person is also often expressed by affixes or clitics. For example, in English there is an obligatory *-s* affix on verbs in the present tense if the verb is third person singular, see (12).

- (12) He sleep-*s*

Of course, independent person markers are usually referred to as personal pronouns, or pronouns, for short.

One question regarding dependent person marker is whether they have argumental status. Is, for example, the affix *-o* in the Italian example in (13), the subject of the sentence?

## ITALIAN

- (13) *Sedev-o in giardino*  
 sat-1SG in garden  
 ‘I sat in the garden’

Several scholars have made this claim that an affix can be an argument by itself (see, for example, Manzini and Roussou 2000). The problem for such an affix-as-argument approach comes with sentences like the one in (14). In this Italian sentence there is both a pronoun (*Io* ‘1SG’) and an affix (*-o* ‘1SG’). If the affix is the subject of the sentence, then the status of the pronoun is problematic. It cannot be the subject too because a sentence cannot have two subjects.

- (14) *Io sedev-o in giardino*  
 1SG sat-1SG in garden  
 ‘I sat in the garden’

One solution is to say that an overt subject like *io* in (14) is not a part of the clause. This would mean that (14) corresponds to the construction in (15) syntactically. *Io* in (14) corresponds to the first  $\alpha$  in (15), and affix *-o* in (14) corresponds to the second  $\alpha$  in (15).

(15) As for  $\alpha$ ,  $\alpha$  sat in the garden

For a sentence with a full noun phrase the situation is similar: *Gianni* in (16) corresponds to the first  $\alpha$  in (15), and affix *-a* in (16) corresponds to the second  $\alpha$  in (15).

(16) *Gianni sedev-a in giardino*  
 John sat-3SG in garden  
 ‘John sat in the garden’

A problem for this solution is a quantifier like *nessuno* ‘nobody’, see (17). The sentence in (17) does not correspond to the construction in (15), because *#As for nobody, he sat in the garden* does not have the same meaning as (17), in which nobody sits in the garden

(17) *Nessuno sedev-a in giardino*  
 Nobody sat-3SG in garden  
 ‘Nobody sat in the garden’

Thus, demoting one of the person markers to a dislocated position is not a viable solution.

Another solution involves a hybrid analysis of affixes: when a sentence also has a pronoun (*Io sedevo in giardino* ‘I sat in the garden’) the affix is not a subject, when the sentence does not have a pronoun (*Sedev in giardino* ‘I sat in the garden’) the affix is the subject. In other words, we have two kinds of person affixes: argument affixes and non-argument affixes. However, the prediction then is that it should not be necessary within a language for the two types of affixes to have exactly the same form, because they are very different semantically: the argument affix has semantic content while the non-argument affix has none. Italian is such a language, however, and Siewierska (2004) notes that in her 309-language sample 271 languages are like Italian: their argument affixes and non-argument affixes share the same form. This is highly unexpected if the hybrid analysis of person affixes were true.

The best solution to the problem of the co-occurrence of pronoun and affix is to assume that a pronoun and an affix may form a single argument together. In a sentence like (18), for example, the marker consists of two morphemes, *he* and *-s*.

(18) He know-s

This is a violation of the principle of strict surface compositionality, which states that every syntactic unit should have its own semantic contribution to

the sentence. In other words, a marker should correspond to only one morpheme. Violations of compositionality are not uncommon, however. In (19a-b) the semantic concept of dying is expressed by three morphemes, *kick*, *the* and *bucket*.

- (19) a. He will kick the bucket  
b. He kicked the bucket

A person marker consisting of two morphemes is, therefore, not ruled out by linguistic theory. In fact, many scholars accept the existence of discontinuous markers by stipulating the existence of *agreement*. Agreement can take many different forms: number agreement, gender agreement and sequence of tense. Also in a sentence like (20) some sort of agreement applies: *their* depends for its reference on *nobody*, which has to be established in one way or another.

- (20) Nobody brushed their teeth

All in all, it seems reasonable to accept the possibility of discontinuous person markers.

It is not the case for all languages that the verb always co-occurs with a two-morpheme person marker. Italian sometimes (in emphatic contexts) has a two-morpheme marker and sometimes a one-morpheme one, but a language like Swedish only has one-morpheme person markers, see (21). The subject pronoun is obligatory, both in emphatic and non-emphatic contexts (this resembles the English situation in the past tense, which shows that there are differences *within* languages as well).

SWEDISH

- (21) *Han skrattar*  
3SG.M laugh  
'He laughs'

A language may also leave person unexpressed in non-emphatic contexts. This applies to a language like Mandarin (see Huang 1989). When the context is clear there is no need for a person marker, see (22).

MANDARIN

- (22) *lai le*  
come PERF  
'I/you/he/she/it/we/they came'

It seems, therefore, that all combinations of pronoun and affix are attested, see (23) for an overview.

- (23) Four types of person marking and their example languages

	-pronoun	+pronoun
-affix	Chinese	Swedish
+affix	Italian	English

Languages may have a null-morpheme (Chinese), a one-morpheme (Italian and Swedish) or a two-morpheme marker (English).

Although all four types of language are attested, language users nevertheless have a strong preference for the Italian type of language. Dryer (2005a) notes that in his 711-language sample there are 437 Italian-type languages. The Chinese type consists of 61 languages and the English and Swedish type have 149 languages together (Dryer does not distinguish between the Swedish type and the English type quantitatively, but he suggests that the English type is the more marginal one). Thus, a two-morpheme person marker is certainly not the number one option in language. Yet, the option does occur. Moreover, person markers can have even more than two morphemes. In the Dutch dialect of Gent the person marker of an embedded clause can have three morphemes (see van Craenenbroeck and van Koppen 2002). In the sentence in (24) we see a clitic (=ze ‘3SG.F’), a stressed pronoun (*zaa* ‘3SG.F’) and an affix (-*t* ‘3SG).

GENT DUTCH

- (24) ...*da=ze*      *ZAA* *werk-t*  
           that=3SG.F 3SG.F work-3SG  
           ‘...that SHE is working’

Thus, a one-morpheme version of a person marker is preferred but in theory the sky is the limit for the number of morphemes.

One final remark involves the so-called *little pro* theorem. In this theory a phonological empty element (represented as *pro*) is present in the cases in which there is no phonologically realized pronoun. In Italian, for example, the sentence *sedevo in giardino* ‘I sat in the garden’ should be analyzed as in (25). See Ackema et al. (2006) for an overview of the discussion on the little *pro* theorem.

ITALIAN

- (25) *pro*      *sedev-o in giardino*  
       SBJ.1SG sat-1SG in garden  
       ‘I sat in the garden’

For my analysis of person markers the existence of little *pro* means that the Chinese-type and Italian-type languages in the overview in (24) have little *pro*’s instead of no pronouns. As my analysis does not provide any additional evidence for or against the little *pro* theorem I remain agnostic on the matter.

To sum up, person markers may consist of multiple morphemes, which solves the problem that sentences with both a personal pronoun and a verbal

person affix pose.

### 2.1.3 Summary

In this section I have looked at person markers, syntactic elements that mark whether some argument in the sentence is a speaker or an addressee. Person markers exist in all languages because all languages need a mechanism to put emphasis on the identity of speaker and addressee as in (26).

(26) I am right and YOU are wrong

In other contexts person markers are not always present. Not every language in the world has subject person markers in a context without emphasis or ambiguity for example. These are the so-called pro-drop languages like Mandarin and Japanese.

If a sentence *does* possess a person marker the person marker may have different morphosyntactic forms (pronoun, clitic, affix) in different languages. There are even sentences in which the person marker has two or more morphemes. The English sentence in (27) is an example; here the person marker consists of a pronoun (*she*) and an affix (*-s*). The connection between the two morphemes is commonly known as agreement.

(27) She know-s

Now that we have a better understanding of person markers, we can look at the person values that the person markers mark. In the next section I will look at the maximum number of person values between which person markers can distinguish.

## 2.2 The inclusive—a fourth person value

Many languages in the world have so-called *inclusive* pronouns. Ngiti is an example of a language with inclusive pronouns (Kutsch Lojenga 1994). An instance of the Ngiti inclusive pronoun (glossed as “ $\frac{1}{2}$ ”) can be found in (28a).

NGITI

- (28) a. *alè k-òdzì*  
 $\frac{1}{2}$   $\frac{1}{2}$ -cry  
 ‘We cry’  
 b. *mà m-òdzì*  
 1PL 1-cry  
 ‘We cry’

This inclusive pronoun is translated as ‘we’, but it has a more specific meaning: the sentence in (28a) conveys that the speaker and the addressee(s) and possibly others are crying. If the speaker wants to convey instead that the speaker and

one or more others are crying, but not the addressee(s), a different pronoun (traditionally known as the *exclusive* pronoun) has to be used. An instance of this pronoun can be found in (28b).

In this section I will argue that the existence of inclusive pronouns has its consequences for the grammatical category of person. The effect of the inclusive pronoun on the interaction between the grammatical categories of person and number will be discussed in Section 2.2.1. The conclusion will be that a special fourth person value (aptly named “inclusive person”) has to be used to account for inclusive pronouns. In Section 2.2.2 it will be discussed how this inclusive person value leads to an analysis of the grammatical person with parameters EGO and TU. In Section 2.2.3 we will look at the question whether the inclusive person value is present in every language in the world.

### 2.2.1 Person and number in pronouns

The main question in this chapter is how many person values are necessary to describe the languages of the world. But before we can answer this question, we have to disentangle the grammatical category of person from other grammatical categories. If one looks at person markers, one will see that these markers not only express the grammatical category of person, but also other grammatical categories. In the overview in (29) I listed three grammatical categories that English personal pronouns also may express: semantic role, number and gender. For the sake of simplicity I have not displayed reflexive pronouns (e.g. *myself*).

(29) English personal pronouns

			first	second	third
SBJ	SG	M			<i>he</i>
		F	<i>I</i>	<i>you</i>	<i>she</i>
	PL	N			<i>it</i>
			<i>we</i>		<i>they</i>
OBJ	SG	M			<i>him</i>
		F	<i>me</i>	<i>you</i>	<i>her</i>
	PL	N			<i>it</i>
			<i>us</i>		<i>them</i>
POSS	SG	M			<i>his</i>
		F	<i>my</i>	<i>your</i>	<i>her</i>
	PL	N			<i>its</i>
			<i>our</i>		<i>their</i>

From the overview in (29) it is evident that the pronouns *he*, *she* and *it* all have the same person value (third person), but differ with respect to the grammatical category of *gender*. Only when we abstract away from the expression of gender and the expression of other grammatical categories like semantic role, we are left with the pure grammatical category of person.

Probably the hardest grammatical category to separate from person is the category of *number*. We will therefore have a closer look at the interaction of number and person in personal pronouns in this section. Our starting point is that personal pronouns are used to refer to a group of salient entities in the context (note that when the personal pronoun is singular such a group consists of only one entity). What the grammatical category of number expresses is simply how many entities there are in that group.

What the grammatical category of person expresses exactly is less obvious. Intuitively, it should account for the pronouns in a sentence like (30). In this sentence there is a pronoun, *I*, that refers to the speaker, and a different pronoun, *you*, that refers to the addressee.

(30) I know you

A first thing to note is that one entity can either be a speaker (S) or an addressee (A), but not both. In other words, those two functions are mutually exclusive. This is illustrated by the scenario in (31). If one talks to oneself, one can either think of oneself as a speaker and use a pronoun like *I*—see (31a) – or think of oneself as an addressee and use a pronoun like *you*—see (31b). As far as I know, there is no language that has a special pronoun that refers to a person who speaks to herself, being both the speaker and the addressee of the utterance. Frequency is probably the driving force behind this: in almost all cases speaker and addressee are distinct individuals.

(31) [Talking to oneself for motivational purposes:]  
 a. I can do this!  
 b. You can do this!

On the other hand, there are entities that are neither speaker nor addressee. We will refer to such an entity as an *other* (O). English uses personal pronouns like *he* to refer to others, see (32) for an example.

(32) He knows

Thus, if we look at groups with only one member there are three possibilities with respect to the expression of person: a single speaker, a single addressee, or a single other.

However, looking at groups with more than one member makes matters more complex. For groups with two entities there are in theory six possibilities: SS, SA, SO, AA, AO and AA. I have to note in advance, however, that it is impossible in language to have more than one speaker in a single sentence. See Section 3.1.2 for the argument. With this restriction a group with two speakers is impossible, which brings the number of two-entity groups down to five. Five is of course still more than the three possibilities in the singular. Moreover, for groups with three entities there are already seven possibilities and the number of possibilities increases with the size of the group, see (33).

(33) Potential groups of entities marked by person

One entity	Two entities	Three entities	Four entities	...
S	SA	SAA	SAAA	
A	SO	SAO	...	
O	AA	SOO		
	AO	AAA		
	OO	AAO		
		AOO		
		OOO		

Languages do not have a dedicated pronoun for each possibility. This would lead to an infinite number of personal pronouns. In theory such a language can exist but it would need a mechanism to generate its pronouns from a finite set of items. This mechanism would come down to naming each single individual in the reference group, so saying *he, she, you and I* instead of *we*. Very few languages use such conjunctions of singular pronouns as the only strategy of referring to groups (Cysouw 2005) because it would make referring to large groups rather tedious.

Thus, languages tend to have a *finite* set of personal pronouns, but this means lumping together some of the infinite possibilities in (33). As a consequence, these languages will have at least one pronoun that covers an infinite number of possibilities. One way in which languages lump together possibilities is by having only a few values in the grammatical category of number. Most languages have a *singular–plural* system, which means that they only distinguish between groups of one entity (singular) and groups of more than one entity (plural). There are slightly more complicated number systems—like the *singular–dual–plural* system, where the distinction is between groups of one entity (singular), groups of two entities (dual) and groups of more than two entities (plural)—but the number of values is never more than a handful. In this dissertation we will mainly focus on *singular–plural* systems.

However, unless the category of person is restricted as well, there would still be an infinite number of personal pronouns. This is shown in the overview in (34): in a *singular–plural* language the number of singular pronouns would be finite (three, to be exact), but the number of plural pronouns would still be infinite, as every combination of S, A and O would still need its own pronoun.

(34) Potential groups of entities in a singular–plural language

Singular	Plural
S	SA
A	SO
O	AA
	AO
	OO
	SAA
	SAO
	SOO
	...

So how do languages restrict their number of pronouns? This is where the precise definition of the values of the grammatical category of person comes in.

Let us look at German, an example of a singular–plural language. An overview of pronouns in German can be found in (35). For ease of exposition we will restrict the discussion to subject pronouns in this chapter. Note that English is similar to German but does not distinguish between second-person singular and second-person plural.

(35) Interaction of number and person in German personal pronouns

	Singular		Plural	
	Pronoun	Semantics	Pronoun	Semantics
1	<i>ich</i>	S	<i>wir</i>	SA, SO, SAA, ...
2	<i>du</i>	A	<i>ihr</i>	AA, AO, AAA, ...
3	<i>er/sie/es</i>	O	<i>sie</i>	OO, OOO, OOOO ...

The common analysis of person in a pronoun system in a language like German has three person values (first-person, second-person and third-person), defined as in (36). Note that I allow only one S in a group, see Section 3.1.2.

(36) Definitions of person values in a German-style language.

- 1** a group with a speaker
- 2** a group with one or more addressees and no speaker
- 3** a group with neither speaker nor addressees

With these definitions the German pronouns are categorized as follows: *ich* ‘I’ and *wir* ‘we’ are first-person, *du* ‘you (singular)’ and *ihr* ‘you (plural)’ are second-person, and *er* ‘he’ and *sie* ‘they’ are third-person (note that the names of the labels “first person”, “second person” and “third person” are unimportant; one could have used labels like “X”, “Y” and “Z” instead, but it is tradition to use numeric names for person values in linguistics). Thus, with a minimum of three person values and two number values and abstracting away from things like case

(i.e. semantic roles) and gender the six German pronouns are as expected.

Yet, six is not the maximum of personal pronouns in a singular–plural language; in a language like Evenki there is a separate inclusive pronoun (*mit*), which brings the total (again abstracting away from case, gender, etc.) to seven pronouns. In (37) we find an overview of Evenki pronouns (see Nedjalkov 1997).

(37) Interaction of number and person in Evenki personal pronouns

Singular		Plural	
Pronoun	Semantics	Pronoun	Semantics
		<i>mit</i>	SA, SAO, ...
<i>bi</i>	S	<i>bu</i>	SO, SOO, ...
<i>si</i>	A	<i>su</i>	AA, AO, ...
<i>nungan</i>	O	<i>nungartyn</i>	OO, OOO, ...

Obviously, the definitions in (36) that have been used for German do not suffice for Evenki (and there are more languages like Evenki), as they would not distinguish between inclusive *mit* and first-person plural *bu*, because both pronouns refer to a group with a speaker.

Traditionally, both types of pronouns have been analyzed as first-person pronouns. The *mit*-type pronoun has been known as the first-person *inclusive* pronoun—i.e. the group *includes* the addressee(s)—and the *bu*-type pronoun as the first-person *exclusive*—i.e. the group *excludes* the addressee(s). However, as the matrix in (37) has already suggested, I will follow a different analysis in this dissertation: a *mit*-type pronoun does not have a first-person value, but a person value of its own, the *inclusive-person* value (Bobaljik 2008, Cysouw 2010). This inclusive-person value is then the fourth person value (besides the first-person, second-person and third-person values) and will be represented with a  $\frac{1}{2}$  in matrices and glosses in this dissertation. In (38a) there is an Evenki example of the inclusive pronoun *mit*.

EVENKI

- (38) a. *Esi mit oron-mi e-get sokor-ro*  
 now  $\frac{1}{2}$  reindeer-POSS.REFL.SG NEG- $\frac{1}{2}$ .IMP lose-PTCP  
 ‘Let us (inclusive) not lose our (inclusive) reindeer’
- b. *Bu oro-r-vor etejet-chere-v*  
 1PL reindeer-PL-POSS.REFL.PL guard-PRS-1PL  
 ‘We (exclusive) guarded our (exclusive) reindeer’

In addition, in (38b) we find an example of the pronoun *bu*. The *bu*-type pronouns will from now on be referred to as first-person plural pronouns; calling it a first-person plural exclusive pronoun is superfluous since now all first-person pronouns are by definition exclusive—they exclude the addressee(s) by definition.

We now have a view that competes with the traditional view that inclusive pronouns are first-person. One argument in support of the inclusive as a fourth

person value can be extracted from typological work by Cysouw (2003:187). Cysouw looks at homophony between person-number markers, i.e. cases in which one morphophonological form may express more than one person-number combination. A well-known example is English *you*, which may be either second-person singular or second-person plural. To tease apart the homophony patterns of the inclusive from the homophony patterns of the first person Cysouw selected a sample of 121 languages in which the inclusive person marker and the first-person plural marker were not homophonous with each other. In other words, he looked at 121 languages that are like Evenki. What he found was that in 23 languages (19.0%) in his sample there was homophony between the first-person singular and the first-person plural, and in only one language (0.8%) there was homophony between first-person singular and the inclusive. Homophony between singular and plural within a person value occurs on a regular basis—31 languages (25.6%) for second person and 47 languages (38.8%) for third person—so if the inclusive really is a first-person pronoun, the percentage of 0.8% should have been higher.

A similar argument is made by Daniel (2005b). This argument involves the derivation of plural pronouns from singular pronouns. A language has such a derivation when a plural pronoun may be analyzed morphologically as a singular pronoun plus a marker of plurality. This is not a very frequent phenomenon, but it does occur. In Mandarin, for example, the second-person plural form is *nǐ-men*, which can be analyzed as the second-person singular form *nǐ* plus plurality marker *-men*. Now, if the inclusive pronoun were a first-person pronoun, one would expect that the number of languages in which an inclusive pronoun is derived from the first-person singular is approximately equal to the number of languages in which a first-person plural pronoun is derived from the first-person singular. Yet, in reality the number of cases in which the inclusive pronoun is derived from a first-person singular pronoun is much lower: 1% of 250 languages vs. 20% of 250 languages (Daniel 2005b). So, it seems indeed that inclusive pronouns are not first-person, and the hypothesis that the inclusive is a person value in its own right seems warranted.

This leaves us with four person values instead of the classical three. But is it even possible to have more than four person values? In the next section I will argue that this is not possible in language.

### 2.2.2 Four is the maximum

As a number of scholars have noted, seven pronouns—as in Evenki, see (37)—is the *de facto* maximum for a singular–plural language (Bobaljik 2008, Cysouw 2010). This means, for example, that no language distinguishes between a group consisting of two addressees (AA) and a group consisting of a single addressee and another (AO). In (39a) there is an English sentence with a context for an AA group, and in (39b) there is one for an AO group. As predicted, in both cases the pronoun *you* is used.

- (39) a. Alice and Bob, could you explain yourselves?  
 b. My husband and I had a blast last night; did you enjoy yourselves as well?

This observation, which extends to all other languages, is in need of explanation, since people can distinguish between an AA group and an AO group at a conceptual level. Thus, as there is a meaningful difference between an AA group and an AO group, why does no language acknowledge this difference by having two separate lexical items?

The most viable solution to this issue is to find out why the person category in human language is severely restricted. We have already seen in the previous section that languages need a restriction on the values in their person category (i.e. some speaker–addressee–other combinations need to be lumped together), because otherwise an infinite number of person values is needed. Apparently, the restriction that rests upon human language is severe: only four person values are allowed to describe the pronoun systems of the languages in the world (inclusive person, first person, second person and third person). In other words, infinity is brought down to four. So why is the restriction on the values in the category of person so severe?

In theory, a language with for example a seven-person system could be conceived of. Let us define the seven person values of this language as in (40). Note that, again, the names of the labels of the person values are irrelevant.

- (40) Definitions of person values in a hypothetical seven-person singular-plural language
- 1 a group with a speaker, one or more addressees, and one or more others
  - 2 a group with a speaker, one or more addressees, and no others
  - 3 a group with a speaker, one or more others, and no addressees
  - 4 a group with a speaker, no addressees, and no others
  - 5 a group with one or more addressees, one or more others, and no speaker
  - 6 a group with one or more addressees, no speaker, and no others
  - 7 a group with one or more others, no speaker, and no addressees

With these definitions the pronoun system of such a seven-person language would follow the matrix in (41). Each cell in the matrix represents one pronoun, so there is a total of nine pronouns.

(41) Personal pronouns in a hypothetical seven-person language

	Singular	Plural
1		SAO, SAAO, SAOO, ...
2		SA, SAA, SAAA, ...
3		SO, SOO, SOOO, ...
4	S	
5		AO, AAO, AOO ...
6	A	AA, AAA, AAAA ...
7	O	OO, OOO, OOOO ...

It seems that theoretically a language with more than four person values is possible.

Why do languages like this not exist? One thing to note about this language is that it will take some time before the right pronoun can be chosen when referring to a large group of people. An AAAAAO group, for example, corresponds to another person value (and therefore another pronoun) than an AAAAAA group, so every member of the group should be assessed before the right pronoun can be chosen. Thus, plural pronoun selection will be quite time-consuming in this language.

In contrast, the situation in a four-person singular-plural language is rather different. Only two questions have to be answered before a pronoun can be selected, see (42).

(42) Questions to answer before pronoun selection in a four-person language

1. Is the speaker part of the group?
2. Pick one addressee; is she part of the group?

If the answer to both questions is yes, choose the inclusive-person pronoun; if the answer to the first question is yes and the answer to the second question no, choose the first-person pronoun; if the answer to the first question is no and the answer to the second question yes, choose the second-person pronoun; and if the answer to both questions is no, choose the third-person pronoun.

The crucial point is that in this system only one non-speaker has to be assessed (so only two questions), while in the seven-person system *every* non-speaker had to be assessed (so as much questions as there are persons in the group). The reason that the simple two-question system in (41) works is that addressees may not be separated. A group of referents either includes *all* addressees, or *none* of them. This can be illustrated with the example in (43), in which Alice and Bob are the addressees.

(43) #Alice and Bob, why are you men so easy to manipulate?

In this example the pronoun *you* can only refer to Bob and others (all other men), but not to Alice because Alice is not a man. Yet, this sentence is in-

felicitous, because Alice and Bob are both addressees at the beginning of the sentence and the *you* refers to only one of them. See Section 3.1 for a deeper analysis on why this sentence is infelicitous.

In addition, take for example the context in (44).

- (44) [At a party while among a group of people:]  
So are you enjoying yourselves at this party?

The speaker of such a sentence is usually not very precise about who is an addressee and who is not. It is quite bothersome to make eye contact with everyone in the group. The speaker probably only wants that somebody gives an answer. It does not really matter whether this person is really addressed by means of eye contact or just an overhearer of the conversation or something in between. For these situations it is convenient that a word like *you* is rather vague in English.

We may operationalize the two questions in (43) as two parameters – the labels EGO and TU will be used for these two parameters in this dissertation. The parameter EGO has the value + if the speaker is part of the group under discussion, otherwise the value is –. The parameter TU has the value + if there are one or more addressees in the group under discussion, otherwise the value is –. By using these two parameters, precisely the seven number–person value combinations of a language like Evenki will be generated (cf. Silverstein 1976, Harley and Ritter 2002, Heim 2008). In (45) there is an overview of the seven pronouns in such a singular-plural language, generated with EGO and TU. Thus, for example, in an SAO group there is a speaker, which gives us as a +EGO value, and also an addressee, which gives us a +TU value. Together this gives us a [+EGO +TU] pronoun, which is, of course, the inclusive pronoun. Note that the inclusive-person singular cell is empty; languages do not allow for a single entity to be both a speaker and an addressee, as we saw above.

- (45) Pronoun system generated with EGO and TU

Parameters	Value	Singular	Plural
[+EGO +TU]	$\frac{1}{2}$		SA, SAO, ...
[+EGO –TU]	1	S	SO, SOO, ...
[–EGO +TU]	2	A	AA, AO, ...
[–EGO –TU]	3	O	OO, OOO ...

All in all, with the assumption of two parameters (EGO and TU) it is correctly predicted that the maximum of person values in language is four.

To sum up this section, four persons (inclusive person, first person, second person and third person) is the maximum number of person values that a language can have. These four persons can be generated by the stipulation of two parameters, EGO and TU. One remaining issue is singular–plural languages (e.g. German) that only have six pronouns, lacking a dedicated inclusive pronoun. There are many of these languages, which is unexpected as the matrix in (45)

predicts that a singular–plural language should have seven pronouns. This issue is in need of an explanation and I will provide one in the next section.

### 2.2.3 The inclusive is not universal

We have established so far that the *maximum* of person values in a language is four. But what can we say about the *minimum* number of person values? Greenberg’s Universal 42 stated that all languages have at least three person values (Greenberg 1963), but do all languages have all four person values as well?

At first sight, there is no need for an inclusive person value for the description of a language like Dutch or English. The consequence of this would be that Dutch and English only need three person values in their grammar to produce all the relevant forms. A three-person analysis of, for example, Dutch personal pronouns would be the same as the classical analysis (as described in Section 2.2.1) of such a paradigm. In (46) such a three-person analysis of Dutch personal pronouns can be found.

(46) Three-person analysis of Dutch personal pronouns

	Singular	Plural
1	<i>ik</i>	<i>wij</i>
2	<i>jij</i>	<i>jullie</i>
3	<i>hij</i>	<i>zij</i>

However, it is sometimes claimed that even languages like English and Dutch have a construction in which the distinction between inclusive and first person is important syntactically: the *hortative* (Fillmore 1971, Levinson 1983:69). The hortative construction corresponds semantically to an act of exhortation, i.e. inciting someone to do something. In (47) we find an example of such an exhortation.

(47) Let’s buy some new clothes

The morpheme *’s*, the subject of *buy* in this sentence, seems to refer to a group that needs both the speaker and the addressee(s) among its referents. Indeed, it does not seem possible to have a (+EGO –TU) first-person interpretation for *’s*; in other words, the *’s* morpheme cannot refer to a group that includes the speaker and others but excludes the addressee(s). This would mean that the English hortative is restricted to the inclusive; to express an exhortation to a first-person plural group a longer construction should be used, (48) for example.

(48) We should buy some new clothes, me and her

As a consequence, English needs a fourth person value (inclusive person)—

because three values do not suffice—at at least one point in its grammar.

Yet, there are data that contradict the hypothesis that the hortative in English cannot apply to a first-person group of referents. Consider the following newspaper example in (49).

- (49) Feeling fine? Let's give you a blood test and quickly prove that you aren't.

In this sentence the 's morpheme does not refer to a speaker–addressee combination, as the sentence is not an invitation to the addressee to assist in a blood test on herself. Rather what the sentence means is 'My colleagues and I will perform a blood test on you'. Similar sentences can be found in Dutch, as the Internet example in (50) shows. What this sentence means is 'The other editors of this magazine (i.e Veto, Leuven's student magazine) and I will put your mind at ease', not 'You and I will put your mind at ease'.

DUTCH

- (50) *Maar laten we je meteen geruststellen: de studenten Germaanse*  
 but let 1PL 2 immediate reassure the students Germanic  
*talen kunnen nog altijd het beste spellen*  
 languages can still always the best spell  
 'But let's put your mind at ease: students of Germanic languages are  
 still the best at spelling'

Thus, it seems that first-person hortatives are possible in English and Dutch.

Yet, first-person hortatives are rare compared to inclusive-person hortatives, which has to be explained. The sentences in (49) and (50) show us that a situation with a first-person hortative involves a speaker, one or more addressees and one or more others, in which the others but not the addressees are urged to do something. This is a rather unusual situation and should not occur very frequently. Thus, while first-person hortatives do occur, they are rather rare.

Because first-person hortative constructions may occur in English in Dutch, these constructions are not syntactically sensitive to the distinction between inclusive and first person. Moreover, I know of no other syntactic phenomenon in English or Dutch where the inclusive person is needed. This means that these languages have no need for a fourth person value in their grammar. Thus, languages with only three person values do exist.

In fact, these three-person languages seem to be extremely common. According to Cysouw (2005) most languages in the world do not distinguish between an inclusive and a first-person plural pronoun. In his sample of 200 languages 130 languages do not have this distinction while 68 languages do (the other two languages do not have plural pronouns to describe groups including a speaker, but use periphrastic constructions instead). Presumably, the 120 languages without a special inclusive have no need for an inclusive person value in the rest of their grammar either, which makes them three-person lan-

guages. Thus, three-person languages occur presumably more frequently than four-person languages.

How do we account for the high occurrence of three-person languages? If four person values are theoretically possible, why does a language go for only three? One possible explanation involves the importance of the singular and could be called *singular-centricity*. This singular-centricity can be illustrated by a corpus investigation. In a convenience sample from the CGN (Spoken Dutch Corpus, see Oostdijk 2000) I found 9909 singular personal pronouns and 1669 plural personal pronouns. Thus, singular pronouns occur approximately six times more often than plural pronouns. The next step is to conclude that for the singular only three person values are needed (first person, second person and third person). So, if a language takes this singular-centric perspective and forces it upon the less frequent plural, three person values suffice for the whole category of person.

One way to represent the pronoun system in such a three-person language using the EGO and TU parameters from the previous section is in (51)—the example language is Dutch. In such an analysis we have a pronoun like *wij* ‘we’ that is underspecified for the TU parameter.

(51) Dutch personal pronouns, generated with EGO and TU

		Singular		Plural	
		Pron	Sem	Pron	Sem
[+EGO]	1	<i>ik</i>	S	<i>wij</i>	SA, SO, ...
[-EGO +TU]	2	<i>jij</i>	A	<i>jullie</i>	AA, AO, ...
[-EGO -TU]	3	<i>hij</i>	O	<i>zij</i>	OO, OOO ...

However, this is not the only strategy to the pronoun paradigm that a three-person language might take. An equally plausible strategy is shown by the Tiwi language (Osborne 1974). Tiwi is the mirror image of Dutch with respect to person: in this language the inclusive pronoun is not equal to the first-person plural pronoun, but to the second-person plural. This can be represented by leaving the EGO parameter underspecified for this pronoun, see (52).

(52) Tiwi personal pronouns, generated with EGO and TU

		Singular		Plural	
		Pron	Sem	Pron	Sem
[+TU]	2	<i>məni-</i>	A	<i>mani-</i>	SA, AA, AO, ...
[+EGO -TU]	1	<i>məni-</i>	S	<i>məwəni-</i>	SO, SOO ...
[-EGO -TU]	3	$\emptyset$ -	O	<i>wəni-</i>	OO, OOO ...

The Tiwi strategy is extremely rare in the languages of the world, however (Daniel 2005b). What we need is an explanation why the inclusive pronoun is far more often homophonous with the first-person plural, than with the second-person plural. Arguably, languages do not only exhibit singular-centricity, but

also *egocentricity* (cf. Givón 1976, Daniel 2005b). Indeed, speakers seem to talk more about themselves than about their addressees. Van Bergen (2011:Ch. 1) reports that in the Spoken Dutch Corpus (Oostdijk 2000) first-person pronouns occur much more frequently than second- or third-person pronouns in Dutch; the nominative singular first-person pronoun is even the most-frequent referential expression in the corpus. This egocentricity may explain why speakers tend to look at a group from a first-person perspective instead of a second-person perspective. The Tiwi homophony may just be a historical accident. In summary, singular-centricity and egocentricity may explain why so many pronoun paradigms in the world look like the Dutch three-person paradigm in (51).

One final thing to note is that in the account provided in this section that a marker of the first-person value has a different use in a language with an inclusive person value and a language without an inclusive person value. In a language with an inclusive the group referred to by a first-person marker can be indicated as [+EGO –TU] and may not include an addressee. In a language without an inclusive, on the other hand, the group referred to by a first-person marker can be indicated as [+EGO] and such a group *may* include an addressee. Perhaps the term *first/inclusive-person marker* would be technically more correct in the latter case, and I will use this longer term if the need arises.

To sum up, in this section we have seen that not every language is a four-person language. Some languages lack the inclusive person as a syntactic person value. Inclusive person is therefore not a universal person value in syntax.

#### 2.2.4 Summary

In this section we have looked at inclusive pronouns and their relation to the grammatical category of person. It became apparent that there are languages *with* an inclusive pronoun and languages *without* an inclusive pronoun. For the languages *with* an inclusive pronoun an additional person value is needed, which brings the number of person values to four (inclusive person, first person, second person, third person). These four person values are expected under an analysis of the grammatical category of person in terms of two parameters, EGO and TU. However the existence of languages with only three person values is unexpected under this analysis. Apparently it is possible for languages to take a singular-centric perspective to their pronominal paradigm, which results in only three person values.

The resulting picture is that languages are either three-person or four-person. In the remainder of this chapter we will see that this is not completely true. In Section 2.3 I will look at the person values in sign language and in Section 2.4 I will look at phenomena with less than three person values within spoken languages.

## 2.3 Person in sign language

In this section we will look at person in sign languages. The sign language equivalent of person markers is rather different from person markers in spoken language. In sign languages a speaker (I will use the term *speaker* instead of *signer* so a first-person entity will have the same terminology throughout this dissertation) can integrate a real-world entity into a sentence by *pointing* at the entity. Thus, the speaker can express ‘you are crazy’ to her addressee by pointing at the addressee followed by the sign for ‘crazy’. Others that are present in the room can also be directly pointed at, but this is obviously not possible for others that are not present. These others first have to be *localized*, i.e. a physical location is appointed to them (Liddell 2003, Zwets 2012:Ch. 5). These localized others then behave like truly present others, so in the remainder of this section we will abstract away from the distinction between present and non-present referents. What is important is that pointing at a referent is in many ways different from the use of a pronoun in spoken language.

The difference between pointing and pronoun is accompanied by another difference. In the previous section we have seen that spoken languages either have three or four person values. This is in line with Greenberg’s Universal 42, which states that all languages have at least three persons (Greenberg 1963). In Section 2.3.1 I will demonstrate that sign languages have less than three persons, which refutes Greenberg’s Universal 42. As a consequence, there is a categorical difference between signed and spoken languages with respect to person values. In Section 2.3.2 I will provide an explanation for this categorical difference by looking at the difference between pronouns and pointing. Finally, the claim that sign languages have less than three person values should be made precise: do sign languages have one or two person values? This issue will be addressed in Section 2.3.3.

### 2.3.1 Second person=third person in sign language

Several authors have noted that there is no formal difference between a point to an addressee and a point to an other (see Meier 1990, Liddell 2003). For example, the hand shapes of the two pointing signs are completely similar (an extended index finger is most common, yet other variants exist). Crucially, this observation violates Greenberg’s Universal 42, which states that every language should have distinct first-person, second-person and third-person pronouns.

That pointing signs in sign language do not distinguish between second person and third person is already intriguing, but there is an even stronger claim to make: the syntax of sign language does not distinguish between second and third person at all, so not only within pointing signs but also within other grammatical constructions (see Meier 1990, Lillo-Martin and Klima 1990, Neidle et al. 2000). One prediction this claim makes has been investigated by Maier et al. (2011). This prediction is that in sign language the semantic con-

cept of *commands* is not sensitive to being directed to an addressee or being directed to another. Such a prediction is in sharp contrast with the behavior of commands in spoken languages. In spoken language there is always a distinction between a second-person and an third-person command, so the null hypothesis would be that sign languages also have this distinction. This is not the case however.

One can distinguish between two types of spoken languages with respect to commands. The first type has one kind of marking for second-person commands (commonly called *imperative marking*), and another kind of marking for third-person commands. An example of this type is English. English uses what is called the imperative construction for the second-person command—see (53a)—and the *let*-construction for the third-person command—see (53b). Note that, confusingly, the sentence in (53b) can also have a causative second-person command reading (‘You should have him prepare for war’); the third-person reading that we are after can be paraphrased as ‘He should prepare for war’ (Mastop 2005).

- (53) a. Prepare for war if you desire peace  
 b. Let him prepare for war if he desires peace

Interestingly, the *let*-construction is ungrammatical in case of a second-person subject, see (54).

- (54) \*Let you prepare for war if you desire peace

So, the English type of language shows a difference in construction between second-person and third-person commands.

The arguments in this section rest on the claim that second-person commands and third-person commands only differ in person and that for the rest the commands are conceptually the same thing. In Section 4.3.3 I will present arguments for this claim. If they are not then the whole point of discussing commands is moot. The main message of this section—that the distinction between second and third person is absent in the syntax of sign languages—is also true in that case, however. And it is all the more striking then that sign languages do not formally distinguish between second-person and third-person commands if they are so different conceptually.

The second type of spoken language with respect to commands uses the same basic construction for second-person and third-person commands, but makes use of distinguishing person markers. In Evenki, for example, for all persons the verb expressing a command consists of the verb stem without tense marking (Nedjalkov 1997). For the verb with the meaning ‘to find’ the stem without tense marking is *baka* in Evenki. This stem then takes a second-person marker if a second-person command is intended, and a third-person marker if a third-person command is intended, see (55).

(55) Evenki imperative paradigm of the verb *baka* ‘to find’

	Singular	Plural
$\frac{1}{2}$		<i>baka-gat</i>
1	<i>baka-hta</i>	<i>baka-hta-vu</i>
2	<i>baka-kal</i>	<i>baka-kallu</i>
3	<i>baka-gin</i>	<i>baka-ktyn</i>

An overview of the two types of spoken language can be found in (56).

(56) Types of command marking in spoken languages

	second-person	third-person
English type	no person marking <i>Find!</i>	third-person marking <i>Let him find!</i>
Evenki type	second-person marking <i>Baka-kal!</i>	third-person marking <i>Baka-gin!</i>

As I already mentioned above, both types of spoken language clearly distinguish between second-person and third-person forms.

Sign languages differ from spoken languages with respect to commands. For a sign language a third-person pointing sign looks the same as a second-person pointing sign (and it depends on the context whether the sign refers to an addressee or an other). Thus, the Evenki type of command marking is not available for sign language. This leaves the English type (i.e. the use of different constructions) as the only way for a sign language to distinguish between second-person and third-person commands. However, sign languages do not seem to have different constructions. In SLN (Sign Language of the Netherlands) for both types of commands a verb is used (which is how declaratives are expressed) with the possible addition of the markers in (57). Note that none of these markers are a obligatory condition for command marking (Maier et al. 2011).

(57) Characteristics of command marking in Sign Language of the Netherlands

Syntax	subject omission
Manner of signing	increased speed; heavy, accentuated movements
Non-manual marking	frowning; squint; wrinkled nose; inclined head
Modal particles	COME_ON; GO AHEAD; GO_ON; REQUEST

An example of a third-person command is in (58a), and an example of a second-person command is in (58b), both elicited from the same SLN informant (Maier

et al. 2011).

SIGN LANGUAGE OF THE NETHERLANDS

- (58) a. [Pete runs into John and says: “Hey, have you heard? Frank quit his job. He wants to make a trip around the world on a unicycle!”  
John just sighs and says:]  
*CRAZY palm\_up NORMAL DO palm\_up*  
crazy come\_on normal do come\_on  
‘That’s crazy! He should get real!’
- b. [Two days later, John meets Frank himself. Full of enthusiasm, Frank starts telling how he is planning to make a trip around the world. John interrupts him and says: “Yeah, I heard all about that. . .”]  
*CRAZY palm\_up NORMAL DO palm\_up*  
crazy come\_on normal do come\_on  
‘You’re crazy! Get real!’

What we see here is that for both commands the same construction is used (*NORMAL DO palm\_up*).

From the above we may conclude that sign language does not make a grammatical distinction between second and third person. Furthermore, for no other aspects of the grammar it is necessary to have the addressee–other distinction in sign language, so the distinction is not needed at all in sign language syntax. There are no spoken languages without this distinction in their syntax, however, and in the next section we will investigate why there is such a categorical difference between signed and spoken languages.

### 2.3.2 Index elements and symbol elements

We have seen that while spoken languages always have a distinction between second and third person, sign languages do not. It is rather unexpected that there would be such a categorical syntactic difference between spoken and signed languages. The null hypothesis is that spoken and signed language may differ categorically in the phonological module, as the difference between speaking and signing is essential for phonology, but that the syntactic module should not be so sensitive to the medium of communication that this gives rise to a categorical difference. Why would there be such a difference in the combination of meaningful elements between signed and spoken languages?

Let us look at pointing signs more closely. One important thing to note is that pointing signs are part of the syntax (Liddell 2003:Ch. 3). I will use the following rather uncontroversial definition of syntax in this dissertation: ‘the mechanism that combines meaningful elements into larger units’. One further thing to note is that the direction of a pointing sign is meaningful: a pointing sign in one direction gets a different interpretation (i.e. another referent) than a pointing sign in another direction. In other words, a pointing sign towards

person A gets a different interpretation than a point towards person B. This brings us to the following question: are two different pointing signs different linguistic elements? As the difference between the two signs is meaningful, the above definition of syntax suggests that the signs should be considered separate linguistic elements. However, because there is an infinite amount of directions in which to point (pointing occurs on an analogue scale after all) there is also an infinite amount of pointing signs (Lillo-Martin and Klima 1990). Sign language therefore has an infinite amount of linguistic elements, which is in contrast with spoken languages because there are only a finite number of morphemes—the smallest meaningful unit—in spoken language. But how can we deal with infinity in the syntax of any language?

For a better analysis of pointing the semiotic concepts “index” and “symbol” as defined by Peirce (1955) are rather useful. Both concepts stand in some relation to a real-world object. An *index* draws attention to its real-world object, like a signpost that points in the direction of some landmark. A *symbol*, on the other hand, only has an arbitrary relation with its referent, like an octagonal road sign that refers to the command ‘stop’. Moreover, it is inherent to the nature of the concept “index” that there is an infinite number of indices; it can be illustrated by the aforementioned signpost, which can point in an infinite number of different directions. Thus, a single signpost already embodies an infinite number of indexes. Similarly, it is inherent to the nature of the concept “symbol” that there is a finite number of symbols: every symbolic relation has to be established by a human being, so there are as many different symbols as there are established symbolic relationships. So, when comparing the signpost to the octagonal road sign, we may observe that every instance of the road sign always constitutes the same symbol (‘Stop!’)—whatever the context is—until a person decides to give it a new symbolic meaning.

Now, for sign language we may also make a division between indices and symbols, and split a pointing sign into an *indexical* element and *symbolic* element. The symbolic element may signal, for example, whether we are dealing with a possessive or a non-possessive interpretation, but it is the symbolic element that deserves the most attention (Liddell 2003). If we confine the infinite number of directions in which to point to the indexical elements, the set of elements in the symbolic part of grammar can still be finite. For a pointing sign the symbolic element is the form of the handshape (note that sign language grammar also has *iconic* elements but these are not relevant for the current discussion). For pronouns in spoken language there is only a symbolic part. Because spoken languages use the auditory medium they cannot make use of a spatial index system: one cannot point spatially with sound waves. Therefore, spoken languages only have symbolic elements in their pronouns. I will use this difference between pronouns and pointing signs to explain why spoken languages have a syntactic distinction between addressees and others, while signed languages do not.

Of course, a spoken language can make use of indices—also in the form



categories like person and gender. Thus, using person only leads to a three-way distinction between individuals: speakers, addressees and others. A symbolic element cannot distinguish between two addressees (at least not as easily as simply pointing at them).

My third constraint concerns innovations. People should not invent new linguistic elements because other people have to learn them first. My definition of the constraint is in (62).

(62) AVOIDINNOVATIONS: do not invent new elements

I assume that pointing gestures have always been a part of modern man. Person, on the other hand, I consider an innovation.

The final constraint is the well-known principle of ECONOMY. A suitable definition of this principle can be found in (63).

(63) ECONOMY: reduce the number of elements used

For this principle a system with both types of elements (index and symbol), for example, is worse than a system with only one of them because it has more elements.

With the above constraints we can simulate how referring expressions developed in sign language should have, and how they developed in spoken language. For sign language consider the Optimality-Theoretic tableau in (64). To avoid the issue of pro-drop the tableau only applies to situations in which there is choice between referents (the answer to the question *Who should make fire?* for example). Four different outputs are compared to each other: no linguistic item, a pointing sign (i.e. indexical element only), a personal pronoun or other element that expresses person (i.e. symbolic element only) and a combination of pronoun and pointing sign.

(64) Optimal linguistic item for reference in sign language when speaker and addressee are both possible as referent

	AVAMB	USEDOM	AVINNOV	ECON
a. $\emptyset$	*!			
b.  <b>point</b>				*
c. person			*!	*
d. point+person			*!	**

This tableau predicts that a referring expression in sign language should only have an indexical element (i.e. a pointing gesture). Such a linguistic item only violates the principle of ECONOMY. The two items with a “person” element also violates the AVOIDINNOVATIONS constraint, because the grammatical category of person has to be constructed before it can be used. In addition, the item without any elements is suboptimal because it violates the AVOIDAMBIGUITY constraint. Because the pointing sign is optimal, it follows that the constraint

AVOIDAMBIGUITY is stronger than the principle of ECONOMY. The USEDOMINANT constraint, finally, is never violated in sign language. All in all, the tableau shows that person is not a useful grammatical category for sign languages, as they can make use of indexical elements.

For spoken language I have constructed the tableau in (65). This tableau uses the same context as the previous tableau.

- (65) Optimal linguistic item for reference in spoken language when speaker and addressee are both possible as referent

	AVAMB	USEDOM	AVINNOV	ECON
a. $\emptyset$	*!			
b.  <b>point</b>		*!		*
c. person			*	*
d. point+person		*!	*	**

This tableau shows that for a spoken language a referring expression with both an indexical element and a symbolic element is the optimal choice in such a context. This is different from the optimal choice for sign language, which was a referring expression with only an indexical element. The reason for this divergence is the principle USEDOMINANT, which is violated by the spoken-language set uses spatial index component, which are not in the auditory communication domain. The other principles display the same violation pattern as we saw with sign language. This means that in a situation with ambiguity between, for example, speaker and addressee a symbolic morpheme (a personal pronoun) will be invented for a spoken language. Note that if there is additional ambiguity – e.g. when the choice is between two addressees – a spoken-language user has to make use of both person and pointing gestures.

In conclusion we can say that with respect to the person category signed and spoken languages differ, because they have different dominant mediums. For spoken language the primary medium is the auditory medium, and for signed language it is the visual medium. Furthermore, speakers prefer linguistic elements that are compatible with their primary medium. This is why sign-language users make extensive use of index components (i.e. pointing), while spoken-language users do not. Yet, pointing is a rather convenient device for reducing ambiguity—and for other reasons (Zwets 2012)—when referring to an entity. Spoken-language users therefore employ pointing signs as well.

### 2.3.3 First person in sign language

In Section 2.3.1 I argued that in sign language there is no syntactic difference between addressees and others. We may see them as a single person value and give them the label *non-first person*. In addition, I do not know of a sign language that differentiates between speaker groups and inclusive groups. Cormier

(2005) mentions exclusive pronouns in sign language but those do not by definition exclude addressees. Speaker groups and inclusive groups can, therefore, also constitute one person value: first person. The only remaining question is whether first person is distinguished syntactically from non-first person.

If there is such a distinction sign language has two person values: first person and non-first person. If there is no such distinction sign language only has one person value. From an empirical point of view this is the same as saying that there is no person at all in sign language (Lillo-Martin and Klima 1990, McBurney 2002). The two analyses of person in sign language can be seen in (66).

(66) Possible analyses of person in sign language

	Distinction	No distinction
$\frac{1}{2}$	first person	person
1		
2	non-first person	
3		

The tableaux from the previous section predict that there is no distinction between first and non-first person. Just pointing at the referent suffices for sign language and they have no need for a superfluous symbolic person element in their referring expressions. But what do the data say: are there really no distinctions in person in sign language?

Incidental data from some sign languages show a distinction between first person and non-first person (cf. Zwets 2012:Ch. 1). One such sign language is American Sign Language (ASL). In ASL ‘we’ can be expressed by pointing at the individual referents that constitute the ‘we’ group, as is the case in most sign languages. Yet, there is also a dedicated form for ‘we’ consisting of two pointing signs to the chest on a virtual, horizontal line (Cormier 2005). There are no such dedicated forms for plural ‘you’ or for ‘they’; for those only the alternative method of pointing to the referents directly is used.

Further data comes from Japanese Sign Language (JSL). In this language a speaker may point to her chest or her nose to indicate a first-person reference. Pointing to the nose resembles the way hearing Japanese point to themselves during conversation (see McBurney 2002) and pointing to the chest is the method used in most other sign languages. Reference to other persons only happens by means of pointing to the chest of that person. Thus, also in JSL there is a special strategy for first-person reference (pointing to the nose) that is not available for non-first-person reference.

So can we maintain the prediction from the previous section that the grammatical category of person is unimportant in sign language in light of these data? One possibility is to appeal to phonology. One phonological difference between a pointing sign to a speaker and a pointing sign to a non-speaker is that, by default, a pointing sign to the speaker touches the speaker’s body.

Pointing signs to non-speakers do not touch the non-speaker's body, because non-speakers are usually further away, and because it is impolite to touch other people's bodies. This would make the distinctions in the data from ASL and JSL a phonological distinction. Touching signs and non-touching signs are not a syntactic distinction between first person and non-first-person: if you are allowed to touch your referent you can have an alternative sign to refer to that referent.

Whatever the strength of the above appeal to phonology is, I think that we can conclude that the grammatical category of person is mostly irrelevant for sign language. First of all, sign languages have at most two person values, which is a sharp contrast with the three or four person values from spoken languages. This means that there has to be some explanation for why the category of person is less important in sign language, and I have posited such a theory in the previous section. Second, the potential counterexamples against the complete absence do not occur in all sign languages. As far as I am aware, only American Sign Language and Japanese Sign Language have them. Third, the two counterexamples did not rule out the coexisting construction that does *not* distinguish between persons (pointing to the chest in JSL and pointing at each referent in ASL). So, if there is a distinction between first person and non-first person in sign language, it is very marginal.

### 2.3.4 Summary

The syntax of sign languages has either two person values (first and non-first) or one person value (which means the category of person is irrelevant). This is less than the three person values predicted by Greenberg's Universal 42: "All languages have pronominal categories involving at least three persons and two numbers" (Greenberg 1963). It is apparently not possible to make any universal claims about the number of person values in language. Instead there is a categorical difference between spoken languages (three or four person values) and signed languages (no or two person values). This difference stems from a difference in medium: signed languages use the visual medium, which allows them to limitlessly use pointing instead of personal pronouns, while spoken languages use the auditory medium and are therefore confined to using personal pronouns by default.

## 2.4 Less than three persons in spoken language

Although there is a maximum of four persons in language, sign languages have at most two persons while spoken languages have three or four. In Section 2.3.2 we saw that spoken languages need so many persons to distinguish between potential referents: a spoken-language referring expression does not by default possess an indexical element, so at least three person values are needed to make a minimal but important distinction between speakers, addressees and others.

Occasionally, however, there is a spoken-language pronoun paradigm that has less than three persons. In this section we will see what this means for my earlier claim that spoken languages have three or four person values.

An example of such a pronoun paradigm that has less than three persons is the neutral singular pronoun in Jambi City Malay (Lukman 2009). This language has four politeness levels (friendly, neutral, respectful to family, respectful to non-family), which are sensitive to the social status of the addressee. At the neutral politeness level (used between colleagues, for example) there is a pronoun, *awak*, which is ambiguous between first person singular and second person singular. The following sentence in (67) is therefore ambiguous when there are no clues in the context as to the identity of the referent of *awak*.

## JAMBI CITY MALAY

- (67) *Fauzan nak ngasih awak hadiah besok*  
 Fauzan want give 1SG/2SG present tomorrow  
 ‘Fauzan wants to give me a present tomorrow’  
 ‘Fauzan wants to give you a present tomorrow’

It is not possible for a speaker to choose a different, unambiguous pronoun, as the other first-person pronouns have a different politeness level—see (68)—and violating the politeness level is not an option.

- (68) First-person singular pronouns in Jambi City Malay

	Politeness	Person values
<i>aku</i>	friendly	1SG
∅	friendly	1SG, 2SG, 3SG, $\frac{1}{2}$ PL, 1PL, 2PL, 3PL
<i>awak</i>	neutral	1SG, 2SG
<i>kami</i>	respect family	1SG, 1PL
<i>sayo</i>	respect non-family	1SG

Of course, there are ways to resolve the ambiguity of *awak*. One strategy is to include the name of the referent (similar to English *He wants to give you, Ann, a present*). The pronominal person paradigm itself is still unexpected for a spoken language, however.

A similar issue arises with so-called *topic-drop* languages. Interestingly, Jambi City Malay is also partially a topic-drop language. The overview in (68) shows that in a context with a friendly politeness level it is possible to drop a first-person subject or object. In (69) there is an example of a topic-dropped first person (Lukman 2009).

- (69) [A man has just arrived in a place where he is supposed to meet his friend. His friend has been waiting for him for some time and says:]  
*Maaf telat, jalan macet kerno ado demo*  
 sorry late street jam because exist rally  
 ‘I am sorry for being late, there was a traffic jam because there was a rally’

In this example the first person does not need to be expressed, because in the accompanying context there is no potential ambiguity with respect to the identity of the person who is late. What is different from the *awak* case here, is that in this case an *emphatic* pronoun can be used for disambiguation: the dedicated first-person friendly person *aku*.

The issue can be related to Greenberg’s Universal 42 (Greenberg 1963). This universal was refuted by sign languages in Section 2.3, but in a revised form it may still hold, see (70).

- (70) Revised Universal 42  
An emphatic pronominal paradigm in spoken language minimally has different forms for a speaker, an addressee and an other

The topic-drop case is not a violation of this universal, as there is an emphatic pronoun, *aku*, that can be used for reference to a speaker. This is fortunate, because topic-drop is a rather frequent phenomenon in the languages of the world. The ambiguous *awak*, on the other hand, *is* a violation of the universal in (70). In this case, there is no suitable pronoun that distinguishes between first and second person. However, this phenomenon is so infrequent—Cysouw (2003:50) did not find any occurrences—that the universal in (70) can still be considered near-absolute.

To summarize this section, it is possible for a spoken language to violate the Revised Universal 42 in (70): the language may have a pronominal paradigm with less than three persons, but this is extremely rare. It seems that the categorical difference between spoken languages (three or four person values) and signed languages (mostly no person values) still holds, by and large.

## 2.5 Singular–plural or minimal–augmented?

I think that the existence of inclusive person as the fourth person value is important for linguistic theory. I expect that linguistic theory may undergo some changes to fit this fourth person value. One of the proposed changes is a reanalysis of the category of number in terms of a *minimal–augmented* system (Section 2.5.1). In this section I want to argue against such a reanalysis, using arguments from suppletion (Section 2.5.2), morphology (Section 2.5.3) and language change (Section 2.5.4).

### 2.5.1 The inclusive as a problem for number

Up until now I have analyzed number on personal pronouns just like number on other nominals. If a group of nurses has one individual, the singular (*nurse*) is used, and if a group of nurses has more than one individual, the plural (*nurses*) is used. Similarly, if a group with a speaker in it consists of one individual, the singular pronoun *I* should be used, and if a group with a speaker in it consists

of more than one individual, the plural pronoun *we* should be used. Thus, in a singular–plural language (note that for ease of explanation I will abstract from other number values like dual as much as possible) “singular” can be defined as ‘a group with one individual’, and “plural” as ‘a group with more than one individual’.

Yet, Bobaljik (2008) and Cysouw (2010) propose a split between nominal and pronominal number, and a reanalysis of pronominal number. They base these changes on the existence of languages like Ilocano. In this language there is an inclusive pronoun *ta* restricted to two entities (i.e. a speaker and an addressee) and an inclusive pronoun *tayo* for groups with more than two entities. The other pronouns do not make this number distinction, and a traditional analysis of pronominal number would need to pose a dual number value specifically for these inclusive pronouns, as the matrix in (71) shows.

(71) Ilocano pronouns under a singular-dual-plural analysis

	Singular	Dual	Plural
$\frac{1}{2}$		ta	tayo
1	co		mi
2	mo		yo
3	na		da

There are a lot of empty cells in this analysis, so scholars have come up with an alternative analysis without empty cells. This alternative analysis makes use of the terms “minimal” and “augmented”. The term *minimal* means ‘the minimum amount of individuals needed for this person value’. For the inclusive this is two (a speaker and an addressee) and for the other three persons this is one (a speaker for first person, an addressee for second person and an other for third person). The term *augmented* means ‘more than the minimum amount of individuals needed for this person value’. For the inclusive person this is three or more individuals and for the other three persons this is two or more individuals. An overview of the Ilocano pronouns under a minimal–augmented analysis can be found in (72).

(72) Ilocano pronouns under a minimal-augmented analysis

	Minimal	Augmented
$\frac{1}{2}$	ta	tayo
1	co	mi
2	mo	yo
3	na	da

This analysis only needs two number values for languages like Ilocano.

However, Bobaljik (2008) and Cysouw (2010) extend the minimal–augmented analysis to all other languages. With respect to the pronoun system all

languages should have minimal–augmented values instead of singular–plural values in their grammatical category of number. In other words, they split number into nominal number—which has singular–plural number values—and pronominal number—which has minimal–augmented number values.

Language has a lot of grammatical categories so it is not a priori wrong to split up a grammatical category in two. It makes, for example, perfect sense to keep the categories of number and aspect apart. In a sense both deal with quantities, but number is found on nouns and (traditionally) has values like singular and plural. Aspect, on the other hand, is found on verbs and has values like semelfactive and iterative (besides more well-known values like perfective and progressive). It is, therefore, rather uncontroversial to say that aspect and number are two separate grammatical categories. But are there enough reasons to say that pronominal number and nominal number are separate grammatical categories?

A conceptual reason for a universal split between nominal and pronominal number is the difference in group forming between nouns and pronouns. For a noun like *nurses* all individuals in the group have to be nurses, while in the plural pronoun *you* not all individuals in the group have to be addressees, see Section 2.2.1. In other words, the plural of a pronoun may lead to an associative meaning: a group of people associated to an individual. The individual is the speaker, the addressee or the other. Some languages also have a plural morpheme with an associative meaning for nouns, however. Turkish is an example of such a language (see Görgülü 2011). The morpheme *-ler* ‘PL’ can have either the associative or the normal (sometimes called *additive*) plural interpretation, see (73). According to Daniel and Moravcsik (2005), these associative plural markers for nouns are very common in the languages of the world (but not in Europe). In their sample of 273 languages, 105 languages have an associative plural marker for nouns that is *similar* to the normal additive plural marker, 48 languages have an *affixal* associative plural marker for nouns that is *different* to the normal additive plural marker, 47 language have a special periphrastic construction to mark an associative plural on nouns, and only 37 languages (English for example) not even have such a periphrastic construction.

#### TURKISH

- (73) *Ahmet-ler*  
 Ahmet-PL  
 ‘Ahmet’s’ (two or more people by the same name)  
 ‘Ahmet’s family or company or group’

The difference between nouns and pronouns, however, is that plural pronouns always may have the associative meaning in the languages in the world (so even in English), while this is not always the case for plural nouns.

This categorical difference between nouns and pronouns cannot be a reason to split up a grammatical category, however. It is not the case that pronominal number is a separate grammatical category and that nominal number is

a separate grammatical category; they are clearly related as the difference between associative and additive meaning is present in both categories. I therefore predict that languages have the same number values for both nominal and pronominal number (i.e. the singular–plural values). In the next three sections I will present data that support my prediction.

## 2.5.2 Suppletion in person paradigms

In the next two sections I will look at person paradigms because the singular–plural analysis and the minimal–augmented analysis of pronominal number make different predictions with respect to these paradigms. But before we can look at these data I have to make one important remark: most languages do not use a group-marking morpheme in their pronominal system. Most languages use *suppletion* instead, i.e. different stems are used for singular and plural pronouns. German is an example of a language with suppletive number marking on pronouns: the first-person pronouns are *ich* ‘I’ and *wir* ‘we’, the second-person pronouns are *du* ‘you (singular)’ and *ihr* ‘you (plural)’, and the third-person pronouns are *er* ‘he’ and *sie* ‘they’, so in every case the singular pronoun has a different stem than the plural pronoun. In his sample of 261 languages Daniel (2005a) found 114 languages with suppletive pronominal number marking, and only 42 languages where pronominal number is expressed by an affix. Interestingly, there are also 69 languages in which pronominal number is expressed both by suppletion and by an affix—an example is the language Amele (Roberts 1987) with *ija* ‘1SG’ versus *e-ge* ‘1PL’, and *hina* ‘2SG’ versus *a-ge* ‘2PL’—so even this double strategy is more common than using a straightforward plurality affix. Thus, overt marking of the grammatical category of number in pronouns is not the number one strategy in this domain.

But what does the high frequency of suppletion in pronominal number paradigms mean? Does it mean that pronominal number is categorically different from nominal number, as suppletion is an infrequent means of marking plurality in nouns? I do not think that suppletion shows a categorical difference between pronominal and nominal number. As Haspelmath (2006) notes, irregular paradigms—of which a suppletion paradigm is an example—most often occur with highly-frequent items. An example of an irregular, suppletive paradigm is the English verb *to be*, which is indeed highly-frequent. An overview of the *to be* paradigm can be seen in (74).

(74) Forms of the English verb *to be*

be.3SG.PRS	<i>is</i>
be.1SG.PRS	<i>am</i>
other be.PRS	<i>are</i>
be.1/3SG.PST	<i>was</i>
other be.PST	<i>were</i>
be.INF	<i>be</i>
be.PRS.PTCP	<i>being</i>
be.PST.PTCP	<i>been</i>

Suppletion is a means of keeping a form short, because a suppletive form does not need an additional morpheme to mark number. Because highly-frequent items tend to be short (see Zipf 1965 [1949], Lestrade 2010:Ch. 1) suppletion is an adequate strategy for such items. Therefore, it seems convenient to think of number marking in nouns and pronouns as a *continuum*, see (75). On the left side there are high-frequency items with an irregular plural form, and on the right side there are low-frequency items with a regular plural form (using the *-s* morpheme). Pronouns are items on the left side.

## (75) Number marking in nouns and pronouns as a continuum

frequent		infrequent
irregular		regular
<i>she</i>	<i>woman</i>	<i>aunt</i>
<i>they</i>	<i>women</i>	<i>aunts</i>

Thus, pronominal number is not categorically different from nominal number with respect to suppletion. So suppletion in itself is not a reason to make a categorical split between nominal and pronominal number. This makes the predominance of suppletion orthogonal to the choice between a singular–plural analysis and a minimal–augmented analysis of pronominal number. In the next section I will look at person paradigms *without* suppletion to see which analysis they support best. In the section after that I will look at person paradigms *with* suppletion.

### 2.5.3 Number in non-suppletive paradigms

Pronoun paradigms that are non-suppletive have a group-marking morpheme by definition. Under a minimal–augmented analysis of pronominal number it is expected that these morphemes have an augmented meaning and not a plural meaning. The blueprint of a language with an augmented morpheme is in (76).

(76) Language with an augmented morpheme for pronouns

	Minimal	Augmented
$\frac{1}{2}$	$\alpha$	$\alpha$ -AUGM
1	$\beta$	$\beta$ -AUGM
2	$\gamma$	$\gamma$ -AUGM
3	$\delta$	$\delta$ -AUGM

The blueprint of a language with a plural morpheme is in (77).

(77) Language with a plural morpheme for pronouns

	Singular	Plural
$\frac{1}{2}$		$\alpha$ -PL
1	$\beta$	$\beta$ -PL
2	$\gamma$	$\gamma$ -PL
3	$\delta$	$\delta$ -PL

The difference between the two languages is clear: the language in (76) has an inclusive pronoun without a group-marking morpheme and the language in (77) does not. The next step is to see which type of language occurs most often.

Cysouw (2003:85) looked at such languages and found that there are no languages with an augmented morpheme. In contrast, languages with a plural morpheme *do* exist. The Mandarin morpheme *-men* is an example, see (78). Note that the inclusive form *zán-* does not stem from the singular, as the inclusive has no singular form, but historically derives from the compound *zì-jīā* ‘self-family’.

(78) Mandarin pronouns

	Singular	Plural
$\frac{1}{2}$		<i>zán-men</i>
1	wǒ	wǒ-men
2	nǐ	nǐ-men
3	tā	tā-men

The absence of a language with an augmented morpheme for pronouns argues against the minimal–augmented analysis of pronominal number.

As most languages in the world lack a dedicated inclusive pronoun, many languages with a group-marking morpheme will also lack a dedicated inclusive pronoun. The minimal–inclusive analysis predicts that in such languages the first-person minimal pronoun also expresses an inclusive group of two individuals. Cysouw (2003:Ch. 8). The singular–plural analysis predicts languages in which the first-person plural also expresses all individual-person groups and such languages do exist. An example is the group of southern (i.e. non-Mandarin) Chinese languages, which did not develop the inclusive *zán-men*

pronoun, see (79).

(79) Southern Chinese pronouns

	Singular	Plural
1	wǒ	wǒ-men
2	nǐ	nǐ-men
3	tā	tā-men

Thus, also in this case it is the singular–plural analysis which makes the better predictions.

Nevertheless, it should be noted that there is some morphological evidence in favor of the minimal–augmented analysis. A language with such evidence is Rembarrnga (McKay 1978, Cysouw 2003:265). In this language the element *-bbarrah* is attached to plural pronouns to derive their dual counterparts, except for the inclusive. For inclusive pronouns *-bbarrah* is used to derive the trial, while the dual has a separate form, *yǝkkɯ*. An analysis of this pronoun system in terms of singular, plural, dual and trial can be seen in (80).

(80) Singular-plural analysis of the Rembarrnga pronoun system

	Singular	Dual	Trial	Plural
$\frac{1}{2}$		yǝkkɯ	ngakorr-bbarrah	ngakorrɯ
1	ngɯnɯ	yarr-bbarrah		yarrɯ
2	kɯ	nakorr-bbarrah		nakorrɯ
3	nawɯ/ngadɯ	barr-bbarrah		barrɯ

In this case, a minimal–augmented analysis produces a more insightful overview, provided that an additional number value called *unit-augmented* (‘the minimum amount of individuals needed for this person value plus one’) is added. The corresponding matrix can be found in (81).

(81) Minimal–augmented analysis of the Rembarrnga pronoun system

	Minimal	Unit-augmented	Augmented
$\frac{1}{2}$	yǝkkɯ	ngakorrɯ	ngakorr-bbarrah
1	ngɯnɯ	yarrɯ	yarr-bbarrah
2	kɯ	nakorrɯ	nakorr-bbarrah
3	nawɯ/ngadɯ	barrɯ	barr-bbarrah

Two comments should be made here. First, these languages overtly mark the distinction between augmented and unit-augmented (roughly the dual–plural distinction); the question why there is no language which overtly marks the much more common distinction between minimal and augmented (roughly the singular–plural distinction) is still unanswered under a minimal–augmented analysis. Second, Cysouw (2003:268) has only eight languages in his sample and he states that paradigms with overt unit-augmented markers are almost

completely restricted to only one geographical area, Australia.

The singular–plural analysis also predicts a paradigm in which the third number value (the dual) is overtly marked. The Maori language has such a paradigm (see Harlow 1996, Cysouw 2003:258). The paradigm is shown in (82). Cysouw has twenty-seven of these paradigms in his sample and notes that they also occur outside of Australia, most notably in North-America.

(82) Singular–plural analysis of the Maori pronoun system

	Singular	Dual	Plural
$\frac{1}{2}$		tātou	tāua
1	au	mātou	āua
2	koe	koutou	kōrua
3	ia	rātou	rāua

In other words, the occurrence of overt markers of unit-augmented number is unexpected under a singular–plural analysis, but the higher occurrence of markers of dual number is even more unexpected under a minimal–augmented analysis.

To sum up this section, overt marking of minimal–augmented number values is a rather marginal phenomenon, more marginal than the overt marking of singular–plural number values. This is in line with my view that language users predominantly think of number in terms of singular and plural, both for nouns and for pronouns.

#### 2.5.4 Number in suppletive paradigms

In Section 2.5.2 I showed that suppletion is very common in person paradigms. Because number is not overtly marked in these paradigms it is somewhat difficult to see whether the suppletive paradigms that occur support the minimal–augmented analysis of number or the singular–plural analysis. It is not impossible, however, which I will show in this section. I will focus on the number of forms that each analysis predicts to occur in person paradigms.

Look at an example of what I will call a *four-form* paradigm in (83). This specific paradigm is from Sierra Popoluca (see Elson 1960).

(83) Sierra Popoluca person markers

$\frac{1}{2}$	ta-
1	?a-
2	mi-
3	∅a-

This paradigm is *number-neutral*: it does not distinguish between minimal and augmented (or between singular and plural for that matter). A minimal–augmented analysis would expect that such a paradigm may be historically

connected to a paradigm with eight forms (Cysouw 2003:212); a blueprint of such a language is in (84). At a point in time the four-form paradigm in (83) may develop into the eight-form paradigm in (84), or it may have happened the other way around in the past.

(84) Hypothetical eight-form paradigm connected to Sierra Popoluca

	Minimal	Augmented
$\frac{1}{2}$	ta-	X1
1	?a-	X2
2	mi-	X3
3	∅a-	X4

Such paradigms have been attested in the languages of the world. An example is Tagalog (see Cysouw 2003:211). The Tagalog paradigm is shown in (85).

(85) Tagalog pronouns under a minimal–augmented analysis

	Minimal	Augmented
$\frac{1}{2}$	kata	tayo
1	ako	kami
2	ikaw	kayo
3	siya	sila

Yet, eight-form languages like Tagalog have never been historically connected to four-form languages like Sierra Popoluca; they are never found in the same geographical areas. Thus, a minimal–augmented analysis makes the wrong prediction on language change here: the eight-form paradigm does not derive from only-inclusive paradigms.

What does the singular–plural analysis predict with respect to suppletive paradigms? Instead of an eight-form paradigm it predicts a seven-form paradigm. An example paradigm from the Bororo language (see Cysouw 2003:206) can be found in (86). The seven forms are expected because there is *nu* such thing as a singular inclusive.

(86) Bororo person affixes

	Singular	Plural
$\frac{1}{2}$		pa-
1	i-	xe-
2	a-	ta-
3	u-/∅-	e-

These seven-form paradigms (67 paradigms in Cysouw’s sample) occur more often than the eight-form paradigm (24 paradigms in Cysouw’s sample). Moreover, there are diachronic links between the seven-form paradigm and the four-

form inclusive. In (86) we saw an example of a seven-form paradigm from the Bororo language; in (87) there is the four-person paradigm of another Macro-Gé language, Canela-Kraho. These paradigms are most probably related.

(87) Canela-Kraho person affixes

$\frac{1}{2}$	pa-
1	i-
2	a-
3	ih-

Thus, the suppletive person paradigms in the languages of the world also favor the singular–plural analysis.

The only downside to a singular–plural analysis seems that an eight-form paradigm like the one from Tagalog needs a dual number value that is restricted to the inclusive, see (88).

(88) Tagalog pronouns

	Singular	Dual	Plural
$\frac{1}{2}$		kata	tayo
1	ako		kami
2	ikaw		kayo
3	siya		sila

It is not unexpected that there are languages where only the inclusive has a dual form, however. As Plank (1996) notes, in many languages the dual is restricted to so-called natural pairs (*eyes* is an example), and the speaker–addressee duo may be such a natural pair. Perhaps pairing the speaker and the addressee together is not *that* natural, but eight-form paradigms—in which such a pairing happens—are not that common either, so this is actually as expected. At any rate, a special dual form for the inclusive happens more often than a special dual form for a speaker–other duo, for example, so the speaker–addressee duo should only be more natural than a speaker–other duo.

In sum, the suppletive paradigms in the languages of the world also support a singular–plural analysis of pronominal number, especially when predictions on diachronic relations are taken into account.

### 2.5.5 Summary

In this section we have looked at the question whether number on pronouns should be seen in terms of singular and plural or in terms of minimal and augmented. Under a minimal–augmented analysis, an inclusive duo (a group with one speaker and one addressee) is treated as having the same number value as a singleton speaker, a singleton addressee or a singleton other. I have shown, however, that more paradigms in the languages of the world can be explained by

a singular–plural analysis of number than by a minimal–augmented analysis. Thus, language users take a singular–plural perspective to both nouns and pronouns.

## 2.6 Conclusion

In this chapter I have shown that the existence of inclusive pronouns leads to a grammatical category of person with maximally four values: inclusive person, first person, second person and third person. More person values are not encountered in language. The reason is probably that additional distinctions in person would lead the speaker to decide for every individual in a group whether this person is an addressee or an other; such a decision is apparently not worth the effort of a language user.

In addition, we saw that languages do not need to have all four persons. Many spoken languages do not have an inclusive pronoun, so their grammar only needs the classical three persons (first person, second person and third person). Moreover, sign languages have at most two persons (first person and non-first person), which disproves Greenberg’s Universal 42 that no language has less than three persons (Greenberg 1963).

One characteristic of the inclusive person is that it is impossible to be inclusive and singular at the same time, as the inclusive person needs at least two individuals (a speaker and an addressee). Some scholars have questioned whether the traditional singular–plural analysis of number still holds for person markers in light of this special relationship between the inclusive person and number. I have shown with cross-linguistic data, however, that the singular–plural analysis still makes the best predictions.

Now that the inclusive is a member of the category of person, the main question of this dissertation is in need of an update. The main question used to be *Is first/second versus third the predominant person pattern in language?* and I think that the inclusive person should fit in there, as it is a bona fide person value. Because the inclusive person is clearly on the side of first and second person—all three deal with speakers, addressees or both—I propose that the new main question have the following form: *Is inclusive/first/second versus third the predominant person pattern in language?* With this new main question I will investigate the person patterns of the world’s languages in the following two chapters.

## CHAPTER 3

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### Rigid person patterns

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In this dissertation I want to look whether there are more person patterns in language than inclusive/first/second person versus third person. In this chapter I want to look specifically at *rigid* person patterns, i.e. person patterns that are the same for every language in the world.

The first phenomena that I want to look at are *addressee shift* and *speaker shift*, see Section 3.1. Addressee shift occurs when the identity of the addressee shifts during a sentence. A sentence like (1) is generally infelicitous in language.

- (1) \*So you know you  
          [points at A]      [points at B]

The sentence in (2) shows that having two *you*'s in a sentence is not infelicitous by itself, which makes addressee shift an interesting phenomenon

- (2) So you and you know each other  
          [points at A]      [points at B]

Speaker shift has similar issues, but also shows that a sentence can only have one speaker. This is the first rigid person pattern of this chapter: a sentence can contain references to more than one addressee and to more than one other, but not to more than one speaker. Moreover, when we look at speaker shift and addressee shift together, a second rigid person pattern emerges: the identities of speaker and addressee(s) are fixed at the beginning of a sentence, but the identity of others is not.

This last principle of INTERLOCUTORFIXATION is important in many lin-

guistic domains, especially the semantic domains of *quantification* and *binding*. Examples of quantifiers are quantifier DP *nobody* and quantificational determiner *every*. Quantifiers strongly resist first and second person; quantifier DP *nobody* cannot be the antecedent of a second-person pronoun (3a) and quantificational determiner *every* cannot combine with a second-person pronoun (3b) to form a second-person constituent.

- (3) a. \*Nobody enjoyed yourself  
b. \*Every you laughed

In section 3.2 I argue that these phenomena are universal. I will use the above rigid person pattern on INTERLOCUTORFIXATION to explain (3a) and the DP hypothesis to explain (3b).

The other semantic domain that is important for person is binding (see Kaplan 1989, Rullmann 2004, 2008, Heim 2008, Kratzer 2009). In this dissertation I will look especially at *accommodational* binding. For basic (non-accommodational) binding person is not all that relevant. Compare, for example, the sentences in (4a) and (4b). *He* may be bound by *every man* in (3a), but *you* may not be bound by *every addressee* in (3b). In other words, (4b) may not mean ‘Every addressee *x* thinks that *x* is smart’. However, we can already explain these facts, because we know that quantifiers generally resist first and second person, see Section 3.3.

- (4) a. Every man thinks he’s smart  
b. Every addressee thinks you’re smart

So, the problem in (4b) involves quantification, not binding.

The situation for accommodational binding is rather different. Basic binding as in *Every man thinks he’s smart* mainly occurs with pronouns as bindee. Yet, there is a type of binding in which full noun phrases (*the mayor* is an example of a full noun phrase) are commonly bound. This other type of binding can be observed in the sentence in (5).

- (5) In each city the mayor was a man

Such a sentence involves the *accommodation* that a city may have a mayor (see Zeevat 1992, Geurts and Beaver 2011b). In (6) there is a simplified version of the semantics of (5). In a sense, *the mayor* is bound by *city*, because the word *mayor* is interpreted locally with respect to each individual city (cf. Partee 1989). Yet, this accommodational binding is rather different from basic binding: it is not *mayor* that combines with the quantifier but *city*. *The mayor* is not bound because it *is* the city but because it stands in some relation to the city.

- (6)  $\forall x, y(x \text{ was a city and } y \text{ was the mayor of } x \rightarrow y \text{ was a man})$   
‘For each city *x* it was the case that the mayor of *x* was a man’

Again, second-person pronouns (and first-person pronouns) behave rather dif-

ferently. The sentence in (7) exemplifies this.

- (7) During each monologue you remained silent

This sentence does not have a reading in which *you* is interpreted locally as the addressee of each individual monologue ('During each monologue *x* the addressee of *x* remained silent'). Thus, it looks as if a second-person pronoun cannot be situationally bound in (7). The only available reading is the one in (8), in which the representation of pronoun *you* is not interpreted relative to each individual monologue.

- (8)  $\forall x(x \text{ is a monologue} \rightarrow \text{you remained silent during } x)$   
 'For each monologue it is the case that you remained silent during this monologue'

Note that for the full noun phrase *the addressee* it is possible to be situationally bound—just like *the mayor* earlier—which makes (9) a minimal pair with (8).

- (9) During each monologue the addressee remained silent

Once again I will explain these observations with the help of the rigid person pattern of INTERLOCUTORFIXATION in Section 3.4.

In Section 3.5 we will encounter the third rigid person pattern of this chapter; it involves in what Potts and Roeper (2006) call *expressive small clauses*. Expressive small clauses occur when a speaker adds a phrase like *idiot!* to a sentence. Crucially, such phrases may only refer to a second person. There is no a priori reason why an added expression like *idiot!* cannot refer to a first or a third person. Yet, in a sentence like (10) the phrase *idiot!* cannot refer to Carol, only to Bob.

- (10) [Alice and Bob approach Carol's house. Alice says to Bob:]  
 #The door is unlocked, idiot!

Expressive small clauses can be seen as a type of *vocative*. The universal incompatibility of secondary insults with first or third person and other characteristics of the vocative will feature in Section 3.5.

In the previous chapter, we saw that person in sign languages works in quite a different way compared to spoken languages: sign languages do not make a syntactic difference between second and third person. However, in this chapter we will encounter three rigid person patterns, two of which have a person split between second and third person. In Section 3.6 we will see how sign languages deal with these rigid person patterns.

### 3.1 Addressee shift and speaker shift

In most sentences that are uttered the identity of the addressee remains constant, whether there is an overt second-person person marker in the sentence (11a) or not (11b). In both (11a) and (11b) person B is the addressee for the full duration of the sentence.

- (11) a. [A says to B:]  
Did you like the movie?  
b. [A says to B:]  
That was a fun movie, right?

Yet, there are sentences in which the addressee changes. Sentence (12) is an example. Note that such sentences always involve pointing or some other kind of visual gesture; otherwise it would not be clear which person is meant by which *you*.

- (12) So  $\underset{[points\ at\ A]}{you}$  and  $\underset{[points\ at\ B]}{you}$  know each other

However, addressee shift seems to be subject to some restrictions. The exact mechanics of this addressee shift will be investigated in Section 3.1.1

Do sentences like the one in (12) only pertain to second-person? For third persons shifting seems to be no problem, as (13) shows. See Section 3.1.3 for more details.

- (13) So  $\underset{[points\ at\ A]}{he}$  and  $\underset{[points\ at\ B]}{he}$  know each other

For the first-person it seems impossible to get a shift. There seems to be no way to attach a sensible meaning to the first-person equivalent of (12) and (13) in (14).

- (14) #So  $\underset{[points\ at\ A]}{I}$  and  $\underset{[points\ at\ B]}{I}$  know each other

In Section 3.1.2 I will explain the impossibility to shift speaker reference.

#### 3.1.1 Addressee shift

It is impossible to shift the identity of the addressee in a sentence like (15).

- (15) \*So  $\underset{[points\ at\ A]}{you}$  went to school with  $\underset{[points\ at\ B]}{you}$

It must be the addressee shift that makes the sentence ungrammatical, because the minimally different sentence in (16) is grammatical.



Cysouw sees the situation in (19) as the first-person equivalent of a *present audience* addressee as in (20).

- (20) [Mother to her three children:]  
I'm praying for you

Indeed, in this example a group of multiple addressees can be discerned. The sentence in (20) can be rewritten as in (21), with addressee specification in order to point out the individual addressees.

- (21) [Mother to her three children:]  
I'm praying for you and you and you  
                                  [points at A]    [points at B]    [points at C]

Yet, for mass speaking a similar rewrite leads to ungrammaticality. *We want more!* cannot be rewritten as in (22).

- (22) [Shouted by three friends at a concert:]  
\* I and I and I want more!  
   [points at A]    [points at B]    [points at C]

In fact, *We want more!* should be rewritten as (23), which means that it only has one speaker. Note, however, that three instances of the sentence are uttered simultaneously. Because for each speaker *my friends and I* (and therefore *we*) comes down to the same group of people, it makes sense to shout in unison. This does not make *We want more!* a sentence with multiple speakers, though, as this would wrongly predict that (22) is felicitous.

- (23) [Shouted by three friends at a concert:]  
My friends and I want more!

In sum, there are no sentences that involve multiple speakers.

This observation is a huge contrast with addressees and others, since sentences can easily contain multiple instances of addressees or others. This is the first rigid person pattern that we encounter in this chapter. It is supposed to hold for all languages in the world. I will visualize such a pattern by crossing out the person values that show the deviant behavior, see (24). Note that this pattern is an instance of a speaker vs. addressee/other pattern.

- (24) ACCEPTANCE OF MULTIPLE REFERENTS  
      /§/ A O

We have just seen that mass speaking is not an instance of speaker shift. The sentence in (25) shows an example that does have speaker shift. The example involves an individual finishing the sentence of another individual. Except for Walt Disney's Huey, Dewey and Louie Duck, speakers normally do not utter

such sentences, which is why the context feels rather odd. Syntactically there is nothing wrong with the sentence, though.

- (25) A: They forced me. . .  
 B: . . . and me. . .  
 C: . . . and me to wear the same outfit

One complication is encountered if the first-person pronouns are the subject of the sentence, see (26). It is ungrammatical to have the finite verb in the singular here (*am*), since one person cannot ‘finish each other’s sentences’. On the other hand, a plural finite verb (*are*) is also slightly odd because the unity of the DP *I and I and I* is disrupted by the speaker shifts, which hampers the group interpretation of the DP.

- (26) A: I. . .  
 B: . . . and I. . .  
 C: . . . and I \*am/?are able to finish each other’s sentences

But despite this complication it is possible to have speaker shift in a sentence, as (25) showed. Yet, because an utterance can only have one speaker, speaker shift can only occur if the sentence is finished by another speaker.

To conclude this section, an utterance may only have one speaker. This constitutes a rigid first vs. second/third person pattern. This means that speaker shift can only happen within a sentence if a sentence started by one speaker is finished by another speaker. In other respects, speaker shift is very much like addressee shift.

### 3.1.3 INTERLOCUTORFIXATION

Both speaker shift and addressee shift can only occur between clauses. In this section I will show that this restriction does not hold for shifting others (i.e. third persons).

The third-person equivalent of shift after an adverbial clause is grammatical, see (27). This is expected as speaker and addressee shift are also acceptable in this case.

- (27) So after <sub>[points at A]</sub> he made the amazing discovery <sub>[points at B]</sub> he wrote about  
 it in the paper

The sentence in (28a) is also grammatical. Here we find a contrast with first and second person, however. The second-person equivalent, for example, is hardly acceptable, see (28b).

- (28) a. So <sub>[points at A]</sub> he works for <sub>[points at B]</sub> him

- b. \*So you work for you  
           [points at A]          [points at B]

It seems that shifting others is rather different from speaker or addressee shift.

Where does this difference in restrictions between first and second person, on the one hand, and third person, on the other, come from? One big difference between first person and third person is that every sentence automatically has a speaker. This is so by definition—without a speaker there can be no speech. The function of addressee shows the same automaticity: an utterance is always directed at someone. Communication needs a receiver, as it turns out. Even screaming when in pain, which seems like a counterexample at first sight, shows the omnipresence of the addressee: the only reason why screaming evolved as a knee-jerk response to pain is that it is evolutionarily convenient to let your peers know when something is wrong with you (see Sullivan et al. 2001). It is no surprise, then, that more conscious utterances automatically come with an addressee (which might be a group, of course). Thus, sentences automatically have a speaker and an addressee.

For the third person, on the other hand, things are differently. Sentences do not automatically have a salient third-person individual or third-person group. For one thing, it is extremely uncommon to have a third-person pronoun in the first sentence of a conversation. The reason is that a third-person pronoun needs context in order to be employed, and the first sentence of a conversation only has such a context if accompanied by a gesture or by a past history as in (29). Nevertheless, as soon as a third-person individual or group is mentioned it becomes possible to use a third-person pronoun in other cases.

- (29) [Woman who always complains about her husband to her friends:]  
       Would you believe what he did just now!?

Furthermore, it is possible to shift the identity of a third-person pronoun. There is a huge difference with first- or second-person pronouns, however. The exact words in a sentence with a third-person pronoun may influence which referent the pronoun picks up. In (30a), for example, third-person pronoun *they* picks up the new clothes as referent, while in (30b) *they* picks up the children as referent.

- (30) a. I provided the children with new clothes; they seemed to fit perfectly  
       b. I provided the children with new clothes; they seemed happy with my choices

Yet, with first or second-person pronouns the words in the sentence cannot influence the referent that gets picked up, because the identity of the speaker and the addressee is already fixed.

This obligatory INTERLOCUTORFIXATION constitutes the second rigid per-

son pattern of this chapter. The message of this pattern is that only the identity of speakers and addressees is automatically fixated at the beginning of a clause (cf. Kaplan 1989).

- (31) INTERLOCUTORFIXATION  
S A / $\emptyset$ /

To sum up, shifting between one or more others does not have any restriction, while shifting between speakers or addressees is heavily restricted. I have argued that this stems from the fact the identity of speaker and addressee is fixated at the beginning of a clause.

### 3.1.4 Summary

In this section we have encountered two rigid person patterns. The first pattern follows from the observation that a sentence can only have one speaker (*\*I and I and I want more!*) but multiple addressees or others. This is a first vs. second/third person pattern. The second absolute pattern is connected to the fact that the identities of speaker and addressee are fixed at the beginning of a clause. When a speaker opens her mouth she is automatically the speaker, and communication needs an addressee by definition. This is a first/second vs. third person pattern.

This second pattern explains why there are restrictions on speaker and addressee shift. The identity of both the speaker and the addressee (or set of addressees) is fixated at the beginning of a clause and should not be altered. This is only one example of the explanatory power of the identity-fixation pattern. We will encounter more examples in Sections 3.2.1 and 3.4 of this chapter.

## 3.2 Quantifier DPs and person

In this section I will look at quantifiers. A language like English has quantifier DPs (*everyone*) which form a DP by themselves, and quantificational determiners (*every*) which need a noun to form a DP. I will use the term quantifier as an umbrella term for these two types.

The main message of this section will be that quantifiers are incompatible with first and second person. I will explain this by an appeal to the principle of INTERLOCUTORFIXATION from Section 3.1.3. Our first stop is quantifier DPs. Quantifier DPs are always third-person syntactically. No language in the world has a dedicated quantifier DP that is syntactically first- or second-person. In Section 3.2.1 I will give an account of why this is the case.

After quantifier DPs—which may be seen as quantificational *pronouns*—we will take a look at quantificational *determiners*. Quantificational determiners like *every* may combine with a noun.

(32) Every addressee laughed

An English pronoun like *you*, on the other hand, cannot be combined with a quantificational determiner, see (33).

(33) \*Every you laughed

Yet, there have been claims in the literature that in languages like Japanese and Thai constructions like (33) are possible (see Déchaine and Wiltschko 2002, Siewierska 2004). In Section 3.2.2 I will argue that this is only apparently so.

These short introductions to quantifier DPs and quantificational determiners already make it clear: first and second person and quantifiers do not go together well.

### 3.2.1 First- and second-person quantifiers

An English quantifier DP like *everyone* is syntactically third-person, which comes to light in the example in (34). A verb like *to be* must have a subject with which it agrees syntactically in person and number. The only possible antecedent is *everyone* but this DP apparently does not agree with *are*, which can be second-person. Note that semantically there is nothing wrong with the sentence; if second-person *are* had been grammatical it could have meant ‘Every one of you is here’.

(34) \*Everyone are here

In other words, quantifier DP *everyone* cannot be a second-person person marker syntactically. Also for the other quantifier DPs in English it is impossible to have a first- or second-person verb, see (35a-b).

(35) a. Somebody \*am/\*are/is there  
b. One of us \*am/\*are/is there

Note that I will exclude DPs with *only* from the set of true quantifiers, because a phrase like *only you* cannot be paraphrased as ‘all/some/... of you’. For more information on *only* and person see Section 3.3.4.

From the above data we can safely conclude that there are no first- or second-person quantifier DPs in English. Moreover, as far as I can see, *all* languages in the world lack syntactically first- or second-person quantifiers. Therefore, there must be some *a priori* reason why such DPs do not exist. This reason is not that quantification is incompatible with first- and second-person. In (36) we find a DP that has both quantification and second person.

(36) So [all/some/few/none of you] already saw the movie

Nor can the reason be that quantifiers are unable to express anything besides quantification. The French quantifiers *tous* ‘all.M’ and *toutes* ‘all.F’, show that

gender can be expressed by a quantifier. If gender can be expressed then why not person?

FRENCH

- (37) a. *Tous sont arrivés*  
 All.M be.3PL arrived.M.PL  
 ‘All have arrived’  
 b. *Toutes sont arrivées*  
 All.F be.3PL arrived.F.PL  
 ‘All have arrived’

Hence, it seems that we should look elsewhere to find the *a priori* reason that first- and second-person quantifiers do not exist in language.

I propose that the reason for this absence is that the speaker and the addressee of a sentence are fixed at the beginning of a sentence, which we discovered when looking at speaker and addressee shift in Section 3.1. In other words, once a speaker starts a sentence she is stuck with herself as the speaker and with the person she addresses as the addressee. We saw that it is possible to specify the individual members of the sentence’s addressee group within a DP, but that this specification does not change the sentence’s addressee group. Hence, in (38) the sentence starts with the set of individuals A and B as the sentence’s addressee group, and after DP *you and you* this set is still the sentence’s addressee group, which is visible in the plural value of the reflexive pronoun *yourselves*.

- (38) So [you and you] are enjoying yourselves  
[points at A] [points at B]

We see the effect of the INTERLOCUTORFIXATION when we compare (38) with (39). The sentence in (39) starts with the set of persons A, B and C as the sentence’s addressees. Yet, the DP *some of you* has the subset consisting of persons A and B as its referent. If this DP *some of you* had been second-person syntactically, the addressee of the sentence would have shifted from the set of A, B and C to the set of A and B, and such a shift in addressee is not allowed. This is why the DP *Some of you* and the corresponding reflexive pronoun *themselves* are syntactically third-person although their referents belong to the set of addressees.

- (39) [To persons A, B and C, when A is bored:]  
 So [some of you] are enjoying themselves

In sum, if you quantify over a set that you consider your addressee, the resulting set cannot be the addressee because a sentence only has one addressee set. A similar argument can be made for the speaker and first person, of course. This is why there are no first- or second-person quantifiers in language: such a quantifier would harbor a speaker or addressee shift in itself.

There are nevertheless examples attested in English in which the quantifier has a quantificational pronoun like *some*, while the reflexive pronoun in the same predicate is first of second person (Rullmann 2008). We find an example in (40).

(40) Some of you are enjoying yourselves

This does not mean that *some of you* is second-person, however. My reason for saying this is that the verb agreement in these cases is still third-person. This can be shown by looking at the singular. An example with a singular quantifier DP shows that the fact that the quantifier contains *you* does not license second-person verb agreement, see (41a). Instead, third-person verb agreement should be used (41b). The pervasive ungrammaticality of a second-person verb shows that a quantifier like *one of you* is syntactically third-person.

(41) a. \*One of you are enjoying yourself  
b. ?One of you is enjoying yourself

There is still an unresolved issue regarding sentence (40), however. *Yourselves* is second-person and does not refer to the addressees but to a subset of the addressees (*some of you*), so one could argue that an addressee shift occurs on the reflexive pronoun. In other words, on uttering *yourselves* the speaker changes the identity of the addressee from the original set to the subset. I do not think there really is an addressee shift here. A sentence-final vocative like *children* does not refer to the subset but to the original set, see (42). It is therefore unlikely that there is an addressee shift in a sentence like (42).

(42) Some of you seem to be enjoying yourselves, children

It seems better to look at the person value of *yourselves* as agreement. *Yourselves* is not referential itself, but it depends on an antecedent for its reference. This is similar to the verbal affixes *-s* and *-es* in (43): these also depend on another element and should be regarded as pure agreement.

(43) The man come-s and go-es

If we assume that shifts involve referential elements, the issue why shifts should be incompatible with non-referential elements like *yourselves*, *-s* and *-es* is solved.

Note that it remains odd that *yourselves* in (42) syntactically agrees with *you*, although referentially it corresponds to *some of you*. In a language like Dutch such a mismatch is impossible, at least for first person, see (44).

DUTCH

(44) *Sommigen van ons vermaken* \**ons/zich* *prima*  
some of 2PL enjoy-PL 2/3.REFL great  
'Some of you are enjoying themselves'

I will not try to answer the question why mismatches are possible in English and other languages. For me the important thing is the observation that speaker and addressee shifts can only occur with referential elements, not with agreement (i.e. bound elements).

Quantifiers like *some of you* have led Bhat (2004:48-49) to claim that personal pronouns like *we* and possessive pronouns like *our* can have an indefinite interpretation. Bhat cites the English sentence in (45).

(45) Some of us like our beer chilled

He states that “here the first person plural pronoun *our* has indefinite reference that is identical with that of the phrase *some of us*”. It is rather strange, however, to claim that a pronoun is indefinite because its antecedent is indefinite. One would have to claim that *the bastard* in (46) is also indefinite, as it is bound by *someone*.

(46) If someone touches my beer I will hit the bastard

Hence, it seems better to stick to the traditional claim that first- and second-person pronouns are inherently definite.

Finally, I should note that I do not predict that quantifiers and first and second person are completely incompatible. Instead, I predict that a first- or second-person person marker can be combined with a quantificational element if the quantificational element does not induce a speaker or addressee shift. This explains why (47a) is grammatical and (47b) ungrammatical: *some* in (47b) restricts the addressee set to a subset, but *all* in (47a) does not.

(47) a. You all/both think I’m weird  
b. \*You some/none think I’m weird

Note that third-person DPs do not allow a shift here either, see (48a-b).

(48) a. They all/both think I’m weird  
b. \*They some/none think I’m weird

All in all, what we have seen in this section is that the absence of first- and second-person quantifier DPs pronouns can be explained by the independent observation that the identities of the speaker and the addressee are fixated at the beginning of a sentence. If a phrase like *some of you* were second-person it would lead to an addressee shift that is not allowed by the principle of identity fixation from Section 3.1.3.

### 3.2.2 Pronominal nouns and the DP hypothesis

A quantificational pronoun like *nobody* is not the only way to make a quantifier DP. There is also the possibility to combine a common noun with an quantificational *determiner*. An example is in (49), *no* being the indefinite determiner

and *boy* the common noun.

(49) No boy won

Such a DP is third-person in its entirety—this is as expected in light of the previous section. There is another relevant restriction however. The English pronoun *you*, for example, cannot combine with a determiner like *no*, see (50). Yet, the intended meaning is clear: ‘None of you is there’.

(50) \*No you are there

In this section we will see that this restriction has to do with *pronouns*, not with person. Moreover, I will claim that the restriction is universal, *pace* Déchaine and Wiltschko (2002) and Siewierska (2004).

Interestingly, the incompatibility between pronouns and determiners also goes for plural pronouns. The sentence in (51) is ungrammatical, but the intended meaning is also clear: ‘Few of you are there. Plural pronoun *you* is apparently not compatible with plural determiner *few*’.

(51) \*Few you are there

Hence, there is no difference between singular and plural here.

The incompatibility of pronouns and determiners—whether in the singular or in the plural—may receive a syntactic explanation: under the *DP hypothesis* (see Postal 1966, Elbourne 2005) both *you* and *every* are Ds (head of a determiner phrase) but there is only room for one D in a DP. The DP hypothesis accounts, as a consequence, for the ungrammaticality of (50) and (51). Additional evidence for the unification of pronouns and determiners is that many forms double as pronoun and determiner, see (52a-b).

(52) a. These/those/few/some/both are present  
b. These/those/few/some/both students are present

The difference between determiners and pronouns is that pronouns have an empty NP argument (Elbourne 2005). All in all, it seems warranted to claim that pronouns are incompatible with quantificational determiners because they are both Ds.

Importantly, a sentence like (53) is as ungrammatical as (51); this is in line with the DP hypothesis since third-person pronouns are taken to be Ds as well.

(53) \*Few he are there

Hence, no person distinction applies to this incompatibility, which makes the construction uninteresting for the main research question of this dissertation. The construction, however, touches upon the issue of *pronominal nouns*, which is an important issue for any study on personal pronouns.

Scholars like Déchaine and Wiltschko (2002) have contested that pronouns are Ds in every language of the world. According to them, being a pronoun and being a noun is not mutually exclusive: there are languages with elements that are both noun and pronoun, and we could call those pronominal nouns. Elbourne's DP hypothesis, on the other hand, predicts that there is no such thing as a pronominal noun. Let us therefore look at Déchaine and Wiltschko's analysis in more detail to find out whether person markers can truly be nouns in some languages of the world.

Déchaine and Wiltschko distinguish between three nominal elements: nouns,  $\phi$ -markers ( $\phi$  stands for person/number/gender features) and determiners. Elements like *the* and *that* are determiners. These may occur with an overt noun like *boy*. Determiners are subject to binding condition C, which means that they may not be c-commanded by their antecedent, see Section 3.3. This is why in (54) *that boy* cannot be coreferential with *the boy*.

(54) That boy said the boy won

Elements like *he* and *they* are  $\phi$ -markers, and  $\phi$ -markers are not subject to binding condition C. This means that *he* in (55) may be coreferential with *that boy*.

(55) That boy said he won

However, the difference between determiners and  $\phi$ -markers will be of no importance to us here. The difference that is important for this section is between nouns on the one hand and non-nouns (i.e. determiners or  $\phi$ -markers) on the other. For the sake of simplicity let us call such non-nouns Ds, which is consistent with the terminology in the previous section. Now that we only distinguish between nouns and Ds we can reduce Déchaine and Wiltschko's claim to the claim that pronouns are either Ds or nouns. The controversial part of the claim is whether pronouns can really be nouns.

The English pronoun *one*, when used as in (56), is a case in point. Just like a normal noun like *boy* it may combine with an adjective and a determiner.

(56) I like [every single one]

Indeed it seems that *one* in (56) is a noun syntactically. But *one* in (56) is not a *personal* pronoun like *I* or *you*, and because my interest is first- and second-person pronouns I am looking for a language that can have a *personal* pronoun in a quantifier DP, because personal pronouns distinguish between different person values. Thus, what we have to find is a language with, for example, a second-person element that means 'you' and that can combine with an quantificational determiner like *every* to get the meaning 'every one of you'. If we find such a language we have found a proper instance of a pronominal noun.

Languages that are good candidates for these pronominal nouns are Thai and Japanese. Siewierska (2004:12-13) notes that the pronouns in these languages are very noun-like. This is also noted by Déchaine and Wiltschko (2002), who classify Japanese pronouns as nouns. Let us first look at Thai. Siewierska (2004) states that the Thai first-person singular pronoun can take an indefinite determiner, giving the example in (57).

THAI

- (57) *raw<sub>1</sub> tháj<sub>2</sub> lǎaj<sub>3</sub>*  
 I all several [as glossed by Siewierska (2004)]  
 ‘we all’

Analyzing the structure of the phrase in (57) as “every I”, however, leads to a problem. Semantically, “every I” would be equal in meaning to ‘a group of multiple speakers’. This is different from the meaning of *we all*, the translation of the construction in (57). What *we all* rather means is ‘all the members of the group associated with the speaker’. Thus, since according to Smyth (2002:41) the pronoun *raw* can also be the first-person plural pronoun, the example in (57) could be better glossed as ‘we all several’. Yet, a quantifier with a plural pronoun is not what I am looking for, since we already saw in Section 3.2.1 that such plural pronouns may combine with a quantificational element like *all*. The prediction is that *tháj<sub>2</sub>* ‘all’ in (57) cannot be replaced by other quantificational pronouns, just like *all* in (58) cannot be replaced by *none*, *some* or *many*.

- (58) we all/\*none/\*some/\*many slept

Moreover, a phrase like *we all* has a different construction than a real quantifier DP like *all men*. It can be seen as a definite description plus a floating quantifier, similar to *the men all*. Quantifier DPs and definite descriptions with a floating quantifier are not the same thing. A quantifier DP like *all men* in combination with present tense is usually used as a generalization. This is why (59a) is slightly odd: wearing pink hats is not a defining characteristics of men. *The men all*, on the hand, cannot be a generalization. A context with a specific group of men is therefore created automatically, see (59b). The same goes for (59c): this is not a generic statement about members of a speaker group, but a specific statement about a specific speaker group. This shows that *we all* resembles *the men all* more than quantifier phrase *all men*.

- (59) a. #All men wear pink hats  
 b. The men all wear pink hats  
 c. We all wear pink hats

We can, therefore, conclude that *We all* is not a real quantifier DP like *somebody* or *none of you* in light of the above data. Hence, it seems that the Thai phrase above is not an instance of a first- or second-person quantifier DP.

A real quantifier phrase that is both first-person and plural would be unexpected anyway. The meaning of such a quantifier phrase would be ‘each group with a current speaker’. This becomes evident when we replace the semantics of *man* with the semantics of *we* ‘speaker group’ in (60a-b), which results in (61a-b).

- (60) a. Every man slept  
 b.  $\forall x(x \text{ is a man} \rightarrow x \text{ slept})$   
 ‘For each man *x* it is the case that *x* slept’
- (61) a. \*Every we slept  
 b.  $\forall x(x \text{ is a group of current speakers} \rightarrow x \text{ slept})$   
 ‘For each speaker group *x* it is the case that *x* slept’

Meaning (61b) is a very unnatural meaning, as the context would involve multiple speaker groups and hence multiple speakers, which is impossible without each speaker taking over the sentence, see Section 3.1.2. The meaning of a second-person singular quantifier phrase (this would be \**every you*(SG) in English) would be more natural: ‘every current addressee’. There are certainly situations in which a speaker wants to quantify over her current addressees; *every one of you* can be used in such a situation and this expression is not uncommon. In (62) we find an overview of the meanings that combinations of the determiner *every* and first- and second-person pronouns would have.

(62) Meanings of combinations of pronouns with quantifier *every*

1SG	* <i>every I</i>	‘every current speaker’
2SG	* <i>every you</i>	‘every current addressee’
1PL	* <i>every we</i>	‘every group with a current speaker’
2PL	* <i>every you</i>	‘every group with a current addressee’

So while in theory it is semantically possible that first-person singular, first-person plural and second-person plural quantifiers exist, it seems more likely that a language has a second-person singular quantifier DP. I have no evidence that Thai has such a quantifier DP, so I will turn my attention to Japanese.

In Japanese *every X* is expressed by *dono X-mo* ‘which X-ever’ (Yurie Hara, personal communication), see (63).

JAPANESE

- (63) *dono gakusei-mo suteki*  
 which student-ever nice  
 ‘Every student is nice’

The Japanese pronoun *anata* ‘you’ may be used in this construction, but it does not lead to the intended reading (‘every current addressee’), see (64).

- (64) ?*dono anata-mo suteki*  
 which 2SG-ever nice  
 ‘?Every you is nice’

This sentence can only be used in a context in which there are, for example, multiple pictures of the addressee, but not in a context in which there are multiple addressees. Note that even then the construction is a little odd. The use of the Japanese pronoun in (64) resembles an English phrase like *the real me*, as discussed by Elbourne (2005:211-213). In both cases we seem to be dealing with *nominalized* versions of a pronoun, and the existence of nominalized versions of pronouns does not mean that *every* occurrence of the pronoun is a noun. In English real personal pronouns and nominalized versions of pronouns behave differently syntactically. A phrase like *the real me* is third-person—this is visible in English because this is a language with subject–verb agreement—see the Internet example in (65).

- (65) The real me does not care about her health

Moreover, in a distributional reading like (64) such nominalized versions refer to multiple versions of one individual, not multiple individuals. Because a quantifier phrase with *every* and a real second-person singular pronoun should have the meaning ‘every current addressee’, the Japanese phrase *dono anata-mo* ‘every instance of you’ in (64) is not a second-person quantifier phrase. So, Japanese does not have a second-person pronominal noun either.

It must again be noted that this issue is about pronouns and not about person. A Japanese third-person singular pronoun like *kare* ‘he’ suffers the same fate as a second-person pronoun, see (66).

- (66) ?*dono kare-mo suteki*  
 which 3SG.M-ever nice  
 ‘?Every he is nice’

The same argument can be made for first person. Thus, no Japanese personal pronoun can form a quantifier phrase with a quantificational determiner like *every* without being nominalized. In this sense they resemble their English counterparts.

The above data argue against Déchaine and Wiltschko’s analysis of the determiner phrase. As we saw above, they claim that in some languages pronouns are always nouns. In this section we have seen, though, that by default personal pronouns do not behave like nouns in Japanese, Thai and English: they do not combine well with quantifiers like *every*. But since Déchaine and Wiltschko based the existence of languages where personal pronouns are always nouns on languages like Japanese and Thai, and it turns out under closer inspection that in both languages personal pronoun are virtually never nouns, then there are probably no languages at all in the world that have pronouns that are always nouns.

We started this section with the DP hypothesis, which claims that pronouns and determiners are syntactically similar—they can both head a DP—and that a DP may have only one head—a pronoun or a determiner. The DP hypothesis predicts why quantifier phrases like English *\*every you* are ungrammatical: the DP contains two heads, the quantificational determiner and the personal pronoun. This prediction turns out—*pace* Déchaine and Wiltschko (2002) and Siewierska (2004)—to hold universally. The DP hypothesis also predicts that person should not matter here; this turns out to be correct as well, since *\*every I* and *\*every he* are universally ungrammatical too.

### 3.2.3 Summary

The term *pronoun* derives from Latin *pronomem*, which means ‘instead of a noun’. Personal pronouns like *I* and *you* are not placeholders of nouns, though. Following the DP analysis they should be seen as similar to determiners like *the* and *every*. This holds for every language and explains why constructions like *\*every you* do not exist.

It is the determiner or the pronoun that provides the person value of the DPs. Quantificational determiners and quantificational pronouns are always third-person. This is explained by the principle of INTERLOCUTORFIXATION: the identities of the speaker and the addressee are both fixated at the beginning of the sentence (see Section 3.1.3 for details). INTERLOCUTORFIXATION explains why there are third-person quantifiers (like English *few*) but no second-person quantifiers (meaning ‘few addressees’ for example) in language. A second-person quantifier would reset the identity of the sentence’s addressee to a subset (e.g. the aforementioned few addressees) of the sentence’s original addressee (i.e. the set of all addressees) and such resets go against the idea of INTERLOCUTORFIXATION.

## 3.3 Binding and person—the basics

Cases of binding are ubiquitous in language. We already saw an example in Section 3.2.1, see (67). In this example *our* is bound by *some of us*.

More on bound readings (and their counterpart, referential readings) can be found in Section 3.3.1.

(67) Some of us like our beer chilled

In this Section we will see that the binding of singular and plural pronouns does involve any person splits. I will investigate singular pronouns in Section 3.3.2 and plural pronouns in Section 3.3.3. These sections serve as an introduction to accommodational binding in Section 3.4.

A special case of binding is formed by sentences with *only*. An example of a sentence with *only* is in (68).

(68) Only I tried my best

Such a sentence is special because, in a sense, two sentences are uttered here: *I tried my best* and *Nobody else tried their best*. The use of *only* may lead to some interesting agreement phenomena. In the sentence in (69) both a first-person and a third-person possessive are possible. (Kratzer 2009).

(69) I'm the only one who tried my/his best

In Section 3.3.4 I will look at constructions like (69) in more detail and conclude that they do not involve person patterns either.

### 3.3.1 Bound versus referential

A sentence like (70) can be analyzed in two ways, depending on the semantic representation of possessive pronoun *his*. If the sentence is equivalent to '*x likes his job* applies to him' the possessive pronoun has a *referential* reading, and if the sentence is equivalent to '*x likes x's job* applies to him' the possessive pronoun has a *bound* reading.

(70) He likes his job

The distinction between the two readings comes to light in so-called VP-ellipsis constructions. An example of VP-ellipsis can be seen in (71).

(71) He likes his job but she doesn't

This sentence can have two readings. Under the first reading the sentence means that the female person does not like the male person's job, see (72a). In this reading the possessive pronoun refers independently and may be considered not-bound (or referential). Under the second reading the sentence means that the female person does not like her own job, see (72b). In this reading the possessive pronoun obligatorily has the same referent as the personal pronoun and may be considered bound.

- (72) a. Referential  
 $\lambda x[x \text{ likes } \mathbf{his} \text{ job}](he) \ \& \ \lambda x[\neg x \text{ likes } \mathbf{his} \text{ job}](she)$   
 '*x likes his job* applies to him and not to her'
- b. Bound  
 $\lambda x[x \text{ likes } \mathbf{x's} \text{ job}](he) \ \& \ \lambda x[\neg x \text{ likes } \mathbf{x's} \text{ job}](she)$   
 '*x likes x's job* applies to him and not to her'

In Section 2.3.2 we come across deixis as a mechanism to establish reference, see demonstrative *this* in (73). The reference in (73) only goes through if there is a real-world entity that has been made salient (e.g. because it is pointed at).

(73) I want this one

This example can be seen as both deictic and referential; it is referential because it does not structurally depend on another linguistic element. An example that is both deictic and bound is also possible, see (74a-b). *Here* in (74a) and *there* in (74b) are both bound by the discourse participant created by *a house* (Geurts and Beaver 2011a). The demonstrative adverb *here* also has a deictic component, however (cf. Levinson 1983:67). The utterance in (74a) is only felicitous if it is uttered in the house under discussion, which is not true of the utterance in (74b).

- (74) a. Now I finally have a house that I like, I want to die **here**  
 b. Now I finally have a house that I like, I want to die **there**

Thus, both deictic and non-deictic (anaphoric) may combine with both bound and referential readings, see (75).

(75) Types of reference

	Referential	Bound
Deictic	<i>I want <b>this</b> one</i>	<i>Now I finally have a house that I like, I want to die <b>here</b></i>
Non-deictic	<i>John knows; <b>he</b> always does</i>	<i>Nobody tried <b>their</b> best</i>

In sum, we have come across the distinction between bound and referential readings. A pronoun with a bound reading is structurally dependent on some other element to get a proper referent. A pronoun with a referential reading, on the other hand,

### 3.3.2 Singular pronouns

In this section we will look at the binding of singular pronouns. Our objective is to see whether first-, second- and third-person singular show different behavior.

We saw above that element a is bound by element b if element a depends on b for its reference. This automatically brings us to sentences like (76). The issue is whether the possessive pronoun *my* depends on *I* for its reference, or whether they both refer to the speaker independently of each other. I will revisit this issue in Section 3.3.4 on *only* DPs.

(76) I raised my hand

In this section I want to focus on uncontroversial cases of binding. These cases involve a quantifier DP like *every boy*, see (77).

(77) Every boy said he won

In (77) the pronoun *he* is bound by singular quantifier DP *every boy*. The term

“singular” is of great importance here; the bound reading only goes through if the antecedent is singular. A comparison with (78) shows this: a plural antecedent does not evoke the bound reading, not even if this antecedent is a quantifier DP like *all boys*.

(78) All boys said he won

Thus, the conclusion must be that the antecedent of a singular pronoun needs to be singular as well.

The best explanation for this observation involves *syntactic agreement*. Syntactic agreement means two things for a DP, as seen in (79).

- (79) Syntactic agreement for DPs
- a. The DP has the same person, number and gender values as its antecedent
  - b. The DP is c-commanded by its antecedent

Condition (79a) corresponds to the observation that the antecedent of a singular pronoun is also singular. Let us look at (80) for condition (79b).

(80) The woman who loved every man decided to leave him

In this sentence the quantifier DP *every man* is embedded in a relative clause (cf. Huang 1995). Because of this, *every man* cannot c-command the pronoun *him*, which means that the quantifier cannot function as the antecedent of *him*. In sum, a bound singular pronoun needs to agree syntactically with its antecedent, which involves shared person/number/gender values and c-command.

Importantly, this obligatory syntactic agreement in the singular also goes for first- and second-person pronouns. This means that first-person and second-person pronouns can only be bound if their antecedent is also first or second person, since antecedent and bindee have to have the same person values. However, in Section 3.2.1 we have seen that first- and second person quantifiers do not exist. We already established that as a person pattern, which means that the binding of singular pronouns does not provide any new person patterns. Thus, there are no person splits with respect to the binding of singular pronouns.

### 3.3.3 Plural pronouns

Plural pronouns behave somewhat differently with respect to binding. In this section I will investigate the ways in which plural pronouns differ from singular pronouns and see if there are person patterns to be found in that area.

The first thing that is necessary to understand plural pronouns is the difference between group and distributive readings. Consider the sentence in (81) as a first example.

(81) They voted

This sentence can have two readings. The first reading of (81) is the *group* reading. Under this reading a *they* is treated as one entity, a group. As a result only one vote is cast in (81). Link (1983) has provided an account of how to map the multiple entities of *we* onto the one group entity, but this is of no importance here as the group reading will be disregarded in the remainder of this dissertation.

The other reading of (80) is the *distributive* reading. Under this reading there are multiple voted events, one for each individual. The semantics of the distributive reading is in (82).

(82) Distributive reading  
 $\forall x(x \text{ is one of them} \rightarrow x \text{ voted})$   
 ‘For each x that is one of them it is the case that x voted’

Reading (82) shows that under the distributive reading a pronoun like *they* introduces a quantifier ( $\forall x$ ) into the semantics. Note that in the syntax I will still refer to DPs like *they* as definite descriptions, not quantifiers, but this is a matter of definition.

The power to introduce a quantifier into the semantics is not restricted to pronouns. A plural definite description like *the men*—I will not go into the internal semantics of *the men*—can also have a distributive reading, see (83a) and the accompanying semantics in (83b).

(83) a. The men voted  
 b.  $\forall x(x \text{ is one of the men} \rightarrow x \text{ voted})$   
 ‘For each x that is one of the men it is the case that x voted’

Interestingly, the bound reading is not restricted to the third person either. The first- and second-person plural pronouns *we* and *you* may also have a distributive reading, see (84a-b) and (85a-b).

(84) a. We voted  
 b.  $\forall x(x \text{ is one of us} \rightarrow x \text{ voted})$   
 ‘For each x that is one of us it is the case that x voted’

(85) a. You voted  
 b.  $\forall x(x \text{ is one of you} \rightarrow x \text{ voted})$   
 ‘For each x that is one of you it is the case that x voted’

Thus, with respect to the introduction of quantifiers into the semantics by plural pronouns there is no difference between first person, second person and third person.

Plural pronouns can also be bound. Let us look at the sentence in (86).

(86) They think that they have to vote

If we ignore the group readings of the pronouns the sentence can have two readings. Under the first reading every one of them thinks that every one of them has to vote. There is no binding under this reading: both pronouns introduce their own quantifiers into the semantics, see (87a). Under the second reading every one of them only thinks about his or her own voting. The second *they* does not introduce its own variable; instead it depends on the first *they* for its reference. This means that the second *they* is bound by the first *they*. Notice that the second *they* is represented by a single variable  $x$  in the semantics (the  $x$  of *that  $x$  has to vote*), see (87b). The plural person value is absent from the semantics—the value is only there because the pronoun has to agree with its antecedent.

- (87) a.  $\forall x(x \text{ is one of them} \rightarrow \forall y(y \text{ is one of them} \rightarrow x \text{ thinks that } y \text{ has to vote}))$   
           ‘For each  $x$  that is one of them it is the case that  $x$  thinks that for each  $y$  that is one them it is the case that  $y$  has to vote’  
       b.  $\forall x(x \text{ is one of them} \rightarrow x \text{ thinks that } x \text{ has to vote})$   
           ‘For each  $x$  that is one of them it is the case that  $x$  thinks that  $x$  has to vote’

The tendency to agree is not absolute, however. In some varieties in English it is possible to have a plural possessive pronoun, and a singular antecedent, see (88a). This violation of agreement is exceptional, however. First of all, the finite verb still has to agree with the antecedent, see (88b).

- (88) a. Every boy has done their homework  
       b. \*Every boy have done their homework

Second, the agreement violation only goes in one direction; a plural antecedent and a singular bindee may not result in a bound reading, see (89).

- (89) All boys have done his homework

Third, in a language like Dutch the tendency to agree cannot be violated. The sentence in (90), for example, does not have the bound reading that (88a) has.

DUTCH

- (90) *Elke jongen heeft-t hun huiswerk gemaakt*  
       each boy have-3SG 3.PL.POSS homework made  
       ‘Every boy has done these people’s homework’

To sum up, plural pronouns may be bound by an antecedent and in nearly all cases antecedent and bindee agree in person, number and gender values.

There is again no difference with first and second person. For both first- (91a) and second-person pronouns (91b) it is possible to be bound by another pronoun.

- (91) a. We think that we have to vote  
 b. You (all) think that you have to vote

Instead there is a difference between pronouns and definite descriptions (i.e. DPs with a noun and a definite determiner). The second definite description *the men* in (92) cannot be bound by the first one, so this sentence cannot mean that every man only thinks about his own voting. This observation is known as principle C of the binding theory.

- (92) The men think that the men have to vote

To sum up this section, plural pronouns are different from singular pronouns in that they can introduce their own quantifier into the semantics. Plural and singular pronouns are therefore different as antecedents. As bindees they are rather similar, however: both tend to agree with their antecedent in person, number and gender values. No differences between first, second and third person have been observed.

### 3.3.4 Kratzer's (2009) *the only one who* construction

In Section 3.3.2 I noted that it is debatable whether the personal pronoun *he* in a sentence like (93) binds the possessive pronoun *his*. Note that the debate is not restricted to the binding of *possessive* pronouns, but for ease of explanation I will only use examples with possessive pronouns.

- (93) He likes his job

The debate will lead us to VP-ellipsis and *only* constructions in this section (cf. Kratzer 2009). Especially the *only* construction is interesting from a person perspective as the construction shows some variation in its person agreement, see (94).

- (94) I'm the only one who tried my/her best

Having these two readings is not restricted to third-person pronouns. The first-person possessive pronoun in (95a) can have both the referential and the bound reading, and so does the second-person possessive pronoun in (95b).

- (95) a. I like my job and you don't  
 b. You like your job and I don't

Does this mean that first- and second-person singular pronouns can be bound? According to scholars like Heim (2008) and Kratzer (2009) it does. For scholars like Dalrymple et al. (1991), Maier (2009) and Maier and de Schepper (2009), however, VP-ellipsis is a pragmatic process, which means that the binding of the pronoun is not a part of semantic proper. Yet, what is important for this dissertation is that there is no difference between first, second and third person

here; the referential and the bound reading are allowed regardless of person.

So, in order to find any person patterns, we have to look further. It is often noted that a sentence with an *only*-DP has striking similarities with VP-ellipsis (see Maier and de Schepper 2009). Consider the sentence in (96).

(96) Only I like my job

The possessive pronoun in such a sentence has a referential reading (97a) and a bound reading (97b).

- (97) a. Referential  
 $\lambda x[x \text{ likes } \mathbf{my} \text{ job}](I) \ \& \ \forall y(y \neq me \rightarrow \lambda x[\neg x \text{ likes } \mathbf{my} \text{ job}](y))$   
 ‘*x* likes **my** job applies to me and not to any *y* that is not me’
- b. Bound  
 $\lambda x[x \text{ likes } \mathbf{x}'s \text{ job}](I) \ \& \ \forall y(y \neq me \rightarrow \lambda x[\neg x \text{ likes } \mathbf{my} \text{ job}](y))$   
 ‘*x* likes **x’s** job applies to me and not to any *y* that is not me’

The parallels between VP-ellipsis and *only* DPs are interesting, but still not very relevant for this dissertation as second person and third person again show the same ambiguity, see (98a-c).

- (98) a. Only you like your job  
 b. Only he likes his job  
 c. Only she likes her job

A potential area of person differences, though, can be found in the German *the only one who* construction as discovered by Kratzer (2009). A first-person example of the construction is given in (99).

GERMAN

- (99) *Ich bin der einzige, der meinen Sohn*  
 1SG be.1SG the.M.SG only.one who.M.SG 1SG.POSS son  
*versorg-t*  
 attend-3SG  
 ‘I am the only one who is taking care of my son’

This sentence has three first-person singular elements: personal pronoun *ich*, verb *bin* and, crucially, possessive pronoun *meinen*. To construct a *the only one who* construction with a different person–number value all three elements have to be changed into that person–number value. In addition, for a plural value the DP *der einzige*, relative pronoun *der* and verb *versorgt* have to be changed as well. For all six person–number values the possessive pronoun may have a referential reading; see (100) for the referential reading of (99).

- (100) Referential  
 $\lambda x[x \text{ is taking care of } \mathbf{my} \text{ son}](I) \ \& \ \forall y(y \neq \text{me} \rightarrow \lambda x[\neg x \text{ is taking care of } \mathbf{my} \text{ son}](y))$   
 ‘*x is taking care of my son* applies to me and not to any *y* that is not me’

The bound reading of the possessive pronoun (*x is taking care of x’s son*), however, is only available for *some* person–number combinations: third person singular, first-person plural and third-person plural, see (101).

- (101) Bound readings of the possessive pronoun in the German *the only one who*-construction
- |     |   |
|-----|---|
| 1SG | – |
| 2SG | – |
| 3SG | + |
| 1PL | + |
| 2PL | – |
| 3PL | + |

If this really is a person pattern then it is a very remarkable one. Let us therefore look into the German examples in more detail.

One part of the puzzle is that there is an alternative *the only one who* construction available (cf. Kratzer 2009). In this alternative construction the possessive pronoun is third-person. A sentence with such a third-person construction and a first-person matrix subject can be seen in (102).

- (102) *Ich bin der einzige, der seinen Sohn*  
 1SG be.1SG the.M.SG only.one who.M.SG **3SG.M.POSS** son  
*versorg-t*  
 attend-3SG  
 ‘I am the only one who is taking care of his son’

This sentence *can* have a bound reading for the possessive pronoun. In fact, all person–number variants can have a bound reading for their possessive pronouns in this alternative construction. The reason seems to be that for a bound reading the possessive pronoun (*seinen* ‘his’) and the embedded verb (*versorgt* ‘takes care of’) have to agree.

This constraint immediately explains why the third-person singular and the third-person plural version of the original *the only one who* construction may have a bound reading for the possessive pronoun: the possessive pronoun is third-person and the embedded verb is third-person, so the bound reading can go through. (Note that this may not come as a surprise as for third-person singular and plural the original and the alternative *the only one who* construction are exactly the same.) The reason that the embedded verb is third-person is that the relative pronoun is third-person. An embedded verb that does not

agree with this relative pronoun—its subject—leads to ungrammaticality, see (103).

- (103) \**Ich bin der einzige, der meinen Sohn*  
 1SG be.1SG the.M.SG only.one who.M.SG 1SG.POSS son  
*versorg-e*  
 attend-1SG

The reason that the relative pronoun is third-person is that the quantifier DP *der einzige* ‘the only one’ is third-person. Quantifier DPs, finally, are obligatorily third-person as we have seen in Section 3.2.1. Moreover, the DP has a definite article (*der*) and definite articles are syntactically third-person. Thus, because *der einzige* ‘the only one’ is third-person, the possessive pronoun also has to be third-person for a bound reading. This explains why third person is different for the *the only one who* construction: a bound reading can only go through if the possessive pronoun agrees with the embedded verb and the embedded verb is obligatorily third-person. Now we only need an explanation for why the first person plural is different.

For the first-person plural the situation is essentially the same as for the third person, but a little more complicated. The first-person plural *the only one who* construction can be found in (104); what is crucial in this sentence is that the person marker on the embedded verb (*-en*) can agree with elements that are first-person plural or third-person plural. The possessive pronoun *unseren* ‘our’ is first-person plural, so here the agreement with the embedded verb holds, satisfying the principle that for a bound reading possessive pronoun and embedded verb should agree. The relative pronoun *die* ‘who’ is third-person plural, so here the agreement with the embedded verb also holds, which results in a grammatical sentence. Because both instances of agreement hold, the possessive pronoun in (104) can have a bound reading.

- (104) *Wir sind die einzigen, die unseren Sohn*  
 1PL be.1/3PL the.PL only.ones who.PL 1PL.POSS son  
*versorg-en*  
 attend-1/3PL  
 ‘We are the only ones who are taking care of our sons’

Thus, the remarkable behavior of the first-person plural with respect to the *the only one construction* is due to an accidental homophony in the German verb endings: 1PL=3PL.

In sum, in this section we have investigated the German phenomenon that in the *the only one who* construction some possessive pronouns (third-person singular, first-person plural, third-person plural) allow a bound reading, while the other ones (first-person singular, second-person singular, second-person plural) do not. We have reduced this phenomenon to a clash between the person value of the relative pronoun (which can only be third-person, as it is connected

to a third-person quantifier, see Section 3.2.1) and the possessive pronoun. The embedded verb has to agree with both for a bound reading for the possessive pronoun. This double agreement happens by default in case of a third-person possessive pronoun and by accident in case of a first-person plural possessive pronoun (because of homophony in the German verb endings). Apparently, the first-person plural bound reading is not due to a deep conceptual split in the category of person, but to a historical incident in German. This means that the person–number patterns in the German *the only one who* construction do not constitute a fundamental person split themselves, but can be fully explained by independent phenomena.

### 3.3.5 Summary

I have not found a single person pattern with respect to binding in this section. The German *the only one who* construction looked most promising (third-person singular, first-person plural and third-person plural patterning together) but the patterning could be explained by accidental homophony and quantifiers being obligatorily third-person. Quantifiers being obligatorily third-person also explains why first- and second-person pronouns cannot be bound by quantifiers.

But, although I have found no person patterns with respect to binding so far, some other interesting patterns can be distinguished. First of all, there is a split between pronouns and nouns: in most languages in the world it is impossible to bind a DP that consists of a determiner and a noun (binding principle C). Second, there is a split between singular and plural. Plural pronouns *can* introduce their own quantifier into the semantics, while singular pronouns *cannot*. Plural pronouns do not have to bring their own quantifier, though; they can be bound and in that case they correspond to a simple single variable in the semantics: *The candidates all hope **they** will become the next president.*

## 3.4 Accommodational binding

In the previous section we observed no person patterns with respect to binding. In this section we will see that a person pattern emerges if we add *accommodation* to the binding.

Take a look at the sentence in (105).

(105) In every Italian city the air is polluted

In this sentence an accommodation is made (see Zeevat 1992, Geurts and Beaver 2011b): a city has air. The result of this accommodation—which is common knowledge—is that for each city in the set of Italian cities there is a local variable that represents the air in that city. Thus because the  $x$  that is connected to *air* is bound by *every Italian city* we can say that *the air* in its entirety is bound by *every Italian city*. Elbourne (2005) calls this type of bind-

ing *situational binding* but because it involves accommodation I will call it *accommodational binding*.

- (106)  $\forall x(x \text{ is an Italian city} \rightarrow (\exists y(y \text{ is air in } x \ \& \ y \text{ is polluted}))$   
 ‘For each Italian city **x there is y which is air in x** and polluted’

In the remainder of this section we will investigate how different types of DP behave under accommodational binding. We will first look at third-person pronouns like *he* and definite descriptions like *the man* in Section 3.4.1. Names like *John* will be the focus of Section 3.4.2. First- and second-person pronouns—which do not tolerate accommodational binding at all—will be the focus of Section 3.4.3.

### 3.4.1 Third-person pronouns

We already saw that a definite description like *the air* can be accommodationally bound by a quantifier DP like *every Italian city*. Third-person pronouns can also be accommodationally bound. In (107a) the third-person plural pronoun *they* is accommodationally bound. The accommodation is that a company consists of a set of one or more persons. For each company the pronoun *they* picks up this set. It fulfills the same function as the definite description *the people* in (107b).

- (107) a. In most companies, they don’t care about the environment  
 b. In most companies, the people don’t care about the environment

A pronoun like *they* is more often used *anaphorically*, however. In this dissertation I will take anaphoric reference to mean that the referent refers to an entity that has been introduced earlier. In (108), for example, there is the pronoun *they* referring to the DP *travelers*. What is also very common is that a pronoun like *they* refers back over a sentence boundary.

- (108) Travelers might get used to jet-lag in the sense that they learn to live with it

Thus, there are two ways for such a definite DP (i.e. a definite description or a pronoun) to get a referent: anaphoric reference (reference to an earlier-mentioned individual) or accommodational binding. The difference between the two is that the referent of an anaphoric DP has been previously mentioned, but the referent of an accommodated DP has not.

It seems that some DPs prefer anaphoric reference and others accommodational binding. A DP like *the winner* probably most often occurs accommodated; (109a-c) are examples of accommodated *the winner*. The accommodation in (109a), for example, is that a game tends to have a winner. The other two sentences have modal contexts and involve possible worlds.

- (109) a. In most games the winner is the best player  
 b. The winner will win one of these fabulous prizes  
 c. The winner might have been a woman

Occurrences of *the winner* with referential reference like (110) are probably much rarer. A convenience sample from the Spoken Dutch Corpus (Oostdijk 2000) confirms this: only one of the forty-six occurrences of *de winnaar* ‘the winner’ could be seen as having referential reference.

- (110) The winner said he was very happy

Other DPs like *the suspect* may both occur frequently as accommodated DP (111a) and as referential DP (111b).

- (111) a. A person has been robbed and the suspect has been arrested  
 b. The suspect’s father issued a statement

There is a difference between singular definite descriptions and pronouns, however. A definite description like *the man* can be accommodationally bound, see (112).

- (112) In many households the man only watches TV

The third-person pronoun cannot have this accommodational reading, see (113). It is probably the gender value that causes this, as such a split between pronoun and definite description is not visible in the plural, which is genderless. Apparently, the gender value of a personal pronoun is not as sensitive to accommodation (‘a household tends to include a male individual’) as the gender value of a definite description.

- (113) In many households he only watches TV

Yet, in a sentence with enough contrast it is possible to construe an accommodational reading for third-person pronouns, see (114).

- (114) In many households HE only watches TV while SHE does all the work

In sum, even singular third-person pronouns may be accommodationally bound, but it takes some effort.

To conclude this section, third-person DPs may be accommodationally bound, but there are some differences within this group. Some third-person DPs prefer accommodational binding to get a referent while others prefer referential reference. Third-person pronouns all fall into the latter group. Moreover, *singular* third-person pronouns can only be accommodationally bound in a situation with heavy contrast.

### 3.4.2 Names

There is, beside pronouns and definite descriptions, a third category of third-person DPs that I want to investigate with respect to accommodational binding: names. Names are even harder to situationally bind than third-person pronouns. It is possible, though, as we will see in this section.

The reason that names are so hard to situationally bind is that the semantic content is important for situational binding, while the content of a name is for most purposes quite irrelevant. Names have a meaning, etymologically, but this meaning is usually irrelevant in communication. The only reason that a name has content is that it makes names different from each other so that we can refer to someone by a unique label. In other words, in sentences that feature the given name *Faith*, for example, the original meaning of the name ('belief/trust') is hardly ever of importance in the sentence.

I will try to find ways to make the content of a name important, so that the name becomes eligible for situational binding. Geurts (1997) notes some names that have a special status because they can be associated with a certain function. The names of the four Beatles, for example, can be associated with a function, see (115). In (115) not the actual Ringo is meant, but the person who plays Ringo in the act. This means that *Ringo* in (115) is accommodationally bound by *every time we do our Beatles act*.

(115) Every time we do our Beatles act, Ringo gets drunk afterwards

Names are usually not associated with a function, however. Yet, Geurts (1997) provides us with another example, see (116).

(116) a. In English, Leslie may be a man or a woman  
b. But John is always a male

*Leslie* in (116a) is accommodationally bound and so is *John* in (116b). This becomes clear when (116a) is rewritten as (117). In (117) *Leslie* is accommodationally bound by *some English families* (and by *some* in the second part of the sentence).

(117) In some cases in the English-speaking world Leslie is a man, in some a woman

It seems that the gender associated with a name can facilitate accommodational binding. This raises the question what else can facilitate accommodational binding. With the sentences (118a-b) I investigate social class. *Gregory* is considered a posh name in the English language. In (118a) there is the definite description *the one who's named Gregory* and this DP can certainly get an accommodationally bound reading. How about the name *Gregory* by itself (118b)? It can have the anaphoric reading where a specific Gregory is meant but this reading is rather odd. The accommodationally bound reading that (118a) has also seems possible for (118b), although (118a) is decidedly better.

- (118) a. In most circles of friends the one who's named Gregory is the one with the rich parents  
 b. In most circles of friends Gregory is the one with the rich parents

It seems, therefore, that even social class can induce an accommodationally bound reading in names, albeit a somewhat marked reading.

All in all it appears that—with some effort—names can be accommodationally bound. Thus, it seems possible for all third-person DPs to be situationally bound.

### 3.4.3 First- and second-person pronouns

Third-person DPs may be accommodationally bound, as it turns out. This raises the questions whether first- and second-person pronouns can be accommodationally bound as well. The answer to this question is no. I have found no accommodationally bound readings of first- and second-person pronouns.

Situations that involve speakers and addressees seem like good candidates for accommodationally bound first- and second-person pronouns. We have seen that semantically the third-person masculine pronoun *he* is similar to definite description *the man*. The pronouns *I* and *you* seem equally similar to the definite descriptions *the speaker* and *the addressee*. A situation that involves both a speaker and an addressee is “sermon” (in its ‘admonishing lecture’ sense). This is therefore an appropriate context to look at the accommodational binding of first and second person. The sentence in (119a) has a reading in which the definite description *the speaker* is accommodationally bound by *most sermons*. If the first-person pronoun *I* behaves the same as *the speaker*, it should be able to be accommodationally bound in this sentence as well. However, the definite description *the speaker* cannot be replaced by the pronoun *I* while maintaining the same reading, as (119b) shows.

- (119) a. During most sermons the speaker seems to enjoy herself  
 b. During most sermons I seem to enjoy myself

Thus, it seems that a first-person pronoun cannot be bound accommodationally. In (120a) there is an example with definite description *the addressee* accommodationally bound. Again it seems not possible to replace the definite description by a conceptually similar pronoun, in this case the second-person pronoun, and maintain the accommodationally bound reading, see (120b).

- (120) a. During most sermons the addressee seems to enjoy herself  
 b. During most sermons you seem to enjoy yourself

To sum up, first- and second-person pronouns cannot be accommodationally bound in context with a speaker and an addressee.

Putting the pronoun in the plural does not help. *You* in (121) is not equal to an accommodationally bound *the addressees*.

(121) During most sermons you seem to enjoy yourselves

Adding a noun to a first- or second-person DP does not help either (see Section 3.5.2 for more information on this operation). *We teachers* in (122) is not equal to *the teachers who are speaking* or something like that.

(122) During most classes we teachers want the students to be quiet

There seems no way to get a first- or second-person DP to be accommodationally bound.

In order to explain the incompatibility between accommodational binding and first and second person I repeat the principle of INTERLOCUTORFIXATION from Section 3.1: the identity of the speaker and addressee of a sentence is fixed at the beginning of that sentence. A pronoun like *I* can therefore not be accommodationally bound by a phrase like *during most talks* because the identity of *I* is already fixed.

A problematic sentence for the claim that first- and second-person DPs may not be not accommodationally bound is given by Nunberg (1993), see (123).

(123) [Condemned prisoner:]  
I am traditionally allowed to order whatever I like for my last meal

What the sentence means is that a condemned prisoner—whoever he is—is traditionally allowed to order whatever he like for his last meal. Being a condemned prisoner is an aspect of the speaker and this prisoner aspect certainly seems to have some sort of binding relation with adverb *traditionally*. A first-person pronoun normally does not mean ‘a condemned prisoner’, however, but ‘the speaker of the sentence’. Some kind of special mechanism adds the condemned prisoner to the sentence. This special mechanism may also apply in a sentence with a third-person pronoun, see (124). *He* is normally equal to ‘the man’ when accommodationally bound, but here the ‘condemned prisoner’ meaning is also added (cf. Maier 2009).

(124) [About a certain condemned prisoner:]  
He is traditionally allowed to order whatever he likes for his last meal

Hence, there seems to be some special mechanism in play here that adds discourse. The entities introduced in this discourse may be accommodationally bound but the corresponding first- or second-person may not.

In brief, a first-person pronoun or a second-person pronoun may never be accommodationally bound, as the identity of these pronouns is fixated. This is in contrast with third-person pronouns, as there are certain situations in which third-person pronouns allow accommodational binding.

### 3.4.4 Summary

The conclusion to this section is as follows. Third-person DPs may be accommodationally bound. First- and second-person DPs, on the other hand, may not be accommodationally bound, which means that we are dealing with a person effect here. The underlying reason for this person effect is again INTERLOCUTORFIXATION: the identity of the speaker and the addressee is fixated right at the beginning of the sentence, so their person markers cannot be bound by other elements during the rest of the sentence.

## 3.5 The vocative

In this section we will take a look at the vocative. An example of a vocative is the name *Alice* in (125).

(125) Stop moving, Alice!

The vocative has several characteristics that are interesting for the grammatical category of person. First of all, the vocative can be used for a number of functions. In (126) we see the function that Potts and Roeper (2006) call *expressive small clauses*: the speaker expresses something (*my car has been scratched*) and adds some secondary insult (*you are a bastard*).

(126) [Alice to Bob:]  
My car has been scratched, bastard!

The remarkable thing to observe is that *bastard* in (126) can only refer to Bob—Alice’s addressee—although Bob has not been referred to in the sentence. If it had been some third person that has scratched the car, Alice could not have used *bastard* to refer to that person. In other words, the expressive small clause may only refer to addressees. This means that we can identify a person pattern here. In Section 3.5.1 I will present the argument in more detail.

A second interesting characteristic of vocatives is that they may consist of a singular DP with a first- or second-person determiner, see (127).

(127) Stop hitting me, you idiot!

Outside of a vocative such a construction is not possible, see (128).

(128) \*You idiot should stop hitting me!

In Section 3.5.2 I will look at the properties of constructions with a first- or second-person determiner.

Finally, the common assumption is that the vocative is always second-person. There are, however, sentences like (129); in Section 3.5.3 I will argue that the quantifier here is third-person, which is in conflict with its addressee-

directed semantics.

(129) I have good news, everybody!

This still leaves us with sentences like (130a-b) that have an imperative verb and a quantifier that looks like a vocative. I will argue in Section 3.5.4 that these quantifiers are not vocatives.

(130) a. Everyone behave yourselves!  
b. Everyone behave themselves!

### 3.5.1 The vocative as a person pattern

The vocative can have a number of functions. For (131), for example, it can be argued that the vocative *Alice* is used to show how serious the speaker is.

(131) I really want you to be honest, Alice

In this section I want to focus on a single function. Potts and Roeper (2006) has named this function the *expressive small clause*, and an example is shown in (132). Alice expresses some information ('I forgot my keys') and insults Bob in addition ('You're an idiot').

(132) [Alice to Bob:]  
I forgot my keys, idiot!

In this section I will use expressive small clauses as an example to show that the vocatives harbors a *bona fide* second vs. first/third person pattern.

The interesting part about the sentence in (132) is that *idiot* may only refer to Bob, although Bob is not referred to earlier in the sentence. I want to argue that Bob has this special position because he is the addressee of the sentence. It is also plausible in (132) that Alice considers herself an idiot for forgetting the keys. She may, however, not express this with the phrase *idiot* in (132). Phonology is essential here. In the sentence in (133) it *is* possible to refer to the speaker with *Idiot!* meaning 'I am such an idiot!'

(133) [Alice to Bob:]  
I forgot my keys. Idiot!

The difference is that (133) consists of two separate sentences, *I forgot my keys* and *Idiot!* This shows itself by a pause between *keys* and *idiot* and a different intonation pattern. In this section I will only focus on insults that are added to a sentences, so cases like (132). For these cases it is clear that the insult may not refer to the speaker.

The same goes for others : the insult in expressive small clauses may not refer to an other. Consider the example in (134), repeated from above. This

sentence cannot be used in a situation in which *bastard* refers to a third person, even if this is the person who has scratched the car.

- (134) [Alice to Bob:]  
My car has been scratched, bastard!

To sum up, secondary insults may only be used for addressees, not for speakers or others.

From these data we can construe a person pattern: second person is allowed as a referent for expressive small clauses, but first person and second person are not. The expressive small clause is only one example of a function that only vocatives can fulfill, but there are certainly more functions that exclusively belong to the vocative and the person pattern will apply to these functions as well. For this reason I will call this pattern VOCATIVEFUNCTION: constructions with a function that is associated with the vocative may only have the addressee as their referent, see (135).

- (135) VOCATIVEFUNCTION  
/S/ A /Q/

This pattern is a rigid person pattern, because—as far as I can see—the pattern holds universally. There is, unfortunately, very little cross-linguistic research on vocatives, though (cf. Levinson 1983:71).

To sum up this section, the vocative is an unusual construction and has a number of unusual functions like the expressive small clause. These functions can only be performed by the vocative, but there is no principled reason why no other construction could express these functions. As a result, these functions constitute a addressee vs. speaker/other rigid person pattern.

### 3.5.2 First- and second-person determiners

A vocative can take many different forms. A secondary insult can occur without a determiner (136a), but also with a determiner (136b). This determiner is necessarily second-person.

- (136) a. I'm irresistible, fool!  
b. I'm irresistible, you fool!

One remarkable aspect of these second-person determiners is that they may also occur outside of the vocative, but only in the plural, see (137a-b).

- (137) a. \*You boy should be able to defend yourself  
b. You boys should be able to defend yourselves

Less surprisingly, outside of a vocative such a determiner may also be first-person. These and other characteristics of first- and second-person determiners will be the focus of this section.

We have seen in Section 3.2.1 that quantifiers (e.g. a determiner like *no* or a pronoun like *everyone*) may not be first- or second-person and neither may nouns. It might therefore seem that single pronouns like *I*, *you* and *we* are the only first- and second-person DPs that are allowed. A sentence like (137b) shows that this is not true: the person marker *you* may combine with a noun like *boys* to form a DP. Such a construction is unmistakably second-person—the second-person reflexive pronoun in (137b) shows this—so it makes sense to study it in a dissertation on person.

One question is whether *you* in a construction like (137) is a determiner or a pronoun. In this section I want to argue that it is a determiner. An important observation for my argument is that the noun in a construction like *you linguists* does not have a *comma intonation*, i.e. there are no pauses before and after *linguists*, see (138a). A sentence with comma intonation on *linguists* is also possible, however, see (138b).

- (138) a. You linguists should know  
b. You, linguists, should know

This last sentence has a different syntactic structure, which can be shown by the sentences in (139a-b)

- (139) a. \*You the linguists of the Netherlands should know  
b. You, the linguists of the Netherlands, should know

In (139a) *linguists* has its own determiner, *the*, and now the sentence is ungrammatical. When comma intonation is applied, however, the sentence is still grammatical (139b). The explanation is that in a construction without comma intonation (139a) person marker *you* is a determiner and *linguist* the accompanying noun. The DP hypothesis says that a DP cannot have two determiners, see Section 3.2.1, so a DP with both *you* and *the* as its head is impossible. In a construction with comma intonation (139b), on the other hand, person marker *you* is a pronoun and a DP by itself, and *the linguists of the Netherlands* is a second DP acting as a parenthetical construction (see Heringa 2011). Additional evidence for the difference between the two constructions in (139a-b) comes from words that can be either pronoun or determiner. The word *they* can only be a pronoun (see below for *them* as a determiner), and is therefore only okay in the construction with comma intonation, see (140a-b)

- (140) a. \*They linguists should know  
b. They, linguists, should know

The word *the*, on the other hand, can only be a determiner and is therefore only grammatical in the construction without comma intonation, see (141a-b)

- (141) a. The linguists should know  
b. \*The, linguists, should know



referred to by *you three girls* does not refer to all girls in the world or all groups of three girls in the world.

(145) You three girls have been a great help

Let us now compare first- and second-person determiners with third-person determiners. As already noted by Postal (1966), third-person pronoun *they* cannot be a determiner, see (146).

(146) \*They linguists should know

One explanation for why *they* should be impossible here is that there already is a linguistic item for this purpose—article *the* or demonstrative *these*—and that the use of *they* for the same purpose is therefore blocked. What should be noted, however, is that in some variants of English *them*, the third-person object pronoun, *can* be used as a determiner. Belfast English is one of these varieties, but—as Henry (1997) notes—it seems that this *them* is not a personal pronoun, but a distal demonstrative, see (147a-b).

#### BELFAST ENGLISH

(147) a. I like them books  
b. Them's no good

Yet, whether a third-person determiner is a distal demonstrative or a definite article does not matter here. What is important is that third-person determiners are fundamentally different from determiners like *we* and *you*, because they have a function–argument meaning. *Them books* for example, means ‘the things that are distant regarding books’, and *the books* means ‘the things that are salient regarding books’. DPs with a first- or second-person determiner do not have this intersective reading. We can therefore conclude two things. First of all, third-person personal pronouns are not as good determiners as first- or second-person personal pronouns in English. Yet, this can be accounted for by the phenomenon of blocking. A language like English has extremely frequent third-person determiners like the article *the* and has no need for its third-person personal pronoun to act as a determiner as well. Second, there is a meaning difference between third-person determiners on the one hand, and first- and second-person determiners on the other hand. This person split can again be explained by INTERLOCUTORFIXATION from Section 3.1.3: only the identities of speaker and addressee are fixed at the beginning of the sentence.

Now that the characteristics of first- and second-person determiners are clear we can return to the difference between singular and plural, see (148a-b).

(148) a. What do you linguists do anyway?  
b. \*What do you linguist do anyway?

It remains a bit of a puzzle why there should be such a huge gap in grammaticality between singular and plural here. To me the most plausible explanation

is that plural pronouns are more in need of additional identification than singular pronouns. The reason is that plural pronouns represent a group so it may be unclear which entities are a part of this group. Additional identificational material may help to clarify the group so I expect that plural pronouns occur more often with such information than singular pronouns. Because of this higher frequency it has been possible for the combination of first- and second-person determiner and noun with additional information to grammaticalize in the plural, but not in the singular. What this analysis predicts is that in general DPs with a singular person marker as head have less additional information than DPs with a plural pronoun as head. To test this I have looked at the Spoken Dutch Corpus (Oostdijk 2000) and extracted all DPs that have a person marker as their head and additional elements beside this head from the syntactically annotated part. After I excluded all DPs in which the additional element was a focus particle (e.g. *zelfs* ‘even’ in *zelfs ik* ‘even I’) and therefore not identificational, 42 DPs remained. Most of these DPs (34) were plural, see (149).

- (149) First- and second-person DPs with additional identification in a Dutch corpus

	Pron	Det	Total
1SG	4		4
2SG	6		6
1PL	36	18	54
2PL	7	3	10

Only a minority of these plural DPs had a first- or second-person *determiner* (150a). Most had a first- or second-person *pronoun*, which was combined with, for example, a locative phrase (150b), a *with*-phrase (150c), an *as*-phrase (150d) or a relative clause (150e).

- (150) a. *wij volledig rechts-handigen*  
 1PL fully right-handed  
 b. *wij in Nederland*  
 1PL in Netherlands  
 c. *wij met ons muziek-groupje*  
 1PL with our music-group  
 d. *wij als stichting-bestuur*  
 1PL as foundation-administration  
 e. *wij die altijd veel postzegels in voorraad hebben*  
 1PL who always many stamps in stock have

The relative numbers are even more telling. Singular first- and second-person occur more frequently than their plural counterparts, so the percentage of singular first- and second-person pronouns with additional identification is negligible, see (151). For *plural* first- and second-person pronouns, however, one

or two out of every one hundred occurrences have additional information. This shows that it was to be expected that a construction that combines a pronoun with additional identification grammaticalized for the plural but not for the singular.

(151) Percentage first- and second-person DPs with additional identification in a Dutch corpus

	All occurrences	With addit. ident.	%
1SG	28034	4	0
2SG	13838	6	0
1PL	8214	54	0.6
2PL	543	10	1.8

In sum, the absence of singular first- and second-person determiners can be explained by the low frequency of additional information surrounding first- and second person singular pronouns: there is no need to grammaticalize a construction that adds information to these pronouns.

We already know that there is one exception to the incompatibility of second-person singular and determiners: the vocative. Example sentence (152) has a vocative (*you idiot*), which has second-person singular *you* as determiner. In the remainder of this section I want to argue that second-person determiner for vocatives are rather different in function from normal second-person determiners.

(152) Stop it, you idiot!

Interestingly, vocatives consisting of a second-person determiner and a noun as in (152) usually have a negative connotation. These vocatives can also be used as standalone sentence—see (153a)—with the same negative connotations. *You* is semantically the subject in (153a), and the noun is the predicate. Formally the person marker is still best analyzed as a determiner, as this explains why an additional determiner seems to be prohibited (153b).

(153) a. You idiot!  
b. \*You an/some/no idiot!

The predicative function is probably why the noun in these vocatives has a negative connotation: the vocative in its entirety is used in its expressive small clause function, which we encountered in the previous section. For non-negative nouns a vocative is therefore odd if the second-person determiner is added (154b), while the same construction is acceptable outside of the vocative, as they are plural (154a).

(154) a. You teachers/parents/singers have to stop!  
b. #Stop it, you teachers/you parents/you singers!

Assuming that expressive small clauses occur with a certain frequency, we have an explanation for why the construction with second-person singular determiners only developed for the vocative.

A further distinction between vocatives and the rest of the sentence with respect to second-person determiners is that the determiner is not obligatory in a vocative. A single noun can be a vocative by itself, which applies to both insulting (155a) and non-insulting vocatives (155b).

- (155) a. Stop it, moron/bastard/maniac!  
b. Stop it, sir/buddy/dear!

Yet, if the determiner is added then only the vocatives that are expressive small clauses seem to go through, see (156a-b).

- (156) a. Stop it, you moron/you bastard/you maniac!  
b. #Stop it, you sir/you buddy/you dear!

This once again shows that there is a strong connection between secondary insults and the second-person singular determiner. This connection is probably why a second-person singular determiner construction developed for the vocative.

To sum up this section on first- and second-person determiners, such determiners do exist but they have not grammaticalized across the board. For vocatives the construction with a singular or plural second-person determiner grammaticalized because of the frequency of secondary-insults vocatives. Outside of vocatives the construction with plural first- or second-person determiners grammaticalized because of the frequency of additional identification around plural first- or second-person person markers.

### 3.5.3 Third-person vocatives

In this section we will look at vocatives that are syntactically third-person, see (157). Such a vocative constitutes a mismatch between syntax and semantics: semantically vocatives refer to the addressee so in the syntax they are expected to be second-person.

- (157) Stop it, everyone!

The next section will show us that an imperative verb like *stop* in (157) already complicates the person mapping by itself. It is, therefore, better to look at vocative and imperatives separately. Fortunately, vocatives may occur without imperative verbs, which is shown by the vocatives *everyone* and *little girl* in (158a-b).

- (158) a. I have good news, everyone  
b. I have good news, little girl

The issue that I will discuss in this section is whether the vocatives in (158a-b) are second-person or third-person.

I will first focus on the construction in (158b). First of all, *little girl* in (158) does not behave like a third-person DP in a normal sentence. A countable, singular noun like *girl* is normally ungrammatical without a determiner, see (159).

(159) \*I saw little girl

In the previous section we saw that determiners like *the* or *that* make a DP third-person. Hence, a vocative like *little girl* is not *a priori* third-person.

Let us therefore look at vocatives with relative clauses in order to determine the person value of the vocative *little girl*. Relative clauses that modify a second person are rare but they do occur. In (160) we find a part from a prayer from Saint Symeon to God. The vocative in this sentence—*o you who always remain immobile*—shows that relative clauses can have second person verbs: the verb *remain* is second-person singular. Note that a third-person relative clause might also have been grammatical, but the point of this example is to show that second-person relative clauses are possible.

(160) Come, o you who always remain immobile

If we compare this with a relative clause inside a vocative we see that the verb in such a clause can only be third-person (161a), not second-person (161b). As the relative clause is connected to the phrase *little kid*, this means that the vocative in its entirety is also third-person.

(161) a. Thank you, little kid who **keeps** pushing the button on the Dancing Santa Doll at the drugstore  
 b. \*Thank you, little kid who **keep** pushing the button on the Dancing Santa Doll at the drugstore

As a result, we have an odd situation in a sentence like (161): the vocative corresponds to the pronoun *you*, which is second-person, in the main sentence, but the vocative itself is third-person. In the remainder of this section on third-person vocatives I will look at the restrictions of this mismatch between second person and third person.

Determiners play an important role in the restrictions. A vocative like *little girl* is ungrammatical when a determiner is added, see (162).

(162) \*I'm your father, the/that little girl

More precisely it seems to be the D—the head of the DP—that is relevant here. Neither *he* nor *him* is allowed as a vocative, see (163b). A viable explanation is, of course, that *he* and *him* are third-person Ds. The second-person D *you* is perfectly acceptable.

- (163) a. Stop complaining, you!  
 b. \*Stop complaining, he/him!

The first-person pronoun as a vocative is also ungrammatical, even when talking to oneself, see (164a-b).

- (164) a. [Looking in the mirror:]  
 Why the long face, you?  
 b. [Looking in the mirror:]  
 \*Why the long face, I/me?

To sum up, a syntactically third-person vocative is only possible if there is no third-person D present. The equilibrium between third-person syntax and second-person semantics is disturbed by an overt third-person D.

The only exception to the prohibition of third-person Ds in vocatives is the quantifier *everyone*, see (165).

- (165) Thanks for coming, everyone!

Such a quantifier vocative is also third-person as the sentences with relative clauses in (166a-b) show.

- (166) a. \*Thank you, everyone who sent in the photos of **yourselves**  
 b. Thank you, everyone who sent in photos of **themselves**

It may be argued that the exception is only an apparent exception because *everyone* is not a D. In the examples in (167a-b) we have DPs in which a quantifier co-occurs with a determiner, so there are some signs that quantifiers are not Ds.

- (167) a. all the food  
 b. both my sons

Moreover, we need an additional mechanism that explains why the determiner *every* plus noun is ungrammatical as a vocative (168) while the pronoun *everyone* is not.

- (168) \*Thanks for coming, every parent

One explanation comes to my mind and it involves the element *one*. There are phenomena in language in which *one* is obligatory because it has some sort of ambiguity towards person. As noted in Section 3.3.4 possessive pronouns that agree with the matrix subject are allowed in the English *the only one who* construction, see (169a). A third-person possessive pronoun is also allowed (169b) so *one* is not very strict in its person preference.

- (169) a. You're the only ones who tried your best

- b. You're the only ones who tried their best

If *ones* is replaced by a noun like *parents*, however, a possessive pronoun agreeing with the matrix subject results in ungrammaticality (170a). Only the third-person possessive is allowed (170b), so a noun like *parents* seems to draw too much attention to the third-person value of its DP. The same may hold for third-person vocatives, where a similar competition between second and third person applies: a noun like *parent* in (168) may tip the balance too much in the third-person direction.

- (170) a. \*You're the only parents who tried your best  
 b. You're the only parents who tried their best

To sum up this section, yes, it is possible to have third-person vocatives, but they need to retain some ambiguity as to whether they are third-person or second-person. This explains why third-person Ds are prohibited in such vocatives (they tip the balance too much towards the third person) and why a quantifier in such a vocative prefers *one* (*one* is itself ambiguous with respect to person). An overview of the acceptability of third-person vocatives is shown in (171).

- (171) Acceptability of third-person vocatives

Example	Acceptable	Comment
Bill	+	
Little girl	+	
The little girl	–	Third-person D
You	+	
He	–	Third-person D
Everyone	+	
Every parent	–	Quantifier without <i>one</i>

### 3.5.4 Imperatives and vocatives

In the previous section I stated that imperative verbs have a complicated relationship with the grammatical category of person. In English an imperative sentence with a quantificational pronoun can co-occur with a second-person reflexive pronoun (172a), but also with a third-person reflexive pronoun (172b). These data were first discovered by Bolinger (1967).

- (172) a. Everyone wash yourselves!  
 b. Everyone wash themselves!

The issue here is whether the quantifiers in (172a-b) are vocatives or subjects. Note that—regardless of syntax—all the imperative verbs in this section are directed to the addressee; for verbs that express commands that are directed to the speaker or an other see Section 4.3.3.

I will first focus on the quantifier DP in (172b). There are good reasons to claim that such a quantifier is a subject (see Zanuttini 2008). Two ways to distinguish subjects from vocatives is to use comma intonation after the element (173a) or to move the element to the back of the sentence (173b). For subjects this results in ungrammaticality.

- (173) a. \*Okay John...went to the market  
b. \*Went to the market John

With quantifier *everyone* and an imperative verb it is okay to use reflexive pronoun *yourselves* in these constructions (174a-b), but reflexive pronoun *himself* is disallowed (175a-b).

- (174) a. Okay everyone...wash yourselves!  
b. Wash yourselves, everyone!

- (175) a. \*Okay everyone...wash themselves!  
b. \*Wash themselves, everyone!

This suggests that *everyone* in *Everyone wash themselves!* is not a vocative but a subject.

One question that remains is what the person value of the imperative verb is in these cases. If a verb co-occurs with a reflexive pronoun, the verb and the reflexive pronoun should agree in person. The phrases in (176a-b) and (177a-b) show this. The phrase in (176a-b)—an excerpt of a Christian text—has the second-person reflexive pronoun as an object, which means that the verb should be second-person as well. The phrase in (177a-b)—an excerpt of an Islamic text—has the third-person reflexive pronoun as an object, which means that the verb should be third-person as well. Thus, it is really the case that verb and reflexive pronoun should agree.

- (176) a. O you who **cover yourself** with light as with a garment  
b. \*O you who **covers yourself** with light as with a garment

- (177) a. \*O you who **cover himself** with a garment  
b. O you who **covers himself** with a garment

We must therefore conclude from imperative sentences like *Everyone wash themselves!* that an imperative verb in English has the possibility to be third-person.

The only thing that we still need is an explanation for the second-person variant of the imperative–quantifier combinations in this section. A first observation is that the availability of this variant is not universal. In the Italian example in (178), the verb and the reflexive pronoun are third-person, and second-person variants are not allowed (see Zanuttini 2008).

## ITALIAN

- (178) *Nessuno si muova*  
 Nobody self.3 move.3SG.SBJV  
 ‘Nobody move!’

So, it seems that the second-person variant is the odd one in language. Moreover, it seems problematic to analyze the quantifier in such a sentence as a subject (178a). As the subject of the sentence the quantifier would agree with the verb and the possessive pronoun and be second-person, and I have argued against second-person quantifiers in Section 3.2.1. Sentences like (179b-c) argue against the possibility of *everybody* being second-person, for example. This argues for an analysis of *everybody* in (179a) as a vocative instead of a subject.

- (179) a. Everybody try your best!  
 b. #Everybody should try your best!  
 c. #Is everybody trying your best!

On the other hand, in this section we have analyzed *everybody* in *Everybody try their best* as a subject, and the parallels between this sentence and (179a) are strong. Furthermore, we saw in the previous section that a DP like *every boy* is generally not allowed as a vocative. In the construction under discussion here such a DP is allowed, however, see (180).

- (180) Every boy try your best!

All in all it seems that the quantifier in the second-person variant of a imperative–quantifier combination has characteristics of both subjects and vocatives. Perhaps a hybrid subject–vocative analysis is the best analysis for these quantifiers.

To conclude, third-person quantifiers like *everyone* in *Everyone behave themselves!* can refer to addressees. This may explain the imperative verbs that are syntactically third-person in English and Italian: they agree with their subject, a third-person quantifier DP. Yet, in English (but not in Italian) there exists an alternative construction that has a second-person verb (*Everyone behave yourselves!*). The quantifier in this sentence shows some peculiar behavior and may be analyzed as a subject–vocative hybrid.

### 3.5.5 Summary

Vocatives have not been studied all that much by linguists (Levinson 1983:71) which is unfortunate, because they are very interesting for the grammatical category of person. First of all, the vocative contains a rigid person pattern. There are a number of functions that can only be performed by a vocative—e.g. what is called an expressive small clause: *idiot* in *Stop it, idiot!*—so these functions can only be applied to addressees. Since secondary insults and similar functions are not *a priori* restricted to addressees, we can establish an rigid

person pattern here:  $\langle \langle S \rangle \langle A \rangle \langle Q \rangle \rangle$ .

Second, vocatives allow second-person determiners (*you* in *Great game, you moron!* for example). Such a DP construction with a second-person determiner could have grammaticalized because the secondary-insult function occurs with a certain frequency. In the non-vocative part of the sentence only plural determiners are allowed (both first-person and second-person ones): *We/You teachers should know*. Here the determiner has a different function; it allows for a noun that provides additional identification for the DP. Because additional identification is needed more frequently for groups than for individuals, the non-vocative DP construction with a determiner only grammaticalized for the plural.

Third, vocatives may be syntactically third-person (*little girl* in *Listen to me, little girl* for example). The clash between third-person syntax and second-person semantics leads to some restrictions on third-person vocatives—overt determiners are not allowed, for example. We see a similar clash in an English sentence like *Everyone raise your hand!* where the quantifier *everyone* not only has some characteristics of a third-person vocative, but also some of a second-person subject.

## 3.6 Sign language and rigid person patterns

In the previous chapter, in Section 2.3.1, we saw that person enjoys a rather special status within sign languages: sign languages do not distinguish between second person and third person in syntax. In this chapter, however, we have seen three rigid person patterns, two of which distinguish between addressees and others. In this section I will look at the clash between these two observations. In Section 3.6.1 I will look at the VOCATIVEFUNCTIONS rigid person pattern ( $\langle \langle S \rangle \langle A \rangle \langle Q \rangle \rangle$ ) and in Section 3.6.2 at the INTERLOCUTORFIXATION rigid person pattern ( $\langle S \rangle \langle A \rangle \langle Q \rangle$ ).

### 3.6.1 Sign language and vocatives

If we want to maintain both that i) there is no distinction between second and third person in sign language, and that ii) vocative functions are restricted to addressees, the only way out seems to be that there are no vocatives in sign language. However, although a language like American Sign Language (ASL) makes very little use of vocatives (see Baker-Shenk and Cokely 1980), there is the so-called HEY sign. The HEY sign is a handwave used to get or maintain the addressee's attention. Thus, HEY is a sign that is specifically directed at the addressee. This fits the VOCATIVEFUNCTIONS person pattern from Section 3.5.1, but it is unexpected from the perspective of Section 2.3.1, in which we established that in sign language there is no difference between second and third person syntactically.

To solve this issue I want to appeal to the distinction between addressees

on the one hand, and second person on the other. As we already know the plural pronoun *you* is second-person, but not all of its referents have to be addressees. In (181), for example, the second-person DP *you two* refers to the addressee, Bob, and an other (e.g. Bob's wife).

- (181) [Alice to Bob:]  
We enjoyed ourselves the other night, did you two also enjoy yourselves?

For a vocative, however, it is impossible to refer to a non-addressee like, for example, Carol in (182).

- (182) [Alice to Bob:]  
#Enjoy yourselves tonight, Bob and Carol!

So, while pronouns involve person (inclusive person, first person, second person and third person), vocatives directly involve addressees, speakers and others.

The solution to the person issue in sign language, therefore, is that sign languages distinguish addressees, but do not distinguish between second person and third person. These are two separate mechanisms. Person is confined to person markers, whether pronouns or verbal affixes. The role of addressee is a more fundamental aspect of language and *does* play a role in sign language. Besides the sign HEY there is the fact that eye gaze in a sentence in sign language is mostly fixated at the addressee (see Alibašić Ciciliani and Wilbur 2006, Berenz 2002).

### 3.6.2 Sign language and interlocutor fixation

In Section 3.1 we established that while it is possible to shift between two others in a sentence, it is impossible to shift between two addressees. These facts can be replicated for sign language. In (183) we find an example from Sign Language of the Netherlands (SLN). The pointing signs are directed at two non-addressees (i.e. others) and shifting back and forth between them is acceptable. The eye gaze (EG) is directed at addressee A the whole time.

SIGN LANGUAGE OF THE NETHERLANDS

- (183)
- |                     |         |        |
|---------------------|---------|--------|
| Q                   |         |        |
| EG-A                |         |        |
| IX-B                | IX-C    | KENNEN |
| POINT-B             | POINT-C | know   |
| ‘Does he know him?’ |         |        |

The example in (184), on the other hand, is not acceptable. In this sentence the eye gaze is directed at person A at first, but after the first pointing sign the eye gaze shifts toward person B. Such a shift is not acceptable because it

suggests that first person A is the addressee and then person B. This would result in an addressee shift within one sentence and those are not acceptable.

$$(184) \quad \begin{array}{c} \text{Q} \\ \hline \text{EG-A} \quad \text{EG-B} \\ \text{*IX-A} \quad \text{IX-B} \quad \text{KENNEN} \\ \text{POINT-A} \quad \text{POINT-B} \quad \text{know} \end{array}$$

I explained the prohibition on addressee shift by the principle of INTERLOCUTORFIXATION in Section 3.1.3. The example in (184) suggests that this principle also holds for sign languages. If this is the case then we predict that a number of observations from the present chapter also apply to sign language. We saw that this is true for addressee shift and in the remainder of this section we will look at some other observations.

In Section 3.2.1 we saw that quantifiers cannot be first- or second-person syntactically in spoken language. Unfortunately, this cannot be checked for sign language. As we established in Section 2.3, sign languages do not distinguish person in their pointing signs, so there is no way to verify the person value of the quantifier because there is no element with which it may agree. Or, to put it differently, there are no person values in sign language, so there is nothing to check.

In Section 3.4 we looked at accommodational binding and concluded that first and second person *cannot* be accommodated in spoken language, while third person can. In the English sentence in (185) pronoun *they* may be accommodationally bound (which means that *they* denotes a different group of people for each company).

(185) In most companies they work hard

To express this reading in a sign language like Sign Language of the Netherlands (SLN) a word like *PERSOON* ‘person’ must be used, see (186).

SIGN LANGUAGE OF THE NETHERLANDS

(186) VEEL BEDRIJF PERSOON HARD\_WERKEN  
 many company person work.hard  
 ‘In many companies they work hard’

If a pointing sign is used, only a referential reading is felicitous, see (187).

(187) VEEL BEDRIJF IX-A-C HARD\_WERKEN  
 many company POINT-A-C work.hard  
 ‘In many companies you/they work hard’  
 [point from A to C]

Thus, pointing signs are obligatorily referential, whether they refer to speakers,

addressees or others (Liddell 2003). Zwets (2012) points out that a pointing sign always points to a real-world *location* and that this location may be directly or indirectly connected to an entity. It is the pointing to the location which is obligatorily referential and which produces the restrictions in this section. The obligatorily referential nature of pointing means that there is no person split in sign language with respect to accommodation, but a pointing sign–noun split (similar to a pronoun–noun split in spoken language). In other words, pronouns referring to a speakers and addressees cannot accommodate in spoken language because they are necessarily anaphoric, but in sign language pointing signs that point at others are also necessarily referential, which is why there is no person split here.

In fact, the obligatory referential status of pointing signs to others shows up in other environments in sign language. In a spoken languages like English the third-person pronoun *he* can appear in a sentence with a quantifier like (188).

(188) Everyone thinks he is smart

This example has two readings for *he*: a referential one (189a) or a bound one (189b).

- (189) a. Referential  
 $\forall(x)(x \text{ thinks } x \text{ is smart})$   
 ‘Every person x thinks that x is smart’
- b. Bound  
 $\forall(x)(x \text{ thinks } y \text{ is smart})$   
 ‘Every person x thinks that some salient person y is smart’

How do these two readings work in sign language? In (190) we find an example of SLN that corresponds to the bound reading for *he* (see Kimmelman 2009).

SIGN LANGUAGE OF THE NETHERLANDS

(190) IEDER-MV DENKEN ZELF SLIM  
 every-PL think self smart  
 ‘Everyone thinks he is smart’

The crucial word is ZELF ‘self’ which acts as some sort of long-distance reflexive. It is not the construction normally used for expressing ‘you’ or ‘he’; a point to the relevant individual is of course the normal way to do this. Yet, if such a point is used, only the strict reading can be obtained, which means that there is a specific individual in mind, namely the person pointed at, see (191). This person may be an addressee or an other.

- (191) IEDER-MV DENKEN IX-A SLIM  
 every-PL think POINT-A smart  
 ‘Everyone thinks you/he is smart’  
[points at A]

Thus, because pointing signs are obligatorily referential they may not be bound by a distributive quantifier. Again we see no difference between pointing signs to speakers, addressees or others.

The necessarily referential status of pointing signs stems from their indexical nature: in an indexical system one can only refer to specific entities. Similarly, if a pronoun in spoken language is given indexical support, the possibility to be semantically bound goes away as well, see (192).

- (192) Everyone thinks he is smart  
[points at A]

Thus, the indexical nature of pointing sign prevents pointing signs to others from being bound, which means that pointing signs to others behave like pointing signs to speaker and addressees and that there are no person splits to be observed in this area.

To sum up, INTERLOCUTORFIXATION also holds for sign language and addressee shift is ungrammatical as expected. The principle does not show in other areas, because sign languages do not distinguish person syntactically and because all pointing signs are referential in nature.

### 3.6.3 Summary

Sign languages show that it is wise to distinguish between speech-act roles (speaker, addressee and other) and person (inclusive person, first person, second person and third person). Person marking is an indirect way to encode speech-act roles and shows up as personal pronouns, verbal affixes, etc. Sign languages do not mark person, as we saw in Section 2.3. Yet, speech-act roles themselves do play a role in sign language. We have seen two examples in this section: the HEY sign in American Sign language—used to draw attention—only applies to the addressee, and addressee shift is prohibited in sign language while shifting between multiple others is no problem.

## 3.7 Conclusion

In this chapter we have been looking for rigid person patterns, i.e. person patterns that hold for all languages in the world. We found three (and in Section 4.4.2 we will find another one). The first is the MULTIPLEREFERENTS pattern ( $/S/ A O$ ) which tells us that a sentence can only have one speaker. The second is the VOCATIVEFUNCTIONS pattern ( $/S/ A /O/$ ) which

shows that for functions that are associated with the vocative—expressive small clauses like *idiot* in *Stop it, idiot!* for example—there are no speaker-directed or other-directed constructions, only the addressee-directed vocative construction. Vocatives are also in other respects very interesting: they are often syntactically third-person (*little girl* in *Go away, little girl*) but semantically they are associated with addressees.

These two rigid person patterns go against Lyons's theory that third person is fundamentally different from first and second person (Lyons 1977). It seems that person patterns do not have one single form, but that the form depends on the phenomenon for which it is a pattern.

The third rigid person pattern, INTERLOCUTORFIXATION (S A //Ø), *is* in line with Lyons's theory. The pattern occurs in many phenomena in language, which may explain the popularity of Lyons's theory. The principle behind the pattern is that the moment a sentence (or a sequence of sentences) is uttered the identities of the speaker and the identity of the addressee are fixated. As a result it is very hard to reset the identity of speaker and addressee during the sentence. This has a number of consequences. First of all, there are very strict constraints on speaker shift and addressee shift within a sentence. Shifting the identity of a third-person pronoun involves no such constraints. Second, it is impossible to accommodate (i.e. derive their identity from some other element in the sentence) first- and second-person pronouns. For third-person DPs, however, it is possible to be accommodated. Moreover, because third-person DPs can be accommodated they can indirectly refer to speakers and addressees, while a first-person pronoun can only refer to a speaker (or speaker group) and a second-person pronoun to an addressee (or addressee group). Third, quantifiers (the quantificational pronoun *some*, for example) can only be third-person. If *some of you* were second-person, then the addressee would shift from the *you* supergroup to the *some* subgroup and such addressee shifts are not allowed (a similar case can be made for *some of us*). Fourth, DPs like *you linguists* have to include all addressees; otherwise there would again be an addressee shift in the sentence. A DP like *these linguists* with a third-person determiner, on the other hand, does not have to include all proximate things. All four phenomena can be derived from the INTERLOCUTORFIXATION principle.

We have also encountered some phenomena in this chapter for which there are no person patterns. For basic semantic binding (*We think we're smart*) there is no distinction in person; the singular–plural distinction is more important here. In addition, pronouns are never nouns in the languages in the world, and may therefore not combine with determiners, irrespective of person. That is, both *\*every you* and *\*every he* do not occur in the languages of the world, which is predicted by the DP hypothesis (Postal 1966, Elbourne 2005). Pointing signs in sign languages, finally, are always referential, whether first-, second- or third-person. This is why there is no distinction between a second-person and a third-person pointing signs in sign language.

What sign language also shows is that there is a difference between speech-act roles and person. Speech-act roles are the three roles important for speech acts (speaker, addressee and other). These roles are indirectly encoded by person markers which may be inclusive-person, first-person, second-person or third-person. Sign language does not make use of person markers (at least, not of the distinction between second- and third-person) but it does make use of speech-act roles. In the next chapter—in which we will look at non-rigid person patterns—the distinction between speech-act roles and person will return.



## CHAPTER 4

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### Person hierarchies

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The main purpose of this dissertation is to find out whether there are more person patterns in language than inclusive/first/second versus third. In the previous chapter I have looked at *rigid* person patterns. If a phenomenon has a rigid person pattern, this means that this phenomenon is the same for every language. In this chapter I want to look at *non-rigid* person patterns. These are person patterns that are also universal, but allow for more than one state: different languages may have different states and languages may change from one state to another.

One scholar who has investigated non-rigid person patterns is Silverstein (1976). He has looked at the interaction between, among other things, the grammatical category of person and the grammatical category of *semantic roles*. Semantic roles (also known as thematic or participant roles) express the role an entity fulfills in a predicate (agent, patient, instrument, . . .) The syntactic markers of semantic roles are commonly known as cases (when affixes) or adpositions (when independent words). Silverstein investigated *ergative marking* (the overt marking on an agent DP) and *accusative marking* (the overt marking on a patient DP), and with respect to ergative marking he made the observation in (1).

- (1) Ergative marking on first and second person is more often absent than ergative marking on third person

With such an observation we predict that the existence of languages with no ergative marking on first and second person ( $\{N//\mathcal{Q}/ 3\}$ ) but also the existence of other types of languages—languages with no ergative marking at all ( $\{N//\mathcal{Q}$

3/)) for example. This is a big difference with the rigid person predicates from the previous chapter, which allow only one type of language. In the typological literature an observation like in (1) is called a *person hierarchy*. In Section 4.1 we will look in more detail at how such hierarchies work.

In a way these non-rigid person patterns seem to be less fundamental to language than the rigid ones. Non-rigid person patterns exist because the grammatical category of person interacts with some other grammatical category. The grammatical category with which person interacts in Silverstein's research is the category of semantic roles. I will discuss this interaction in Section 4.2. In the next three sections we will look at other grammatical categories with which person may interact. Section 4.3 will feature the grammatical category of *illocutionary force*, which includes markers for things such as questions, assertions and commands. In Section 4.4 we will investigate the grammatical category of *evidentiality*, which expresses the semantic concept of the source of information of the utterance. Three nominal categories (spatial deixis, gender and politeness) and their interaction with person will be discussed in Section 4.5.

We will encounter a number of person hierarchies in these four sections. In Section 4.6 we will see whether we can predict which person hierarchies occur in language and which ones do not. Finally, in Section 4.7 we will look at the difference between rigid person patterns and non-rigid person patterns (i.e. person hierarchies).

## 4.1 Person hierarchies and predictability

Silverstein's observation in (1) on ergative marking (Silverstein 1976) is usually represented as a *person hierarchy*, see (2).

- (2) Ergative marking absent on pronoun  
1,2 > 3

In such a hierarchy the greater-than sign means 'occurs more often than'. Therefore, what the hierarchy in (2) says is 'the absence of ergative marking occurs more often on first- and second-person pronouns than on third-person pronouns'.

Such hierarchies are commonly known in the literature as *markedness* hierarchies. Yet, as Haspelmath (2006) notes, the term "markedness" is rather ambiguous and not very explanatory by itself. He argues that what really underlies such hierarchies is *predictability*: can the addressee predict something without the need of an overt marker? I will discuss predictability in Section 4.1.1. Another issue regarding person hierarchies is the inclusive person value. If the inclusive is taken seriously as a person value, then linguistic phenomena should be investigated in the plural rather than the singular, see Section 4.1.2.

### 4.1.1 Predictability and morphological reduction

The idea of predictability is that in a language the speaker does not mark overtly what is highly predictable (see Haspelmath 2006). Let us see how this works out for Silverstein's agents and person. When speakers or addressees are participants in a transitive predicate, most of the time they fulfill the role of agent, as a speaker typically talks about what she did herself or asks what the addressee did (cf. van Bergen 2011:Ch. 1). Therefore, since it is very predictable that a first or second person is an agent, there is no need for an overt agent-marker (the ergative case). For third person, on the other hand, the agent role is less predictable, as third persons are often patients. Therefore, it is harder for an addressee to interpret a third person without ergative case than a first or second person without ergative case. This is reflected in the hierarchy on ergative marking in (2): the tendency in languages to have no ergative marker for first and second person is stronger than the tendency to have no ergative marker for third person.

Predictability may have a number of observable effects according to Haspelmath (2006). One effect is *phonological reduction*. If a marker is highly predictable sounds may be pronounced more sloppily, because the addressee will recognize the marker anyway (see Nettle 1999, Lestrade 2010:Ch. 2). A well-known example is the oft-occurring English collocation *want to*, which may be reduced to *wanna*, in which the *t*-sound is absent. It is, however, rather hard to compare two markers on phonological reduction—what should be measured: phonemes, syllables, feet or something else? Furthermore, it is not always evident how to define phonological reduction exactly; for example, is a short vowel plus a consonant longer than a long vowel? Because of these problems I have decided not to look at the phonological reduction effects of person hierarchies in this dissertation.

*Morphological reduction* is another effect of predictability. We already saw it at work in the hierarchy on ergative marking in (2): the agent-marking morpheme is often absent when it is highly predictable. Another example is English patient marking (see Trask 1996). Old-English still had patient marking in the form of accusative case, see (3), but the increasingly rigid word order made the patient role highly predictable, and in the history of English the accusative marker on articles was dropped.

OLD ENGLISH

- (3) *Ic hæbbe þo-ne fisc gefangen-ne*  
 1SG have DEF-ACC fish caught-ACC  
 'I have caught the fish'

These examples illustrate the MORPHOLOGICALREDUCTION constraint in (4).

- (4) MORPHOLOGICALREDUCTION  
 A marker that is highly predictable tends to have fewer morphemes than a marker that is less predictable

I assume that in most cases the tendency in (4) will mean that the marker with low predictability has one morpheme, and that the marker with high predictability has no morphemes. This is what occurs with agent and patient marking in the Australian languages as investigated by Silverstein (1976). Occasionally, however, it happens that higher numbers are in play. In English number marking, for example, the singular has no marker (5a) and the plural is marked by a single affix (5b), while the dual marker (the marker that expresses a quantity of 2 conceptually) consists of two morphemes—the affix and the numeral *two* (5c). Note that the numeral *two* is only necessary if it not clear from the context that the number of books is two; nevertheless, I count the data in (5b-c) as a difference between plural marking and dual marking in English.

- (5) a. the book  
       b. the book-s  
       c. the two book-s

These data are in line with the cross-linguistically attested number hierarchy (see Corbett 2000). This number hierarchy can be found in (6). One thing the hierarchy shows is that in a language the dual marker tends to have more morphemes than the plural marker. We have seen that this is the case for English (two morphemes vs. one morpheme).

- (6) Number hierarchy  
       SG > PL > DUAL

There is another mechanism that also contributes to MORPHOLOGICALREDUCTION: *regularization*. Examples of this can be found in the English past tense. Some English verbs used to have a suppletive past tense form; an example is the verb *climb*, which used to have a past tense form *clomb*. If these past tense forms are not so frequent, a speaker can choose to construct a past tense form based on the more frequent basic verb stem *climb* instead, adding the regular past tense marker *-ed* to get the form *climbed*. Clearly this also leads to a situation where the more predictable marker (the present tense marker) has less morphemes than the less predictable marker (the past tense).

Finally, I would like to discuss the status of exceptions. We have seen that the rigid person patterns of Chapter 2 are without exception in the languages of the world. In this chapter we have seen so far that person hierarchies allow for multiple types of language, but this does not automatically mean that they allow exceptions. Silverstein's person hierarchy predicts that the types of agent marking in (7a) exist and that the types of agent marking in (7b) do *not* occur.

- (7) a. Types of agent marking expected by Silverstein (1976)
- |              |              |              |
|--------------|--------------|--------------|
| 1            | 2            | 3            |
| <del>1</del> | 2            | 3            |
| 1            | <del>2</del> | 3            |
| <del>1</del> | <del>2</del> | 3            |
| <del>1</del> | <del>2</del> | <del>3</del> |
- b. Patterns of agent marking not expected by Silverstein (1976)
- |              |              |              |
|--------------|--------------|--------------|
| 1            | 2            | <del>3</del> |
| <del>1</del> | 2            | <del>3</del> |
| 1            | <del>2</del> | <del>3</del> |

Yet, in a language like Hungarian it is the third-person marking that is absent for agents, so Hungarian has 1 2 ~~3~~ agent-marking (Nichols 1992:49). This is an exception to the person pattern, and in this chapter we will see that there are more person hierarchies with exceptions. Such exceptions notwithstanding, a person hierarchy has its value because it fares better than the null hypothesis, which says that all types of marking should occur with equal frequency. A person hierarchy predicts which types occur with high, and which ones with low frequency.

To sum up this section, what underlies person hierarchies is predictability, and one effect of predictability is MORPHOLOGICALREDUCTION, which will be investigated in this chapter.

#### 4.1.2 The inclusive, the plural and person hierarchies

Another important aspect of person hierarchies is the number of person values. I concluded in Chapter 2 that language users split up the category of person in maximally four parts: the inclusive-person person value (for groups with both speakers and hearers), the first-person person value (for groups with speakers but no hearers), the second-person person value (for groups with hearers but no speakers), and the third-person person value (groups with neither speakers nor hearers). As a consequence, all four person values should be considered when investigating person hierarchies. An alternative analysis is that the inclusive is disregarded as a separate person value and once again follows what the first-person person value does. Such an analysis is not only at odds with the claim in Chapter 2 that the inclusive is a fourth, independent person value, but is also incompatible with the fact that sometimes the inclusive and the first person behave differently, see the command hierarchy ( $2 > \frac{1}{2} > 3 > 1$ ) in Section 4.3.3 for example. Person hierarchies should therefore always include the inclusive.

However, most scholars do not consider the inclusive person value while looking for hierarchies. An example is Dixon (1979), who put the observations on agent-marking from Silverstein (1976) in the form of the hierarchy in (8).

- (8) Silverstein Hierarchy (three-value version)  
 $1,2 > 3$

The lack of the inclusive person value is apparent in (8). Yet, Silverstein himself recognized the importance of the inclusive person value. His version of the hierarchy is in (9).

- (9) Silverstein Hierarchy (four-value version)  
 $\frac{1}{2} > 1,2 > 3$

However, most scholars ignore the inclusive.

An important characteristic of the inclusive value is that it only exists in the plural. There are a number of ways to deal with this fact in person hierarchies. One way is to add data from the singular and data from the plural together for each person value. As a result, the inclusive will be a rather marginal category because the singular occurs more often than the plural and the inclusive only exists in the plural. Consequently, the inclusive person value will probably always be at the right-hand side of a person hierarchy: its predictability is low because it seldom occurs. As we will see, this is not true for all person hierarchies—the command hierarchy ( $2 > \frac{1}{2} > 3 > 1$ ) in Section 4.3.3 is an example—so a better solution is needed.

In the second approach to the inclusive person value, emphasis is placed on a fair comparison between the inclusive and the other person values. Because of this only the plural values of a linguistic phenomenon are compared, as the inclusive does not have a singular. In practice this can really be a problem, since many scholars only look at singular forms in their research, probably because singular forms occur more frequently and because many Western languages lack dedicated inclusive markers. We will encounter this problem a number of times in this chapter, unfortunately.

Another reason to look at the plural is that in the plural the difference between person and speech-act roles comes to light. As we saw in Section 3.6.1, the vocative involves speech-act roles and not person because in the plural it involves multiple addressees and not an addressee group (i.e. a group with an addressee) which is the semantic translation of second person. In other words, if we want to distinguish between person and speech-act roles, we should look at the plural.

To sum up this section, I think there are two very good reasons for looking at the plural in typological research: both the inclusive person and the difference between person and speech-act roles only show up in the plural. The consequence, however, is that scholars should look at the plural instead of the singular, and this is something that few scholars do.

### 4.1.3 Summary

We now have the means to look for person hierarchies in the languages of the world: for any phenomenon we have to count the number of morphemes for each person value. Because of the inclusive and the difference between person and speech-act roles we should look at the plural forms rather than the singular forms.

## 4.2 Person hierarchies I: semantic roles

A semantic role is the role that an entity performs in an event. Examples of semantic roles are agent, recipient and instrument. These semantic role values can be expressed by case markers and adpositions (i.e. prepositions or postpositions). Because semantic roles have markers we can consider them a grammatical category.

We already encountered a person hierarchy on semantic roles in the beginning of this chapter: the Silverstein Hierarchy. This hierarchy is supposed to be a hierarchy on the marking of the agent role. Silverstein (1976) also devised a hierarchy on patient marking; we will look at this hierarchy in Section 4.2.1. This hierarchy is based on a sample of Australian languages and is the reverse of the Silverstein Hierarchy. When looking at cross-linguistic data, however, it will become apparent that the two hierarchies have to be revised. Section 4.2.2 will be devoted to this. Finally, in Section 4.2.3 we will investigate whether Silverstein's proposed reversal between agent- and patient-marking perhaps holds at the level of the individual language.

### 4.2.1 Silverstein (1976) and the agent–patient reversal

Silverstein (1976) devised the hierarchy in (10) for ergative marking, i.e. the marking of the agent role of an entity.

- (10) Silverstein Hierarchy  
 $\frac{1}{2} > 1, 2 > 3$

For morphological marking the hierarchy means that on average the inclusive is marked by the least number of morphemes, and that third-person has a relatively high number of morphemes. In practice this means that the inclusive will have the highest chance not to have a dedicated morpheme in a language.

Silverstein also posited a hierarchy for accusative marking. Such a hierarchy involves markers of the patient role. It expresses which patient-role marker is most likely to be expressed by a null morpheme—the inclusive-person, the first-person, the second-person or the third-person marker. According to Silverstein this hierarchy is the reverse of the hierarchy in (10). This means that for him third-person has the highest chance of being expressed by the null

morpheme, and the inclusive has the lowest chance, see (11).

- (11) Reversed Silverstein Hierarchy  
 $3 > 1,2 > \frac{1}{2}$

Silverstein has only used data from Australian languages, however, to constitute the hierarchies in (10) and (11). In the remainder of this section I will show that another picture arises when looking at languages from all over the world.

#### 4.2.2 Against Silverstein (1976)

For cross-linguistic data on the agent and patient marking I have consulted the Person-Agreement database (PAD). This database is constructed by Siewierska and Bakker (no date) and contains data on over 400 languages. In this database it can be found, among other things, for what person values languages express their semantic roles with an overt morpheme. I have looked at three of their categories: A (the agent of a transitive predicate), P (the patient of a transitive predicate) and S (the sole argument of an intransitive predicate). For a marker in the S category it depends on the verb whether it is an agent or a patient semantically. This makes it not very insightful as a category for present purposes, but I have included it for the reader who wants to see the full picture.

In (12) I present an overview of the data. The overview shows the frequency of certain person patterns in agent and patient markers. A value of 37 for “A” and “1,2”, for example, means that in 37 languages there is an agent marker for first and second person, but no agent marker for third person.

- (12) Presence of marker for semantic roles specified by person

	1	1,2	1,2,3	2,3	3	1,3
A	4	37	297	1	5	2
P	4	54	192	1	13	1
S	3	44	295	0	5	2

One thing to note about the data in (12) is that the inclusive is not treated as a separate category. This means that from this data we can only generate person hierarchies with three person values: first, second and third person. Nevertheless, even with only three person values we can still test Silverstein’s hypothesis that the person hierarchy of Patient marking should be the reverse of the person hierarchy of Agent marking.

Which person hierarchy fits the data in (12) best? For patient marking this is a  $3 > 2 > 1$  hierarchy, as is shown by the second line in the overview in (12). It accounts for languages in which only the first-person marker is present (4), languages in which only first- and second-person marker are present (54), and languages in which all three markers are present (192). So, 250 of 265

languages fit this profile. Notice that for Silverstein first and second person were ranked equally, which would amount to a  $3 > 1, 2$  hierarchy, resembling the Reversed Silverstein Hierarchy in (11). Yet, because there are four languages in Siewierska and Bakker’s sample where only the first person is overt, and no languages where only the second person is overt, the  $3 > 2 > 1$  hierarchy is better, although only slightly. The overview in (13) lists the observations in a more compact form.

(13) Appropriateness of person hierarchies for semantic roles

	$3 > 2 > 1$		$1 > 2 > 3$	
	explained	unexplained	explained	unexplained
A	338	8	303	43
P	250	15	206	59
S	342	7	300	49

For Agent marking the picture is more controversial. As the overview in (13) shows, also in this case the  $3 > 2 > 1$  hierarchy is the most appropriate one: it accounts for 338 of 346 languages. A  $1 > 2 > 3$  hierarchy—which is the reverse of the patient marking hierarchy and therefore predicted by Silverstein to be the best fit—accounts for only 302 of these 346 languages. This means that according to these data agent marking and patient marking are not the reverse of each other. Instead they seem to behave alike.

A more nuanced view is perhaps that there is both a  $3 > 2 > 1$  tendency and a  $1 > 2 > 3$  tendency in the marking of semantic roles (agent as well as patient), but that the  $3 > 2 > 1$  tendency is stronger. Nevertheless this is still different from the pattern reversion proposed by Silverstein, so his analysis based on Australian languages cannot be replicated on a worldwide scale.

### 4.2.3 The agent–patient reversal in individual languages

When languages are lumped together, agent and patient marking apparently follow the same lines. But is this also the case for an individual language? We saw that there is also a  $1 > 2 > 3$  tendency in languages, which is not that much weaker than the  $3 > 2 > 1$  tendency. Theoretically it could therefore be that there are three groups of languages: i) a big group with a  $3 > 2 > 1$  tendency for agent marking and a  $1 > 2 > 3$  tendency for patient marking; ii) a big group with a  $1 > 2 > 3$  tendency for agent marking and a  $3 > 2 > 1$  tendency for patient marking; iii) a small group with a  $3 > 2 > 1$  tendency for both agent and patient marking. In this scenario there would be a hierarchy reversal between agent and patient marking for most of the languages, which would be in line with the claims made by Silverstein (1976). But is this the correct scenario?

Let us look at what kind of patterns of marking actually exist in individual languages. According to Siewierska and Bakker’s sample the pattern that occurs

most often has markers in all persons for both agent and patient marking. Unfortunately, this pattern does not distinguish between persons and therefore does not point in the direction of one of the two hierarchies. This is why we will look at two other patterns instead: overt marking of third person on the one hand and overt marking of first and second person on the other hand. These two patterns are the most frequent after overt marking of all three persons, see (12), and the first one favors a  $3 > 2 > 1$  hierarchy while the second one favors a  $1 > 2 > 3$  hierarchy. As a consequence, looking at these two patterns will probably provide information on how agent and patient marking interact in an individual language.

In Siewierska and Bakker's sample I found twenty languages that have overt marking of first and second person for both the agent and the patient. One language has overt marking of third person for both agent and patient. Also one language has overt marking of first and second person for agents and overt marking of third person for patients. There are no languages, finally, that have overt marking of third person for agents and overt marking of first and second person for patients, see the overview in (14).

- (14) Correlation of presence of agent and patient markers for different persons

A	P	languages
1&2	1&2	20
3	3	1
1&2	3	1
3	1&2	0

This overview shows that in twenty-one languages the same hierarchy applies for agent and patient marking, while in only one language the reverse hierarchy applies. Thus, also at the level of individual languages Silverstein's claim that the agent marking and the patient marking hierarchies should be each other's mirror image seems misguided.

#### 4.2.4 Summary

Data from the Person-Agreement Database by Siewierska and Bakker (no date) show us that in both agent and patient marking there is a  $3 > 2 > 1$  hierarchy. What the hierarchy comes down to is that a third-person agent or patient marker has a higher chance to be absent than a first- or second-person agent or patient marker. This contradicts the claim by Silverstein (1976) that the hierarchies of agent and patient marking should be the reverse of each other.

The follow-up question is: why should both agent marking and patient marking follow a  $3 > 2 > 1 >$  hierarchy? Following Haspelmath (2006) this would mean that third persons are both more predictable agents and more predictable patients than first or second persons. I would like to know whether

that is in line with the actual frequencies of occurrence. In Section 4.3.2 we will continue this discussion and look at the difference between assertions and questions.

### 4.3 Person hierarchies II: illocutionary force

Illocutionary force involves the distinction between assertions, questions, commands, exclamations, promises and the like. We will see that person is very important for illocutionary force in this chapter. Only the three illocutionary forces that occur most frequently in the linguistic literature will be investigated: assertions and questions in Section 4.3.2, and command in Section 4.3.3. But first we will have a closer look at the concept of illocutionary force and how it is marked in Section 4.3.1.

#### 4.3.1 The marking of illocutionary force

A sentence is more than a subject and a predicate. A speaker intends to achieve something by uttering a sentence. I will use the term *illocutionary force* for these intentions (the term *speech act* is also frequently used). The concept of illocutionary force can be seen as a grammatical category, because it can be marked by grammatical elements like verbal affixes, see Section 2.1.1. Three values of the category of illocutionary force can be seen in (15a-c), namely *assertion* ('conveying information') in (15a), *question* ('asking for information') in (15b), and *command* ('giving orders') in (15c).

- (15) a. You stopped hiccuping.  
 b. Did you stop hiccuping?  
 c. Stop hiccuping!

The grammatical category of illocutionary force is notoriously fuzzy (see Levinson 1983:Ch. 5). In (16a-c) a marker of the illocutionary force often referred to as the *indicative* is used. In (16a) the indicative is used to mark an assertion; the English indicative (and its counterpart in other languages) is often used to mark assertions, especially in narratives. In the Internet examples (16b-c), however, the assertion value of the indicatives is overridden, in a sense. The construction *I want to ask you* gives (16b) the function of a question, and the construction *I demand that you* gives (16c) the function of a command.

- (16) a. I have blond hair.  
 b. I want to ask you whether there is a visa for working in Korea.  
 c. I demand that you shoot me now.

In other words, an indicative sentence is usually an assertion, but a sentence with an indicative *I want to ask you ...* is a question, and a sentence with an indicative *I demand that you ...* construction is a command. So an indicative

marker does not automatically mean an assertion.

It gets more complicated than this. It is also not necessary to have overt constructions in order to change the illocutionary force. The indicative sentence in (17), for example, is usually taken as a command to come to the table and eat dinner.

(17) Dinner is ready.

Speech acts like these are known as *indirect* speech acts. Some scholars argue that indirect speech acts point at a distinction between semantic meaning and pragmatic meaning (again, see Levinson 1983:Ch. 5). In this dissertation, however, I will disregard indirect speech acts. The reason is the following: there is more data on the frequency of markers than on the frequency of functions, so I only investigate markers. Yet, indirectly I want to say something about functions, so for each speech act I will only look at the markers that usually mark this speech act. For English, for example, this will be the indicative for questions and assertions and the imperative for commands.

#### 4.3.2 Assertions and questions

As we have seen in the previous section, assertions are utterances that provide information (*The killer had a beard*) and questions are sentences that ask for information (*Do you own a laptop?*) The two illocutionary forces show different preferences for person values. Questions seldom occur with first persons, as a speaker has no need of being informed about her own actions. Assertions, on the other hand, tend not to occur with second persons, as an addressee similarly has no need of being informed about her own actions. This suggests that questions and assertions should have different person hierarchies, as these preferences relate to predictability, which underlies person hierarchies.

However, assertions and questions almost always behave alike in a language. It happens very infrequently that a language has a different set of person markers for questions and for assertions (see Dryer 2005b). And even if this is the case, it does not mean that there is a difference in person patterning between the two sets. Therefore, we may conclude that the hierarchy that was found in Section 4.2 for agent and patient marking—see (18)—may have been established on the basis of data on assertions, but that the hierarchy equally applies to questions. This is in conflict with the idea that the predictability of person is different for questions and assertions. Therefore, we need to take a closer look at what really underlies the agent and patient marking hierarchy.

(18) Hierarchy on agents and patients  
 $3 > 2 > 1$

Let us look at frequency data, as frequency and predictability are often closely related: you can easily predict something that occurs very frequently, see Section 4.1.1. According to Greenberg (1966) the frequency of subject person

forms (i.e. pronouns and verb agreement taken together) in English has the distribution in (19).

- (19) Frequency of subject person forms  
 $3 > 1 > 2$

Greenberg's study involves text counts of pronouns and both assertions and questions are included. As questions occur less than assertions and second-person subjects are rare in assertions, second-person subjects have a very low frequency. Obviously, these frequency data are not fully compatible with the hierarchy in (18), since in (18) second person is to the left of first person. This means that we have to take a closer look at first and second person.

Let us look at the numbers from the Person-Agreement Database (Siewierska and Bakker no date) again. These numbers—specified for transitive A role and intransitive S role—can be found in the overview in (20), repeated from Section 4.2.2.

- (20) Presence of marker for subject roles specified by person

	1	1,2	1,2,3	2,3	3	1,3
A	4	37	297	1	5	2
S	3	44	295	0	5	2
Total	7	81	592	1	10	4

These data first of all show that most paradigms have person markers for all persons (592 out of 695). If there are so few markers absent, we should ask ourselves if we want to pose a hierarchy for assertions and questions at all. However, the eighty-one paradigms that have an absent third-person marker deserve some explanation, and the high frequency of third-person entities in language might be this explanation. This leaves us with the issue of the relative position of first and second person again. In the hierarchy on agents and patients second person is seen as—on average—shorter than first person. This is based on only seven languages. This makes it hard to come up with a definitive judgment on the relative order of first and second person.

Some scholars have adhered to *iconicity* instead of frequency to explain the patterns in person paradigms. Such an iconicity explanation states that third person is a non-person (see Benveniste 1966, Koch 1995) and that a non-person is preferably left unexpressed. This would predict a  $3 > 1, 2$  hierarchy; the issue of the relative order of first and second person is left unanswered here, which has some merit. However, it is not clear that zero realization of third persons is caused by their being non-persons, as a parallel with the grammatical category of gender shows. In the category of gender the neuter value could be considered a non-gender, parallel to the non-person third-person value. The prediction for neuter gender is then that it should be left unexpressed more often than other genders. Yet, there is no such cross-linguistic pattern (see Corbett 1991). As a consequence, it seems unlikely that being a non-X automatically leads to a

decrease of markers, so the iconicity explanation of the high number of absent third-person markers does not seem feasible.

To sum up this section, it is rather hard to decide whether first or second person has a better predictability for assertions and questions. First of all, first person occurs more often in assertions, and second person more often in questions, but languages rarely have separate sets of person markers for assertion and question. Second, assertions are more frequent than questions, which means that overall first person is more frequent than second person. Third, it is very common for a language to have person markers for all persons, and if person markers are lacking it is usually the third-person marker. All in all, it might be best to assume a  $3 > 1, 2$  hierarchy for assertions and questions combined, see (21).

- (21) QUESTIONASSERTIONHIERARCHY  
 $3 > 1, 2$

### 4.3.3 Commands

Already in Section 2.3.1 we saw that person is important for the grammatical category of *commands*. In this section I will look whether there is a person hierarchy for commands.

Commands are a rather unusual illocutionary force. This becomes apparent when commands are compared to other illocutionary forces like assertions, polar questions and promises. In (22) we find definitions of these three illocutionary forces.

- (22) Definition of three illocutionary forces
- |           |  |
|-----------|--|
| Assertion | ‘speaker informs addressee about proposition p’        |
| Question  | ‘speaker asks addressee whether proposition p is true’ |
| Promise   | ‘speaker promises addressee proposition p will happen’ |

One thing to note is that all three definitions involve the addressee. This is necessary as an assertion like (23a) can address no other person than the addressee, a question like (23b) can elicit an answer from no other person than the addressee and a promise like (23c) cannot be made to any other person than the addressee.

- (23) a. There is tea in the kitchen  
 b. Does John work here?  
 c. My grades will improve!

Commands work somewhat differently, though.

It is possible to create a definition for commands with an obligatory addressee—these commands are usually called imperatives—that parallels the definitions in (22), see (24).

- (24) Definition of the imperative  
 ‘speaker orders addressee to perform action a’

Yet, we should ask ourselves whether it is wise to restrict the concept of commands to addressee-directed commands. First of all, an imperative does not involve the addressee but second person. In (25) the phrase *you guys* can refer to Bob and an absent other person, so the imperative is not restricted to addressees, but it *is* restricted to second person.

- (25) [Alice to Bob:]  
 You guys be careful tomorrow!

Second, commands can also be extended to other person values. Let us compare for example a second-person command like (26a) with something that is usually called a *hortative*, see (26b).

- (26) a. Stop judging yourselves!  
 b. Let’s stop judging ourselves!

These hortatives are exhortations directed at an inclusive-person group. The conceptual closeness of imperatives and hortatives is why I think it makes sense to compare the morphological marking of the two cross-linguistically (cf. van der Auwera et al. 2005). A broad, person-neutral definition of commands can be found in (27).

- (27) Definition of command  
 ‘speaker orders x to perform action a’

For imperatives x will be equal to ‘the second-person group’ (note that a group may consist of one individual here), and for hortatives x will be equal to ‘the inclusive-person group’. Note that this definition makes commands different from assertions, questions and commands, which may only have the addressee as the participant alongside the speaker and not any x. Perhaps this special status of command is due to the fact that commands specifically deal with actions, and not with predicates in general like assertions or questions.

If the definition of command in (27) is true, we would expect that there are languages that have a similar construction for second-person commands and inclusive-person commands. An example of such a language is Hungarian (de Groot 2010) where the construction—verb stem plus imperative marker plus person marker—is the same for second person, see (28a-b), and inclusive person, see (28c).

#### HUNGARIAN

- (28) a. *Öl-j-él!*  
 kill-IMP-2SG.INDEF  
 ‘Kill someone!’

- b. *Öl-j-etek!*  
kill-IMP-2PL.INDEF'  
'Kill someone, you guys!'
- c. *Öl-j-ünk!*  
kill-IMP-1PL.INDEF'  
'Let us kill someone'

It has not been investigated exactly how many languages have similar constructions. Yet, we can extract some numbers from a study on imperatives by van der Auwera et al. (2005). In their 375-language sample, 133 languages have constructions that are similar for second person and inclusive person, 20 languages do not, 21 languages have both constructions that are similar for second person and inclusive person and constructions that are not, and for 201 languages the situation is unclear. This means that at least one third of the world's languages have a construction that is similar for second person and inclusive person.

Which definition of commands predicts these typological data? The narrow definition of command predicts that similar constructions for imperatives and hortatives should only occur by accident, because the definitions of imperatives and hortatives are different. Compare this to the marking of assertions and questions: these have different definitions and Dryer (2005b) notes that only one language out of 954 has a single construction to express both. The broad definition of commands, on the other hand, predicts the high occurrence of paradigms that express both imperatives and hortatives straight away, as this definition does not restrict the identity of the performer of the command. The fact that both often have their own construction can be explained by frequency of occurrence: second-person commands occur much more frequently than inclusive-person commands and profit more from a special short form. Therefore, the broad definition of commands is the better definition.

Up until now we have looked at second-person and inclusive versions of commands. The definition in (28) predicts that there are also first-person and third-person versions of commands, however. Such commands are indeed encountered in the languages of the world and are sometimes given the name *jussive*. English also has jussives; they are formed by using the auxiliary *let*. In (28) there is an example of a third-person command directed at Bill.

- (29) [John heard that Bill needs his help for the umpteenth time; he says to his wife:]  
Let him solve it himself!

Yet, jussives in English are rather complicated (see Mastop 2005), as the auxiliary *let* is also used for causatives (*I let him go* is an example of such a causative). This causative *let* can also be put in imperative form; in (30) we find an example.

- (30) [John's wife wants to help her child with a puzzle, but John holds her back and says:]  
Let him solve it himself!

The sentence in (30) is an second-person causative command and directed at John's wife. Notice that it has the same form as the third-person (non-causative) command in (29). This shows that it is rather complicated in English to talk about third-person commands.

To avoid the ambiguity in English, I will use Dutch examples of jussives. Dutch also uses a *let* auxiliary for both third-person commands and second-person causative commands, but may use a different case form for the topic (i.e. the person who should perform the action specified). In (31) we find a Dutch example of a third-person command; nominative case is used on the third-person pronoun.

## DUTCH

- (31) [John heard that Bill needs his help for the umpteenth time; he says to his wife:]  
*Laat hij het zelf maar oplossen!*  
let 3SG.NOM it self just solve  
'Let him solve it himself!'

The sentence in (31) cannot be a second-person causative command. Thus in order to have unambiguous examples of a jussive I will use Dutch examples featuring topics with nominative case.

We have seen second-person, inclusive-person and third-person commands so far, but a first-person command is also possible, as the Dutch example in (32) shows.

- (32) *Laat ik maar eens een positief onderwerp aansnijden*  
let 1SG.NOM just once a positive subject broach  
'Let me broach a more positive subject'

This example can be seen as a self-imposed command. Interestingly, the Dutch *let* auxiliary can be used for inclusive-person, third-person and first-person commands, but not for second-person commands, see (33).

- (33) \**Laat jij het zelf maar oplossen!*  
let 2SG.NOM it self just solve

The same holds for English, see (34).

- (34) \*Let you solve it yourself!

For both languages the reason is probably that there is already an imperative verb form (*Solve it yourself!* in English) that expresses the intended meaning.

The combination of *let* and second person is blocked by the existence of the imperative form. Similar blocking effects exist in other languages, for example Indonesian (see Sneddon 1996). This shows once again that imperatives and other commands are interconnected in language, and that it makes sense to perform cross-linguistic research on the category of commands as a whole.

Some languages have a very opaque command paradigm. An example is Hungarian (see de Groot 2010). The Hungarian command paradigm can be found in (35).

(35) Hungarian command paradigm

<i>Öl-j-ek!</i>	kill-IMP-1SG.INDEF	‘Let me kill!’
<i>Öl-j-él!</i>	kill-IMP-2SG.INDEF	‘Kill!’
<i>Öl-j-ön!</i>	kill-IMP-3SG.INDEF	‘Let him kill!’
<i>Öl-j-ünk!</i>	kill-IMP-1PL.INDEF	‘Let’s kill!’
<i>Öl-j-etek!</i>	kill-IMP-2PL.INDEF	‘Kill!’
<i>Öl-j-enek!</i>	kill-IMP-3PL.INDEF	‘Let them kill!’

These six forms all have a command marker (affix *-j*) and a meaning that corresponds to their person affix (imperative, hortative or jussive). Such a paradigm also serves as an illustration of the command as a single concept for all persons.

Hungarian shows only one way of how a language expresses commands, of course. Many other languages put more emphasis on the differences in person. Often there is a rather short construction in a language for expressing commands to the hearer, while the constructions for expressing commands to other persons is longer. Dutch is an example of such a language; in (36a) there is an example of a second-person command in Dutch, and in (36b) there is an example of a first-person command in Dutch.

DUTCH

- (36) a. *Zeg maar niets!*  
 say just nothing  
 ‘Just say nothing!’
- b. ***Laat ik maar niets zegg-en!***  
**let 1SG just nothing say-INF**  
 ‘Let me say nothing!’

The first-person command in (36b) has three morphemes more (glossed as *let*, 1SG and INF) than the second-person command in (36a). Such a system of command marking is exemplary for the languages in the world. Aikhenvald (2010:379) has investigated the cross-linguistic behavior of command markers and has come to the hierarchy in (37).

- (37) COMMANDHIERARCHY  
 $2 > \frac{1}{2} > 3 > 1$

What this hierarchy says is that markers of second-person commands tend to have the fewest morphemes, and markers of first-person commands the most.

One important aspect of this hierarchy is that the inclusive shows different behavior than the first person. An example is French: it has dedicated command forms for second person (*lis!* ‘read.2SG’, *lis-ez!* ‘read-2PL’) and inclusive-person (*lis-ons!* ‘read- $\frac{1}{2}$ PL’). First-person and third-person commands, on the other hand, have to be expressed by longer, periphrastic means, see (38).

FRENCH

- (38) **Que je mett-e l’=amour**  
**that 1SG put-1SG.SBJV the=love**  
 ‘Let me sow love’

In Section 4.6 we will come back to this difference between first person and inclusive.

To conclude this section on commands: it makes sense to compare commands for different persons on a cross-linguistic scale, and the result of this comparison is the COMMANDHIERARCHY in (37).

#### 4.3.4 Summary

In this section on illocutionary force we have seen that person is especially important for the illocutionary force of commands. Commands have a person hierarchy that is very interesting:  $2 > \frac{1}{2} > 3 > 1$ . The hierarchy means that for commands the second-person marker is usually the shortest, and the first-person marker the longest. This hierarchy shows that inclusive person can behave differently from first person.

### 4.4 Person hierarchies III: evidentiality

Evidentiality is a relatively new addition to the group of grammatical categories in the history of linguistics. It marks the type of information that a speaker relies upon in making the utterance. In (39) there is an example of an evidentiality marker. This language, Shipibo-Konibo, has a *sensory* evidentiality marker, the affix *r-* (see Valenzuela 2003). Sensory evidentiality markers convey that the speaker has direct sensory evidence for the information in her utterance. Therefore, what (39) means is that some herb is really effective, and that the speaker has seen—or observed in another way—that this is so herself.

SHIPIBO-KONIBO

- (39) *jakon baken-ti waste r-iki ainbo bi-ti*  
 good give.birth-INF herb SENS-COP completely true  
 ‘The herb for easy births is really effective’

Person plays an important role in evidentiality. Most prominently this can

be seen in the *source of information*. In (39) the source of information is the speaker herself. We will deal with the person value of the source of information in Section 4.4.2. The category of person also has an effect on the topic (which is in most cases the subject) of a predicate marked by evidentials. In (39) the topic of the evidential is *waste* ‘herb’. The effects of person on the topic is more subtle and will be investigated in Section 4.4.3. But first, let us see what other values the category of evidentiality has besides sensory evidentiality in Section 4.4.1. These values often behave differently with respect to the category of person, which is why it is important to discuss them.

#### 4.4.1 Types of evidentiality

For present purposes I will only discern four types of evidentiality. Besides sensory evidentiality these types are *performative* evidentiality, *inferential* evidentiality and *reportative* evidentiality. Performative evidentiality occurs with events that the speaker performed herself. In (40) we find an example from Kashya (see Oswalt 1986).

KASHAYA

- (40) *qowá-qala*  
 pack-1SG.PFRM  
 ‘I am packing (a suitcase)’

The speaker knows the suitcase is being packed because she performs the act of packing herself. In most languages with evidentiality markers, sensory and performative evidentiality are lumped together syntactically: they are marked by the same marker. Such markers are known as *firsthand* (or *direct*) evidentiality markers.

Inferential evidentiality means that the speaker makes an inference based on some other evidence or on general knowledge. In (41) we find an example of an inferential-evidentiality-marker (*-ine* from Eastern Pomo, a Hokan language from the United States (see McLendon 2003).

EASTERN POMO

- (41) *b?k-al p<sup>h</sup>a-b?-k-ine*  
 3PL-P burn-PUNCT-INFER  
 ‘They must have gotten burned (because I see signs of, for instance, a fire, bandages, burn cream)’

Reportative (or *quotative*, or *hearsay*) evidentiality means that the speaker has heard the information from another person. In (42) we find an example of a reportative-evidentiality marker (*-ri*) from Oksapmin, a language isolate from Papua new Guinea (see Lawrence 1987). English uses markers like *reportedly* or *it is said that . . .*

OKSAPMIN

- (42) *Hapareapnong mahan kuu gaamin tit pipaa-ri*  
 Haperap.to over.there woman husband.and.wife one went-REP  
 ‘A husband and a wife went (reportedly) over there to Haperap’

This concludes the overview of the types of evidentiality. With this information we can continue our search for person hierarchies.

#### 4.4.2 Person and source of information

All four types of evidentiality strongly prefer certain values for their source of information. Performative evidence obligatorily stems from the speaker; it is after all the speaker herself who experienced the situation. I assume that source of information is about speech-act-roles (i.e. speakers) and not about person (i.e. first person) as the meaning of a performative evidential can be described as ‘...and the speaker experienced it’ not as ‘...and the whole first-person group experienced it’. This already suggests that source of information is a rigid person pattern. It seems that it is *a priori* impossible for a speaker to base her sentence directly on the experience of another person. To do this the other person first has to report their experience. This also goes for a language like English, which does not have a dedicated marker of performative evidentiality. A sentence like (43a) has the speaker as the source of the performative evidentiality, but there is no way in which the person referred to by *he* can be source of some performative evidentiality in a sentence like (43b). This sentence is probably an observation by the speaker.

- (43) a. I’m happy today  
 b. He’s happy today

I therefore propose that we have found the fourth rigid person pattern here, see (44). The principle behind the pattern is that only the speaker can be the information source of performative evidentiality.

- (44) EVIDENTIALITYSOURCE  
 S /A//O/

The pattern also pertains to sensory and inferential evidence. Sensory evidence obligatorily stems from the speaker, as all the sensory information that a speaker has, she acquired herself by definition. The same goes for inferential evidence: inferential evidence always stems from the speaker. A speaker only has access to her own system for generating inferences. Again, if another person wants to share their inferences with the speaker, this person has to report the inferences, which automatically makes it reportative evidence.

In light of this last observation, it may not come as a surprise that the source of reportative evidence is predominantly a third person. Aikhenvald (2006) nevertheless reports a reportative evidential with a second person as

source.

JARAWARA

- (45) *ti-fimiho-none, ti-ra*  
 2SG-be.hungry-REP.F 2SG-say.F  
 ‘You said you were hungry’

Languages differ with respect to the second person. LaPolla (2003) states that in Qiang, a Tibeto-Burman language spoken in China, it is impossible for a reportative evidential to have an addressee as the source of information. A longer, periphrastic direct-speech construction should be used instead (cf. English *But you said you’d come*). As no author has ever mentioned the first person as the reportative source of information of a reportative evidential—as far as I can see—I assume that a first-person source of information is even rarer than a second-person one in the languages in the world, although it is theoretically not impossible.

We can ask ourselves whether the information source of reportative evidentials involve speech-act roles or person. Aikhenvald (2006:217-218) found no significant differences between the first person singular and the first person plural in these cases, which argues for person over speech-act roles. Aikhenvald’s remark also signals that no differences between first person and inclusive person have been observed. Moreover, because languages may differ with respect to reportative evidentiality (the choice is between a dedicated marker or a periphrastic construction, which may differ for different sources of information) we may propose a tentative person hierarchy for reportative evidentials ( $3 > 2 > 1$ ).

In sum, for sensory, performative and inferential evidentiality we have found a rigid person pattern, and for reportative evidentiality a tentative person hierarchy ( $3 > 2 > 1$ ). In (46) we find an overview of the interaction of evidential type and source of information.

(46) Person and the source of information in evidentials

Evidential type	Pattern type	Pattern
Performative	Rigid	S //A//O//
Sensory	Rigid	S //A//O//
Inferential	Rigid	S //A//O//
Reportative	Hierarchy (tentative)	$3 > 2 > 1$

#### 4.4.3 Person and topic of the predicate

A more subtle effect of person on evidentiality can be found in the topic of the predicate marked for evidentiality. For sensory, inferential and reportative evidentiality we can construct a person hierarchy. In (47a-b) we find examples from Tariana (see Aikhenvald 2006).

TARIANA

- (47) a. *amiri-sika*  
 be.drunk-PST.INFER  
 ‘He/she/they/you must be drunk’
- b. *amiri-naka*  
 be.drunk-PRS.SENS  
 ‘He/she/they/you is/are drunk’

In the example in (47a) there is an inferential evidentiality marker, which means it is assumed that the person under discussion is drunk (for example, because there are a lot of empty beer bottles). Crucially, the topic does need to be present when it is second or third person, as in (47a). If, on the other hand, the topic is first-person it has to be present in the sentence. The same observation applies to a sentence marked by sensory information in Tariana, see (47b). In this sentence the drunkenness of the person under discussion is directly observable (a staggering walk, for example) and here it is again second- and third-person topics that may be left out.

According to Aikhenvald (2006) more languages behave like Tariana. On the basis of her observations on sensory, inferential and reportative evidentiality I have established the EVIDENTIALITYHIERARCHY in (48).

- (48) EVIDENTIALITYHIERARCHY  
 $2, 3 > \frac{1}{2}, 1$

What the hierarchy says is that for sensory, inferential and reportative evidentiality the marker of first- and inclusive-person topics tends to have more morphemes than the marker of second- and third-person topics.

Frequency patterns confirm the validity of the hierarchy in (48). Aikhenvald (2006:Ch. 7) notes that only in rare occasions there is a first-person topic for sensory, inferential and reportative evidentiality. She illustrates this with examples from Jarawara (see Dixon 2003:170). In (49a) we see the performative evidentiality marker, which is normal for a predicate with a first-person topic. This sentence means that the speaker was fully aware of getting drunk.

JARAWARA

- (49) a. *o-hano-hara*                      *o-ke*  
 1SG-be.drunk-PST.PFRM 1SG-DECL  
 ‘I got drunk (deliberately)’
- b. *o-hano-hani*                      *o-ke*  
 1SG-be.drunk-PST.INFER 1SG-DECL  
 ‘I got drunk (and don’t recall it)’

In (49b) an inferential evidentiality marker is used instead. Now the sentence means that the speaker was unaware of getting drunk. Perhaps for getting drunk

this makes sense, but for most actions that are performed by an individual, this individual is usually aware of performing them. From this it follows that sensory, inferential and reportative evidentials with first-person topics are expected not to occur very often (note that this is hard to test for sensory evidentiality, as most languages lump performative and sensory evidentiality together). Thus, the hierarchy on topics in (48) is supported by frequency patterns, which means that first-person topics have low predictability within sensory, inferential and sensory evidentiality.

For performative evidentiality there is no person hierarchy. Take the Jarawara sentence in (49a) as an example. In this sentence the speaker is the topic of the predicate. No other individual can be the topic of a sentence with performative evidentiality. This follows from the nature of performative evidentiality—the performer of the predicate is the source of information—and the fact that the speaker is the source of information, as shown in the rigid EVIDENTIALITYSOURCE pattern from the previous section. As a consequence, there is no person hierarchy for the topic of a performative evidential.

In short, I have constructed a  $3, 2 > \frac{1}{2}, 1$  person hierarchy in this section that applies to the topic of three types of evidentiality-marked predicates. For performative evidentiality there is no such hierarchy.

#### 4.4.4 Summary

Person matters for at least two aspects of evidentiality-marked predicates. First of all there is the source of information, i.e. the person who provided the information in the utterance. For three of four types of evidentiality this source of information can only be the speaker. This constitutes a rigid person pattern (S /~~A~~//~~O~~/).

The second aspect pertains to the topic of the predicate marked by the evidentiality marker. For sensory, inferential and reportative evidentiality the marker of such a topic follows a  $3, 2 > \frac{1}{2}, 1$  person hierarchy.

### 4.5 Person hierarchies IV: nominal categories

Thus far we have looked at three grammatical categories in this chapter: semantic roles, illocutionary force and evidentiality. Illocutionary force and evidentiality mark information at the sentence level, semantic roles mark the relation between argument and predicate, but there are also potentially interesting grammatical categories at the *nominal* level. In this section I will investigate a selection of nominal categories: spatial deixis (Section 4.5.1), gender (Section 4.5.2), and politeness (Section 4.5.3).

### 4.5.1 Spatial deixis

Spatial deixis involves the location of an entity. In a language like English spatial deixis is relative to the speaker of the utterance. In (50) we find the demonstratives *there* and *here*. These can be used for a number of things, but especially in a contrastive situation like (50) they tend to express spatial deixis. The weather close to the first person (*here*) is contrasted with the weather further away from the first person (*there*).

(50) The weather is better **there** than **here**

An expression like *there* does not specify whether the weather is near the addressee or near an other. An alternative construction is needed to express this explicitly:

(51) a. How is the weather **where you are**?  
b. How is the weather **where he is**?

In other words, the marker of first-person spatial deixis is shorter in English than the marker of second-person or third-person spatial deixis.

Not all languages are like English, however. First of all, not all languages have a person orientation for spatial deixis; there are also more absolute systems like upriver/downriver and north/east/south/west (see Diessel 2005). But languages that *do* have a person orientation for spatial deixis may also be different from English. Japanese, for example, has a three-way system that explicitly distinguishes between first, second and third person (Janssen 2002). We find the Japanese demonstrative system in (52).

(52) Japanese demonstratives

<i>kono</i>	near first-person or inclusive-person group
<i>sono</i>	near second-person group
<i>ano</i>	away from first- or second-person groups

Janssen explicitly notes that *kono* is used for something that is close to an inclusive-person group. This suggests that we are dealing with person and not with speech-act roles here. This is supported by the fact that the Japanese system can deal with a group that includes both an addressee and an other. A system purely based on speech-act roles should break down here.

To sum up, we have two types of languages with respect to spatial deixis: first/inclusive short and second/third long (English), and all markers equally long (Japanese). From these data the hierarchy in (53) can be distilled. The hierarchy says that on average first-person and inclusive-person spatial deixis needs less morphemes than second- and third-person spatial deixis.

(53) SPATIALDEIXISHIERARCHY:  
 $\frac{1}{2}, 1 < 2, 3$

### 4.5.2 Gender

The interconnectedness between person and gender has been noted by many, for example by Cysouw (2003:320-321). Cysouw notes that there is a difference between gender in first and second person and gender in third person: in first and second person gender is always biological gender (female vs. male) while in third person other oppositions are possible (animate vs. inanimate, big vs. small).

More in general, gender distinctions occur far more often in third person than in first and second person. In addition, there is also a difference between first and second person: gender distinctions occur more often in the second than in the first person. In other words, in most languages the first person needs a periphrastic construction to express its gender explicitly, see the English example in (54)

(54) I, a man, am the one who wrote that

Siewierska (2004:105) derived the hierarchy in (55) from these observations.

(55) GENDERHIERARCHY  
3 > 2 > 1

Because I have emphasized the importance of the inclusive, I would like to know how the inclusive relates to the GENDERHIERARCHY in (55). Although Cysouw (2003) notes that few languages that have a first-person/inclusive-person distinction also have gender distinctions, he does not mention a difference in frequency between gender marking on inclusive-person and first-person forms. At any rate, it is probably not possible to transfer the hierarchy in (55) to the plural anyway. Cysouw mentions that gender distinctions in the first-person plural are more frequent than in the first-person singular, while Siewierska (2004:107) mentions that overall gender marking occurs less in the plural than in the singular. So perhaps for the plural the hierarchy on gender is not 3 > 2 > 1; I will leave this issue to further research.

In conclusion, for gender marking there is a 3 > 2 > 1 hierarchy, but this hierarchy probably only applies to the singular.

### 4.5.3 Politeness

It is very important to distinguish between two types of politeness marking, as we will see in this section on politeness. The first type is *participant politeness* (see Potts and Kawahara 2011). Participant politeness involves politeness regarding some individual in the sentence. We find an example of participant politeness in English in (56a-b). Referring to an individual with a title and a surname expresses more politeness to that individual than using a first name.

(56) a. I'm going for a coffee with George

- b. I'm going for a coffee with Mr. Clooney

Another example is Nepali third-person pronouns (see Siewierska 2004:229). The third-person pronoun *tinī* is used to refer to an other with a social standing equal to the speaker, while the third-person pronoun *wahā* is used to refer to an other with higher social standing.

Not all politeness distinctions in third-person pronouns are like the one in Nepali however. In Javanese all pronouns express the social relation between speaker and *addressee* (see Siewierska 2004:230). The third-person pronoun *dewege*, for example, expresses an equal standing between speaker and addressee, while the third-person pronoun *piyambaqipin* expresses that the addressee has a higher social standing than the speaker. The politeness in the Javanese pronouns is apparently of a different type than the one in the Nepali pronouns. The politeness in the Javanese pronouns is called *performative politeness* (see Potts and Kawahara 2011).

Performative politeness is often observed on linguistic elements other than pronouns. This makes sense because the addressee is not always overtly present in the sentence by means of a pronoun. In the English sentences in (57a-b), for example, the use of the preterit form *could* (57b) shows more respect from speaker to the addressee than the present form *can* (57a).

- (57) a. Can I see that again?  
b. Could I see that again?

In a language like Japanese performative politeness has a dedicated verbal morpheme, *mashi* 'HON'. In (58) we see the morpheme at work; this sentence is perceived as polite with respect to the addressee (see Potts and Kawahara 2011).

JAPANESE

- (58) *Mary-ga ringo-o tabe-mashi-ta*  
Mary-NOM apple-ACC eat-HON-PST  
'Mary ate an apple'

Is there a hierarchy for either of the two types of politeness? Helmbrecht (2004:170) provides the hierarchy in (59).

- (59) Helmbrecht's politeness hierarchy  
2 > 3 > 1

What type of politeness this hierarchy represents will be the topic of the remainder of this section on politeness. In (60) we find the definitions of the two types of politeness for ease of reference.

(60) Two types of politeness

	Scope	Politeness directed at
Performative politeness	sentence	addressee
Participant politeness	DP	referent group of DP

According to the Helmbrecht hierarchy in (60), the second-person is the person that most often has dedicated politeness forms. Languages in which second-person pronouns are the only pronouns with politeness marking are known as languages with a *T-V distinction*. An example is French with its distinction between *tu* ‘2SG.FAM’ and *vous* ‘2HON’. The problem with the T-V distinction is that it is hard to test whether we are dealing with participant politeness or performative politeness. Both types of politeness come down to the same thing for the second-person singular pronoun: politeness from the speaker to the addressee is expressed. A look at the plural might help us to distinguish between the two types of politeness. This may also clarify whether we are dealing with person or speech-act roles here. Dutch distinguishes between *jullie* ‘2PL.FAM’ and *u* ‘2HON’ in the plural. A high school teacher, for example, will address two students with *jullie* ‘2PL.FAM’ and two parents with *u* ‘2HON’. Let us look at the context in (61); in this context the plural form is not used. This is expected if the politeness is *performative* politeness here: while the parents of the student need to be addressed politely, only the student is the addressee here and the student does not need to be addressed politely. Interpreting the politeness as *participant* politeness here, on the other hand, makes the wrong predictions. The whole group (student plus parents) has persons that need to be addressed politely by the teacher and therefore a polite pronoun should be used, but this is not the case. Thus, politeness in the second person seems to be performative politeness in Dutch.

DUTCH

- (61) [High school teacher talking to a student:]  
*Hoe doen jullie dat thuis?*  
 how do 2PL.FAM that home  
 ‘How do you do that at your place?’

These data on Dutch suggest that Helmbrecht’s hierarchy is about performative politeness, but a closer inspection of plural polite second-person forms is warranted.

What the Helmbrecht hierarchy furthermore predicts is that there are languages that have politeness distinctions for second and third person, but not for first person. This brings up the question whether the politeness in such languages is of the performative type or the participant type. Unfortunately, Helmbrecht (2004) does not list any of these languages. He refers (p. 294) to another article (Helmbrecht 2005) for the empirical evidence behind the hierarchy, but unfortunately he does not discuss the hierarchy in that article. Siewierska

(2004:229-230), however, discusses two languages that have only politeness distinctions in second and third pronoun. One of these languages is Nepali; in Nepali there is a participant politeness distinction, as we saw above. The same goes for San Lucas Quiaviní Zapotec. Thus, for the third person participant politeness seems to be the relevant type of politeness.

For the first person things are again different. Helmbrecht (2004:294) discusses first-person pronouns in languages like Korean and those pronouns have a performative politeness distinction. Participant politeness would be very odd for the first-person singular: it would express the social standing of a speaker with respect to herself. It may occur in the plural, but for the first person in general performative politeness distinctions seems to be more frequent. Note that the so-called *majestic plural* (royal “we”) is not an example of participant politeness; it is inherent to the social relation between speaker and addressee as well.

What this all comes down to is that Helmbrecht’s hierarchy sometimes seems to refer to participant politeness (third person) and sometimes to performative politeness (first and second person). The hierarchy is therefore not useful; the two types of politeness need to be disentangled in the world’s pronoun systems first. As a consequence, I will leave politeness hierarchies to further research.

#### 4.5.4 Summary

It has been rather difficult to devise person hierarchies for nominal grammatical categories. The reason is that phenomena like gender, spatial position and politeness are not easily applied to groups. What goes for the singular may therefore not automatically apply to the plural. The plural is important because it shows what the position of the inclusive with respect to the other person values is, but, unfortunately, little is known about the interaction between person and nominal categories in the plural. I have nevertheless identified two person hierarchies that apply to the singular:  $\frac{1}{2}, 1 > 2, 3$  for spatial deixis and  $3 > 2 > 1$  (singular only) for gender.

## 4.6 Predicting the hierarchies

In this chapter we have come across a number of hierarchies. In (62) we find an overview of these hierarchies.

## (62) Overview of attested person hierarchies

Hierarchy	Name
$3 > 1, 2$	QUESTIONASSERTIONHIERARCHY
$3 > 2 > 1$	GENDERHIERARCHY
$\frac{1}{2}, 1 > 2, 3$	SPATIALDEIXISHIERARCHY
$2 > \frac{1}{2} > 3 > 1$	COMMANDHIERARCHY
$2, 3 > \frac{1}{2}, 1$	EVIDENTIALITYHIERARCHY

In all these hierarchies the marker of the leftmost person value tends to have the shortest form while the marker of the rightmost person value tends to have the longest form.

In this section I want to find out whether there is a linguistic approach that predicts the existence of the attested hierarchies in (62). The answer will give us an insight in the nature of the grammatical category of person, showing what is possible and what is impossible.

In the remainder of this section we will look at three such approaches to person hierarchies. The approaches differ in the *primitives* that they use, see Section 4.6.1. The approach in Section 4.6.2 has the presence of the speaker and the presence of an interlocutor as its primitives. As a result, this approach generates hierarchies in which the first person and the inclusive always occupy the same position. A different approach can be found in Section 4.6.3. This approach does not have any primitives and, therefore, allows for a larger number of possible hierarchies. In Section 4.6.4, finally, we will see a third approach, which sees the inclusive as a combination of a speaker and an addressee primitive. This approach allows the inclusive to behave differently from both the first and the second person in hierarchies.

#### 4.6.1 How primitives work

An approach to person hierarchies is defined by the hierarchies it disallows. In order to disallow hierarchies an approach needs one or more additional constraints on person hierarchies. One could apply such a constraint directly at one or more of the four person values (inclusive person, first person, second person and third person). An example of such a constraint would be ‘first person and third person may never occupy the same position in a hierarchy’. This constraint agrees with the attested hierarchies in the overview in (62), but it is doubtful whether such a constraint reveals any deep conceptual truth about person as it is not supported by any independent evidence.

Another way to go is to derive the four person values from something more fundamental. I will refer to these fundamental notions as *primitives*. A parallel can be drawn with spatial semantic roles. A spatial semantic role can be split up into a configuration primitive and a direction primitive (see Lestrade 2010, Lestrade et al. 2011). The English preposition *through*, for example, has “inside” as its configuration and “path” as its direction and means therefore

‘on a path that intersects with the inside of’. The English preposition *off*, on the other hand, has “top” as its configuration and “origin” as its direction and means therefore ‘originating from the top of’. Because only the primitives are conceptually relevant, it is the primitives on which the hierarchies are based. As a consequence, the number of hierarchies are reduced, since there are less primitives than values.

Ackema and Neeleman (2011) deconstruct the four person values by means of two primitives. Let us call these primitives EGO and ALTER; Ackema and Neeleman use different labels, but for ease of explanation I will use EGO and ALTER. These primitives are used as follows: a +EGO feature means that there is a speaker in the group, and a +ALTER feature means that there are no interlocutors (i.e. speakers or addressees) in the group. With these definitions the four person values are generated as in (63).

(63) Person values with EGO and ALTER as primitives

Person value	Primitives
$\frac{1}{2}$	[EGO]
1	[EGO]
2	∥
3	[ALTER]

Note the inclusive and the first person have the same primitive combination.

In the next section I will argue against the validity of EGO and ALTER as primitives, but first I will use them as an example to show the relation between primitives and hierarchies. If we assume that person hierarchies are about the primitives and not about the person values (which are epiphenomena to the primitives), we should use the primitives to generate the hierarchies. Take for example the GENDERHIERARCHY, the hierarchy on gender marking from Section 4.5.2, in (64).

(64) GENDERHIERARCHY  
3 > 2 > 1

In terms of primitives the hierarchy can be restated as in (65). What (65) intuitively means is that things with an ALTER primitive go well together with gender marking, but things with an EGO primitive do not

(65) Primitives EGO and ALTER and gender marking

EGO:	–
ALTER:	+

The hierarchy in (64) can be derived from the description in (65) in the following way. The first person only has the EGO primitive, which has a – value in this example, so the value of first person in the hierarchy is –. The third person

only has an ALTER primitive, so its value is + in this example. The second person neither has an EGO nor an ALTER principle and its value is zero: neither + nor - (the value of the second person is always zero in this theory). If we then align the person values according to their pluses and minuses we get the hierarchy in (64).

In a similar fashion we can make person hierarchies out of the other value combinations for EGO and ALTER. As it turns out, only values --, -, 0, + and ++ are needed; having more values will not generate more hierarchies. Table 4.1 lists all hierarchies that can be generated with EGO and ALTER as primitives. These are the hierarchies predicted by the person theory of Ackema and Neeleman (2011).

EGO	ALTER	Hierarchy
+	-	1 > 2 > 3
+	0	1 > 2,3
0	-	1,2 > 3
++	+	1 > 3 > 2
-	--	2 > 1 > 3
+	+	1,3 > 2
0	0	1,2,3
-	-	2 > 1,3
+	++	3 > 1 > 2
--	-	2 > 3 > 1
0	+	3 > 1,2
-	0	2,3 > 1
-	+	3 > 2 > 1

Table 4.1: Hierarchies generated with EGO and ALTER as primitives

Such a table shows how the number and nature of the predicted hierarchies depends on the primitives with which an approach works.

#### 4.6.2 Against Ackema and Neeleman (2011)

There are, however, a number of problems with Ackema and Neeleman's approach. First of all, Ackema and Neeleman base their approach on a study by Baerman et al. (2005): in this study 1=2 and 2=3 are allegedly the most dominant homophony patterns, which would show that second person is in between first and third person. However, Baerman et al.'s claims on the dominance of 1=2 and 2=3 homophony are directed at the plural. Things are different for the singular: 1=2 homophony is, for example, not attested by Baerman et al. in the singular. Thus, a number-neutral account of person homophony seems impossible.

Furthermore, the study by Baerman et al. (2005) has very little data. They base their claims on the one hand on 27 languages where some homophony is

present in *all verbal* paradigms, and on the other hand on 19 languages where *pronouns* show some homophony. Homophony seems to be rather restricted. Baerman and Brown (2005) note that of the 140 languages in their sample with verbal person markers 54 languages have homophony in only some of their paradigms and 6 languages have homophony in all of their paradigms. In other words, person homophony is the exception in languages.

Because of the sparsity of the data it is not surprising that if we look at a different sample the patterns are different. Cysouw (2003:185–187) has a sample of 245 languages and in this sample person homophony is rare too, see (66). The only frequent homophony is  $\frac{1}{2}=1$ —obviously only in the plural—and in Chapter 2 I have indicated that we need an additional assumption to account for this. The other pattern that emerges is that homophony occurs more often in the plural. No other patterns emerge, so on the basis of Cysouw’s sample we cannot say that the  $1=3$  pattern is rare, neither in the singular nor in the plural.

(66) Occurrence of person homophony in Cysouw’s (2003) sample

	$\frac{1}{2}=1$	$\frac{1}{2}=2$	$\frac{1}{2}=3$	$1=2$	$1=3$	$2=3$
SG				8	9	8
PL	121	27	17	23	20	16

All in all, it seems that there is insufficient evidence for Ackema and Neeleman’s claim that  $1=2$  and  $2=3$  are the dominant patterns in person homophony. This removes the support for an approach that derives person hierarchies from an EGO and an ALTER primitive.

An additional problem of Ackema and Neeleman’s approach is that the inclusive and first person have the same set of primitives, which I have already observed above. This is the reason that the inclusive is not given as a separate person value in Table 4.1. More importantly, it means that under this approach inclusive and first person should always occupy the same position in a person hierarchy. This is problematic for the COMMANDHIERARCHY ( $2 > \frac{1}{2} > 3 > 1$ ), as in this hierarchy inclusive and first person do not behave alike. Thus, because an approach with only an EGO and an ALTER primitive does not predict the existence of the hierarchy on commands, it cannot be the right approach.

In this section we have seen two severe drawbacks of Ackema and Neeleman’s approach to the decomposition of person values: Baerman et al.’s homophony data do not provide the needed support and the COMMANDHIERARCHY should not be able to exist. In the next section we will look at an approach that does not have these drawbacks.

### 4.6.3 An approach without primitives

In order to correctly predict the existence of the hierarchy on commands ( $2 > \frac{1}{2} > 3 > 1$ ) we need an approach that is less restrictive than the first one.

This is certainly possible; it is even possible to have a approach without any constraints. Such an approach does not have any primitives—as primitives are restrictive—so the generation of hierarchies is rather straightforward. This is the approach that we will investigate in this section and the question is how far having no primitives will bring us.

With no restrictions on the possible hierarchies, any order of the four person values is possible. The number of potential hierarchies in such a situation is seventy-five. These seventy-five possibilities are listed somewhat systematically in Table 4.2.

$\frac{1}{2} > 1 > 2 > 3$	$\frac{1}{2} > 1 > 2,3$	$\frac{1}{2} > 1,2 > 3$	$\frac{1}{2}, 1 > 2 > 3$
$\frac{1}{2} > 1 > 3 > 2$	$\frac{1}{2} > 2 > 1,3$	$\frac{1}{2} > 1,3 > 2$	$\frac{1}{2}, 1 > 3 > 2$
$\frac{1}{2} > 2 > 1 > 3$	$\frac{1}{2} > 3 > 1,2$	$\frac{1}{2} > 2,3 > 1$	$\frac{1}{2}, 2 > 1 > 3$
$\frac{1}{2} > 2 > 3 > 1$	$1 > \frac{1}{2} > 2,3$	$1 > \frac{1}{2}, 2 > 3$	$\frac{1}{2}, 2 > 3 > 1$
$\frac{1}{2} > 3 > 1 > 2$	$1 > 2 > \frac{1}{2}, 3$	$1 > \frac{1}{2}, 3 > 2$	$\frac{1}{2}, 3 > 1 > 2$
$\frac{1}{2} > 3 > 2 > 1$	$1 > 3 > \frac{1}{2}, 2$	$1 > 2, 3 > \frac{1}{2}$	$\frac{1}{2}, 3 > 2 > 1$
$1 > \frac{1}{2} > 2 > 3$	$2 > \frac{1}{2} > 1,3$	$2 > \frac{1}{2}, 1 > 3$	$1, 2 > \frac{1}{2} > 3$
$1 > \frac{1}{2} > 3 > 2$	$2 > 1 > \frac{1}{2}, 3$	$2 > \frac{1}{2}, 3 > 1$	$1, 2 > 3 > \frac{1}{2}$
$1 > 2 > \frac{1}{2} > 3$	$2 > 3 > \frac{1}{2}, 1$	$2 > 1, 3 > \frac{1}{2}$	$1, 3 > \frac{1}{2} > 2$
$1 > 2 > 3 > \frac{1}{2}$	$3 > \frac{1}{2} > 1, 2$	$3 > \frac{1}{2}, 1 > 2$	$1, 3 > 2 > \frac{1}{2}$
$1 > 3 > \frac{1}{2} > 2$	$3 > 1 > \frac{1}{2}, 2$	$3 > \frac{1}{2}, 2 > 1$	$2, 3 > \frac{1}{2} > 1$
$1 > 3 > 2 > \frac{1}{2}$	$3 > 2 > \frac{1}{2}, 1$	$3 > 1, 2 > \frac{1}{2}$	$2, 3 > 1 > \frac{1}{2}$
$2 > \frac{1}{2} > 1 > 3$			
$2 > \frac{1}{2} > 3 > 1$	$\frac{1}{2}, 1 > 2, 3$	$\frac{1}{2} > 1, 2, 3$	$\frac{1}{2}, 1, 2 > 3$
$2 > 1 > \frac{1}{2} > 3$	$\frac{1}{2}, 2 > 1, 3$	$1 > \frac{1}{2}, 2, 3$	$\frac{1}{2}, 1, 3 > 2$
$2 > 1 > 3 > \frac{1}{2}$	$\frac{1}{2}, 3 > 1, 2$	$2 > \frac{1}{2}, 1, 3$	$\frac{1}{2}, 2, 3 > 1$
$2 > 3 > \frac{1}{2} > 1$	$1, 2 > \frac{1}{2}, 3$	$3 > \frac{1}{2}, 1, 2$	$1, 2, 3 > \frac{1}{2}$
$2 > 3 > 1 > \frac{1}{2}$	$1, 3 > \frac{1}{2}, 2$		
$3 > \frac{1}{2} > 1 > 2$	$2, 3 > \frac{1}{2}, 1$		
$3 > \frac{1}{2} > 2 > 1$			
$3 > 1 > \frac{1}{2} > 2$	$1, 2, 3, \frac{1}{2}$		
$3 > 1 > 2 > \frac{1}{2}$			
$3 > 2 > \frac{1}{2} > 1$			
$3 > 2 > 1 > \frac{1}{2}$			

Table 4.2: Possible person hierarchies with no primitives

However, obviously not all seventy-five hierarchies have actually been attested in the world's languages. In fact, as we have seen in this chapter, only five hierarchies have been attested. That only such a small subset is attested raises the question whether a theory without primitives is the right way to go. This is why I feel the need to look at a third approach. This approach also correctly predicts the existence of the five attested person hierarchies, but which is more restrictive than the present second approach.

#### 4.6.4 An approach with EGO and TU

For this third approach I will try to reduce the number of seventy-five possible hierarchies that were generated in the previous approach. I need an constraint on hierarchies in order to do this and this constraint should be independently motivated.

In Section 2.2.2 I used the primitives EGO and TU to explain why languages have a maximum of four person values (inclusive person, first person, second person and third person) in their syntax. The primitive EGO corresponds to a group that includes the speaker and the primitive TU corresponds to a group that includes the addressee(s). With these two primitives we have been able to explain which groups of individuals behave the same with respect to person. An SAA group (speaker plus addressee plus addressee) should behave the same as an SAO group, for example, see (67).

- (67) Person values with EGO, and TU as primitives  
(S=speaker, A=addressee, O=other)

Person value	Primitives	Groups covered
$\frac{1}{2}$	[EGO,TU]	SA, SAA, SAO, SAAA, ...
1	[EGO]	S, SO, SOO, SOOO, ...
2	[TU]	A, AA, AO, AAA, AAO, ...
3		O, OO, OOO, OOOO, ...

The semantics of the person values is connected to the primitives in the following way: a group with an inclusive-person value has both a speaker and an addressee and has both the EGO and the TU primitives, a group with a first-person value has a speaker but no addressees and only has the EGO primitive, a group with a second-person value has an addressee but no speaker and only has the TU primitive, and a group with a third-person value contains neither speakers nor addressees and has no primitives at all. In sum, we need the EGO and TU primitives to explain the number of person values in syntax.

That the inclusive has [EGO,TU] as its set of primitives means that the inclusive has something in common with both the first person and the second person. We can use this conclusion to restrict the number of potential person hierarchies: if the inclusive is connected to both first person and second person some hierarchies are expected not to exist. We find an example of such an unexpected hierarchy in (68).

- (68) Person hierarchy that is not expected to occur  
 $1,2 > 3 > \frac{1}{2}$

It would be strange if such a hierarchy existed, as it has high predictability for first person and second person, but low predictability for the inclusive. This is odd because if the phenomenon associated with the hierarchy occurs frequently with groups with speakers (first person) and groups with addressees (second

person), then why would the same phenomenon be so rare for groups with both speakers and addressees (the inclusive)? In other words, if something is frequent for the first person and frequent for the second person it should be even more frequent for the inclusive. In the approach of this section I will incorporate this intuition.

It is apparent how an approach with an EGO and a TU primitive differs from the approach with an EGO and an ALTER primitive from Section 4.6.2. In the present approach the inclusive has something in common with the second person (the TU primitive)—which makes it distinct from the first person—while in the other approach the inclusive is equal to the first person. This makes it possible for the present approach to distinguish between inclusive and first person in its hierarchies. Moreover, I will not include the ALTER primitive as a third primitive into the present approach: having only the EGO and TU primitives instead of having three severely restricts the number of person hierarchies that can be generated. As the overview in Table 4.3 shows, the number of generated hierarchies is seventeen. Each of these hierarchies has an intuitive meaning.

EGO	TU	Hierarchy
++	-	$1 > \frac{1}{2} > 3 > 2$
+	-	$1 > \frac{1}{2}, 3 > 2$
+	--	$1 > 3 > \frac{1}{2} > 2$
+	0	$\frac{1}{2}, 1 > 2, 3$
0	-	$1, 3 > \frac{1}{2}, 2$
++	+	$\frac{1}{2} > 1 > 2 > 3$
-	--	$3 > 1 > 2 > \frac{1}{2}$
+	+	$\frac{1}{2} > 1, 2 > 3$
0	0	$\frac{1}{2}, 1, 2, 3$
-	-	$3 > 1, 2 > \frac{1}{2}$
+	++	$\frac{1}{2} > 2 > 1 > 3$
--	-	$3 > 2 > 1 > \frac{1}{2}$
0	+	$\frac{1}{2}, 2 > 1, 3$
-	0	$2, 3 > \frac{1}{2}, 1$
-	++	$2 > \frac{1}{2} > 3 > 1$
-	+	$2 > \frac{1}{2}, 3 > 1$
--	+	$2 > 3 > \frac{1}{2} > 1$

Table 4.3: Hierarchies generated with EGO and TU as primitives

The first hierarchy in Table 4.3, for example, has an EGO value of ++ and a TU value of -, which may be translated as ‘the role of speaker goes extremely well with the phenomenon associated with the hierarchy, while the role of hearer goes rather badly with the phenomenon.’

Now that we have generated the predicted hierarchies, we can see how the present approach, with EGO and TU as primitives, handles the five hierarchies

that we came across in this chapter. It can handle the `COMMANDHIERARCHY` ( $2 > \frac{1}{2} > 3 > 1$ ), since it accurately predicts the existence of this hierarchy: with an `EGO` value of  $-$  and a `TU` value of  $++$  the hierarchy is generated. The `SPATIALDEIXISHIERARCHY` ( $\frac{1}{2}, 1 > 2, 3$ ) and the `EVIDENTIALITYHIERARCHY` ( $2, 3 > \frac{1}{2}, 1$ ) can be generated in a similar way. The `GENDERHIERARCHY` ( $3 > 2 > 1$ ) only applies to the singular—see Section 4.5.2—which is why this hierarchy does not occur in Table 4.3. The `QUESTIONASSERTIONHIERARCHY` ( $3 > 2, 1$ ) deserves some more attention as there is some data on plural subjects in questions and assertions.

The hierarchy in Table 4.3 that comes closest to the `QUESTIONASSERTIONHIERARCHY` ( $3 > 2, 1$ ) is  $3 > 2, 1 > \frac{1}{2}$ . This suggests that an inclusive-person subject in a question or assertion tends to have a shorter marker on average than a first- or second-person subject. Silverstein (1976) found evidence for this suggestion; he noted in his analysis of accusative case in the Australian languages that in the languages of his sample there are more overt markers of patients in the inclusive than in the first or second person. In Section 4.2 I noted that agent marking follows the same pattern as patient marking, so it makes sense that inclusive-person subjects have shorter markers than first- or second-person subjects. Thus, it seems that an approach with `EGO` and `TU` as primitives can handle the `QUESTIONASSERTIONHIERARCHY`.

The last thing that needs to be addressed is the thirteen hierarchies in Table 4.3 that I have not found. The model in this section predicts that these hierarchies *may* exist, not that they *do* exist. For me no linguistic phenomenon comes to mind that, for example, tolerates the speaker rather well (`EGO`  $\rightarrow$   $+$ ) but the addressee(s) rather badly (`TU`  $\rightarrow$   $-$ ), which is why I have not attested a  $1 > \frac{1}{2}, 3 > 2$  hierarchy. It may be that such a linguistic phenomenon does not exist, or simply that I did not find one.

In sum, with some speculation on the `QUESTIONASSERTIONHIERARCHY` we have seen that an approach with `EGO` and `TU` as primitives correctly predicts the existence of the five attested person hierarchies that we have discussed in this chapter.

#### 4.6.5 Summary

In this section I have looked at three approaches that make predictions about the possible person hierarchies in the languages of the world. Without any restrictions the number of potential hierarchies is seventy-five, which is rather large since we have only attested four of these hierarchies. It seems that a more restrictive theory is needed.

Therefore, I have tried to define the four person values (inclusive person, first person, second person and third person) in terms of primitives and generate hierarchies on the basis of these primitives. This leads to a smaller number of potential hierarchies. First I have discussed an approach by Ackema and Neeleman (2011), which has an `EGO` and an `ALTER` primitive. Unfortunately,

the independent evidence to support these primitives was insufficient. Moreover, it wrongly predicts that the attested COMMANDHIERARCHY ( $2 > \frac{1}{2} > 3 > 1$ ) cannot exist. As a consequence, an approach with an EGO and an ALTER primitive cannot be the right approach.

Because of the problem with the approach with an EGO and an ALTER primitive, I have tried an approach with an EGO and a TU primitive instead. In this approach the inclusive is seen as partially distinct from both first person and second person. I have shown that this approach correctly predicts the four person hierarchies that are attested. In addition, the existence of these two primitives is supported by independent evidence.

## 4.7 Rigid patterns, hierarchies and innateness

We have dealt extensively with person hierarchies in this chapter but in this section I want to go up one level and look at person patterns in general. We have seen a number of person patterns by now—both rigid person patterns and person hierarchies—which means that we can return to the question posed in Section 1.2, whether person patterns are language-internal (i.e. innately present in the human genes) or language-external (i.e. originating from the world around the speaker). In Section 4.7.1 I will argue that both innate and learned person patterns occur in language, and in Section 4.7.2 I will highlight some differences between the two types of patterns.

### 4.7.1 Co-existence

It is difficult to give a definite answer to the question of linguistic innateness. If a person pattern is innate it should be present in the human genes, but at the moment it is not possible to test this directly. This means that we have to rely on circumstantial evidence in order to be able to say something on the innateness of patterns.

Kiparsky (2008) states that he sees the merits of both historical and synchronic explanations in language, which is why he allows for both language-internal and language-external phenomena in his analyses. In Optimality Theory this dichotomy is also present (see Burzio 1998:111) and is known as the distinction between hard constraints (innate) and soft constraints (learned). In this dissertation I will follow this assumption that both types of phenomena exist. What I need to do next is look at the person patterns that have been attested and see if the circumstantial evidence for each pattern points in the direction of a language-internal phenomenon or a language-external one.

I think that Kiparsky's distinction between the two types of phenomena may manifest itself in the difference between rigid and non-rigid (hierarchical) person patterns that I have made in this dissertation. Let us first look at a non-rigid person pattern, the COMMANDHIERARCHY in this case. A language like French may have the same number of morphemes for an inclusive-person

command (69a) as for a second-person command (69b).

FRENCH

- (69) a. *All-ons au Mardi Gras!*  
 go-**1PL** to-the Mardi Gras  
 ‘Let’s go to the Mardi Gras!’  
 b. *All-ez au Mardi Gras!*  
 go-**2PL** to-the Mardi Gras  
 ‘Go to the Mardi Gras!’

A language like Dutch, on the other hand, may have a larger number of morphemes for an inclusive-person (70a) command than for a second-person command (70b).

DUTCH

- (70) a. *Lat-en we naar het Mardi Gras-festival gaa-n!*  
**let-PL 1PL.NOM** to the Mardi Gras-festival go-**INF**  
 ‘Let’s go to the Mardi Gras!’  
 b. *Ga naar het Mardi Gras-festival!*  
 go to the Mardi Gras-festival  
 ‘Go to the Mardi Gras!’

If we make a typology of languages (or rather: paradigms) based on the number of morphemes that the command markers have, we get the overview in (71).

- (71) Typology based on the person markers for commands  
 (the more to the right the more morphemes)

Type I	$2=\frac{1}{2}=3=1$			
Type II	$2=\frac{1}{2}=3$	1		
Type III	$2=\frac{1}{2}$	$3=1$		
Type IV	2	$\frac{1}{2}=3=1$		
Type V	$2=\frac{1}{2}$	3	1	
Type VI	2	$\frac{1}{2}=3$	1	
Type VII	2	$\frac{1}{2}$	$3=1$	
Type VIII	2	$\frac{1}{2}$	3	1

The overview lists eight different types of language (note that the overview is based on the number of morphemes relative to the other markers; if the absolute number of morphemes had been taken into account, the number of types would have been even higher). This means that there are eight possible outcomes for a language with respect to the COMMANDHIERARCHY. All person hierarchies have multiple outcomes (except for the indifferent  $\frac{1}{2}, 1, 2, 3$  hierarchy) which contrasts sharply with how rigid person patterns work.

In the overview in (72) we find the rigid person patterns that I have proposed in this dissertation.

(72) Rigid person patterns

Name	Pattern	Introduced in
MULTIPLEREFERENTS	/S/ A O	Section 3.1.2
INTERLOCUTORFIXATION	S A /O//	Section 3.1.3
VOCATIVEFUNCTIONS	/S/ A /O//	Section 3.5.1
EVIDENTIALITYSOURCE	S /A//O//	Section 4.4.2

I will use the VOCATIVEFUNCTIONS pattern as the example rigid person pattern. One of the functions that falls under VOCATIVEFUNCTIONS is expressive small clauses, see (73). Crucial for the function is that the insulted referent does not have to be mentioned in the sentence.

(73) It's the economy, stupid!

In (73) the insulted referent is the addressee. As I pointed out in section 3.5 it is theoretically possible to have a language with expressive small clauses for speakers and others. Yet, as far as I know, there are no such languages. The person pattern on such a vocative function cannot be captured in a hierarchy; the function only allows one type of language, so the visualization in (74) suffices.

(74) VOCATIVEFUNCTIONS  
S/ A /O//

Such a visualization shows the big difference between rigid and hierarchical person patterns.

If a person pattern like the one in (74) applies to every language in the world it is a better candidate for a language-internal (innate) phenomenon than a person hierarchy. We saw above that a person hierarchy like the COMMANDHIERARCHY leads to multiple types of language. If the hierarchy were a language-internal, universal phenomenon, then it is unexpected that there is no single fixed universal template for the command marker (e.g. 2→no morpheme; 1/2/3/1→one morpheme). This would be much easier for the learner of the language, whether a child or an adult. The circumstantial evidence, therefore, pushes hierarchical person patterns like the COMMANDHIERARCHY in the direction of the language-external phenomena, as they allow for multiple outcomes.

A universal person pattern like the one in (74), on the other hand, looks more like a language-internal phenomenon: there is only one possible outcome for every language in the world. So, if we follow Kiparsky (2008) and accept that linguistic phenomena may be language-internal or language-external, then I propose that person hierarchies are language-external phenomena and that rigid person patterns are language-internal phenomena. What this, for example, means is that second-person commands being short is *not* an intrinsic facet of human language while secondary-insult constructions being restricted to

addressees *is*.

To sum up, if we assume that both linguistic-internal and linguistic-external person patterns exist in language, it seems best to consider rigid person patterns as linguistic-internal and hierarchical person patterns as linguistic-external.

#### 4.7.2 The differences

There are big differences between linguistic-internal and linguistic-external phenomena. Linguistic-internal phenomena have to be acknowledged by a language in every stage of its existence. A human language will always have them. This would mean, for example, that a rule in a made-up human language that violates a language-internal prediction cannot be learned by children. Linguistic-external phenomena, on the other hand, do not matter for a synchronic description of a language. They are just diachronic road maps of language change: they point out which part of a language is most likely to change first. Or, to put it metaphorically, things that are used the most will be worn out the quickest and person hierarchies show this frequency of use. All in all, there are many areas in which the difference between language-internal and language-external phenomena plays a role.

Let us look at an example of an application of a person hierarchy. Because a person hierarchy is a language-external phenomenon it allows for more than one type of language. The different types of language can change into each other in specific ways. In order to explain this, I have chosen the GENDERHIERARCHY ( $3 > 2 > 1$ ) from Section 4.2.2 as an example. This assertion hierarchy allows for four types of language, which leads to a model of language change that is neither too complex nor too simplistic. The four types of language that the hierarchy allows can be seen in the overview in (75).

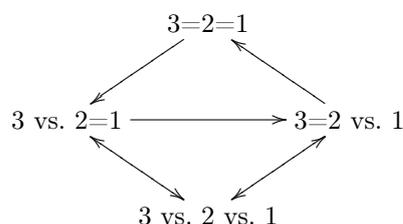
(75) Types of languages allowed by the GENDERHIERARCHY based on the number of morphemes of the marker for each person

3=2=1	3,2 and 1 have the same number of morphemes
3 vs. 2=1	3 has less morphemes than 1 or 2
3=2 vs. 1	3 and 2 have less morphemes than 1
3 vs. 2 vs. 1	3 has less morphemes than 2, 2 has less than 1

The diachronic relation between the four types can be seen in the graph in (76). A [3=2=1] language may change into a [3 vs. 2=1] language if the third-person marker loses a morpheme. A possible next step is that the second person marker also loses a morpheme and the language becomes a [3=2 vs. 1] language. Then, there are two possible next steps: the first-person marker may wear down resulting in a [3=2=1] language once again, or the third-person marker may wear down further resulting in a [3 vs. 2 vs. 1] language. In this last case there are again two options: if the second-person marker diminishes

the result is a [3=2 vs. 1] language, and if the first-person marker diminishes the result is a [3 vs. 2=1] language. This leaves one final connection: when in a [3 vs. 2=1] language the third-person marker is two or more morphemes shorter than the other two, a change in the second-person marker will result in a [3 vs. 2 vs. 1] language.

- (76) Diachronic relations between the four types of languages allowed by the GenderHierarchy



This example shows that for a person hierarchy that allows for only four types the diachronic relations are already quite complex. It is nevertheless possible to make such a connection graph for each person hierarchy. For absolute person patterns, on the other hand, such a graph is rather useless as these patterns are insensitive to language change and only allow for one type of language.

### 4.7.3 Summary

To summarize this section, the issue of whether linguistic phenomena are innate (language-internal) or learned (language-external) is presumably one of the biggest debates in linguistics at the moment. I will follow Kiparsky (2008) and take a hybrid approach to this debate: some phenomena are language-internal, others are language-external. In this section I have hypothesized that the hierarchical person patterns, which featured most prominently in this chapter, are better suited to be language-external phenomena as they allow for different types of language. The non-hierarchical person patterns in this dissertation, on the other hand, are all absolute (i.e. exceptionless). Such absolute patterns are better suited for language-internal phenomena.

## 4.8 Conclusion

In this chapter we have looked at person hierarchies. An overview of the person hierarchies that have been found is repeated in (77).

## (77) Overview of attested person hierarchies

Hierarchy	Name
$3 > 1, 2$	QUESTIONASSERTIONHIERARCHY
$3 > 2 > 1$	GENDERHIERARCHY
$\frac{1}{2}, 1 > 2, 3$	SPATIALDEIXISHIERARCHY
$2 > \frac{1}{2} > 3 > 1$	COMMANDHIERARCHY
$2, 3 > \frac{1}{2}, 1$	EVIDENTIALITYHIERARCHY

What these hierarchies depict is the number of morphemes that a person marker has for a certain phenomenon.

From the first hierarchy in (77), for example, it can be derived that in a language a third-person agent marker in an assertion has a higher chance of being absent than a first- or second-person agent marker. Incidentally, this contradicts Silverstein's (1976) claim that for agents the third person marker should have the *lowest* chance of being absent. Silverstein claimed that the hierarchy for agents and the hierarchy for patients are the mirror image of each other, but I have found no evidence for that claim on a cross-linguistic scale.

The GENDERHIERARCHY in (77) shows that third-person pronouns have a higher chance to have a dedicated form to convey gender in a language than first-person pronouns. Spatial deixis is the topic of the third hierarchy; an example is the English demonstrative adverb *here*. The fourth hierarchy in (77) deals with commands. Not surprisingly, it is the second-person command (the imperative) that usually has the shortest form in a language. The fourth hierarchy in (77), finally, concerns evidentiality marking, the marking of the source of information of the utterance. For three types of evidentiality marking it is the second- and third-person topics that have the shortest markers.

The best model that predicts the existence of the person hierarchies in (77) does not take the four person values (inclusive, first person, second person and third person) as its input, but the EGO primitive (the group has a speaker) and the TU primitive (the group has an addressee) instead. The need for the EGO and TU primitives was independently established in Section 2.2.2.

Person hierarchies are different from the rigid person patterns from Chapter 3. Person hierarchies allow multiple types of languages, which is reason to argue that they are language-external (learned) phenomena. Rigid person patterns, on the other hand, only allow a single type of language, which is reason to argue that these are language-internal (innate) phenomena.

The hierarchies in (77) also address the central question of this dissertation: is there an insurmountable difference between first and second person on the one hand and third person on the other? The EVIDENTIALITYHIERARCHY shows that for three types of evidentiality marking the main difference is between second and third person on the one side, and first person on the other. The same goes for the SPATIALDEIXISHIERARCHY: this hierarchy is the mirror image of the EVIDENTIALITYHIERARCHY. The COMMANDHIERARCHY, finally, shows that for commands first and second person are very far apart, with inclusive

and third person being in between. To sum up, these three hierarchies show that for some phenomena the image of first and second person versus third person does not apply.

## CHAPTER 5

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### Conclusions

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In this dissertation I have investigated the grammatical category of person. In Section 5.1 I provide a summary of the main findings. The central question of this dissertation has been, following Lyons (1977): is the person distinction in language always first and second person vs. third person? My answer is: no, the person distinction depends on the linguistic phenomenon under discussion—see Section 5.2 for a more detailed account.

### 5.1 Summary of main findings

I will summarize this dissertation by discussing a number of topics that have played an important role in it. For each topic I will give the main findings that this dissertation has provided.

#### **The inclusive**

Many languages have special inclusive person markers (i.e. pronouns and/or verbal affixes). These person markers refer to a group with a speaker and one or more addressees—‘you and me’, in other words. The best way to analyze inclusive person markers is having a fourth person value specifically for the inclusive (see Daniel 2005b, Bobaljik 2008, Cysouw 2010) in addition to the traditional three person values, i.e. first person (*I*), second person (*you*) and third person (*he/she/it*). We can therefore speak of inclusive-person pronouns in the languages that have them. For the sake of parallelism I proposed a numerical gloss ( $\frac{1}{2}$ ) for the inclusive person.

The inclusive is, however, not a universal person value in the world’s lan-

guages. It is not necessary for the syntactic description of languages like English and Dutch to have a separate inclusive value, on the basis of which we may conclude that these languages do not have an inclusive person value, see Section 2.2.3.

Because the inclusive minimally consists of a speaker and an addressee, the inclusive does not occur in the singular. This presents a methodological problem for the cross-linguistic comparison of person, see Section 4.1.2. For a proper comparison of a person phenomenon across languages we should look at the plural, because only the plural may have all four person values. Most research focuses on the singular when discussing a phenomenon, however, so there is unfortunately little data with which a proper cross-linguistic investigation of person phenomena may be performed.

Although there is no such thing as a *singular* inclusive, this absence is not enough reason to rearrange the singular-plural system of the grammatical category of number into a so-called *minimal-augmented* system for pronouns (pace Bobaljik 2008, Cysouw 2010). There is more evidence for a singular-plural system in person markers than for a minimal-augmented system, see Section 2.5.

### Language universals

Greenberg (1963) stated that no language has fewer than three number values. I have argued that this is not true: sign languages appear to have fewer than three person values. Additionally, it makes more sense to talk about the person values of specific *phenomena* (e.g. agent marking, gender marking, question marking) than about the person values of whole languages. For many phenomena there is certainly a tendency to have three or more person values (in spoken languages, that is) but this tendency is not universal, which I have shown in Section 2.4.

What *is* universal is that there are never more than four person values in a phenomenon. Why should four be the maximum of person values? Five or more person values irrevocably leads to a situation where the speaker has to judge—for example for each person in a group of ten—whether some person is an addressee or not. It seems that, because this task is cumbersome and not that informative, language users universally refrain from it, see Section 2.2.2.

The nature of language universals is probably the most debated topic in current linguistics: are language universals language-internal (innate) or language-external (learned)? I follow Kiparsky (2008) and take a hybrid approach to the debate and allow for both language-internal and language-external universals. If we follow this line of reasoning we can say that the person hierarchies from Chapter 4 are probably language-external, as they allow for more than one outcome, but that the rigid person patterns from Chapter 3 are probably language-internal, as they only allow for one type of language, see Section 4.7 for more details.

One example of such a rigid person pattern is that a sentence may only have one speaker. *\*I and I and I are in favor* is ungrammatical when uttered

by three persons at the same time, even if there is pointing, see Section 3.1.2. Here, first person differs from second person and third person (*So you and you and you are in favor* is perfectly acceptable, for example). The other three rigid person patterns—concerning identity fixation, vocatives and evidentiality—will be discussed below.

### Sign language

Sign languages tend not to distinguish person in the syntax; signers simply point to the referent to introduce that referent into the discourse. This pointing sign is usually the same for all persons; only the first-person pointing sign has some peculiarities in some sign languages. Furthermore, there are no other domains in sign language where there are person distinctions, not even in the domain of commands, see Section 2.3.1.

The resulting situation is that spoken languages have three or four person values while signed languages have two or less person values. The reason for this categorical difference is that sign languages do not need person values because directly pointing at referents will not result in ambiguity, see Section 2.3.2.

Although many sign languages do not distinguish person values, they all distinguish speech-act roles (speaker, addressee and other), see Section 3.6. Therefore, because sign languages are also subject to rigid person patterns it makes sense that rigid person patterns are actually not about person markers but about speech-act roles.

### Nouns, pronouns and binding

In a number of cases in language there is no difference between first, second and third person at all. Take, for example, the binding of plural pronouns from Section 3.3.3. Third-person plural pronouns may be bound (*They all think they will become class president*), but this also goes for first and second person (e.g. *You all think you will become class president*). There is a pronoun–noun split instead (i.e. binding conditions B and C: *#The boys all think the boys will become class president*).

A similar split between nouns and pronouns can be seen in the domain of quantifiers. I follow the DP hypothesis (Elbourne 2005) which states that pronouns are syntactically different from nouns. The theory predicts that pronouns can never combine with quantifiers into one DP (*\*every you* for example). I have shown in Section 3.2.2 that this prediction is correct, even for languages—Japanese, for example—that allegedly possess pronominal nouns (Déchaine and Wiltschko 2002).

So-called *situational binding* (see Section 3.4) also harbors a noun–pronoun split. *The man* in *In many households the man only watches television* may be bound by *many households* resulting in a reading about the man in each household. *In many households he only watches television* does not have this reading.

### Speakers/addressees fixation

The main question of this dissertation has been whether first and second person occupy a special position with respect to third person. My answer is ‘no’—see Section 5.2 for the details.

There are, however, certainly some constructions that have a first/second vs. third person split, so for these constructions first and second person do occupy a special position. All these splits are based on the same principle. The identity of the speaker and the addressee(s) is fixed at the beginning of the sentence. As soon as the speaker opens her mouth it is clear that she is the speaker and that the persons that she addresses are the addressees. It is therefore a general constraint on effective communication not to change the identity of speaker or addressee(s) mid-sentence.

We encounter this constraint in several linguistic phenomena. (i) It is difficult to switch speakers or addressees in the middle of a sentence (*So you know you?* vs. *So he knows him?*), see Section 3.1. (ii) First- and second-person pronouns cannot be accommodated—which means getting a distributive reading—by another phrase (*During most of my monologues you stay silent* vs. *During most of my monologues the addressee stays silent*), see Section 3.4. (iii) DP-quantifiers like *some of us/you* that select a subset of the addressee-group may never be first- or second-person syntactically, see Section 3.2.1. (iv) *We/you linguists* necessarily includes all of the speaker or addressee group, while *those linguists*, for example does not necessarily include all distant things, see Section 3.5.2. All four phenomena can be explained by the speaker/addressee fixation at the beginning of a sentence.

### Agents, patients and Silverstein

Silverstein (1976) came up with a hierarchy on agent marking:  $\frac{1}{2} > 1, 2 > 3$ . What the hierarchy says is that the tendency to mark third-person agents with an ergative case morpheme is greater than the tendency to mark first- or second-person agents. Silverstein also distinguished a hierarchy on *patient* marking and proposed that this hierarchy should be the mirror image of the hierarchy on agent marking.

When we look at a cross-linguistic sample of languages, however, this mirror-image hypothesis is falsified, see Section 4.2. First of all, the tendency to have a case morpheme for some person values and no case morpheme for other person values is not that strong. Second, the hierarchy that emerges for agent and patient marking is exactly the same ( $3 > 2 > 1$ ). Even at the level of the individual language the person patterns of agent and patient marking turns out to be similar instead of reversed. Thus, agent and patient marking follows the same hierarchy.

### Vocatives

Vocatives can have several functions—for example: *The keys are still in the ignition, you idiot!* The frequency of this construction explains why second-person singular determiners grammaticalized for vocatives, but not for normal

sentences (*\*You teacher work hard*), see Section 3.5.2. In addition, because the vocative is restricted to the addressee and because there are no secondary-insult constrictions for speakers or others, we have a rigid person pattern here (addressee vs. speaker/other). Note that vocatives are about speech-act roles (addressees), not about person marking (second person).

There can also be a mismatch between syntax and semantics for vocatives, see Section 3.5. A third-person DP-quantifier like *everyone* can be a vocative, referring to addressees: *I'm off, everyone!* This usage is subject to some restrictions, however: *\*I'm off, every friend*. The equilibrium between third-person syntax and addressee semantics seems to be rather fragile.

### Imperatives

In this dissertation I have defined imperatives as second-person commands (e.g. *Behave yourself!*). In a language like English the subject of an imperative may be third-person syntactically: *Everyone raise their hands*, see Section 3.5.4.

Commands are not confined to the second person on the semantic side either. Inclusive-person (*Let's go!*, third-person (*Let him be safe!*) and first-person commands (*Let me introduce myself*) also exist. The need for a special morpheme to explicitly mark the command meaning follows the following person hierarchy:  $2 > \frac{1}{2} > 3 > 1$ , see Section 4.3.3. This does not mean that there are no languages that use the same construction for all four persons. Sign languages are an example of this type because they do not distinguish between persons, see Section 2.3.1.

### Evidentiality

Evidentiality is a grammatical category that exhibits a great number of person patterns. To identify these person patterns it is important to distinguish between four types of evidentiality, see Section 4.4.1: performative ('I know I fell because I did it myself'), sensory ('I know John fell because I saw it'), inferential ('I know John fell because I infer it from something') and reportative ('I know John fell because someone told me').

Evidentiality has both a rigid person pattern and a person hierarchy. The rigid person pattern is that for some types of evidentiality only the speaker may be the source of information, see Section 4.4.2. The person hierarchy is that for some types of evidentiality it is odd to have a first-person topic, so such a topic may need extra marking.

## 5.2 First and second versus third: conclusion

I would like to end this dissertation with the quote with which I began: "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). I have found many instances in which first person may pattern with third person

against second person in this dissertation, or in which second person may pattern with third person against first person. Consider the following three person hierarchies:

- The EVIDENTIALITYHIERARCHY  $(2, 3 > \frac{1}{2}, 1)$  from Section 4.4.3 shows that with respect to the marking of the *topic* of sensory, inferential and reportative evidentials third and second person pattern together against first person. In many languages it is, for example, odd for a speaker to use an evidential to make an inference about herself, since normally a speaker simply knows things about herself.
- Spatial deixis also has a first vs. second/third pattern. The SPATIALDEIXISHIERARCHY  $(\frac{1}{2}, 1 < 2, 3)$  from Section 4.5.1 shows that many languages have a dedicated demonstrative for things close to the speaker (English *this*, for example) but lack separate demonstratives for things close to the addressee(s) and things close to other(s).
- The third hierarchy that I want to bring up can be found in commands. The COMMANDHIERARCHY  $(2 > \frac{1}{2} > 3 > 1)$  from Section 4.3.3 shows that person marking behaves in quite different ways for the agent of a command. Or, to put it another way, second-person commands (i.e. imperatives) and first-person commands are miles apart from each other. Third person and inclusive person occupy the middle ground between these two extremes. I am not sure how to call this pattern but it is certainly not a first/second vs. third pattern.

If we do not restrict ourselves to person—the indirect marking of speech-act roles—but also to speech-act roles themselves, we can distinguish even more divergent patterns. Lyons (1977) would predict that speaker/addressee vs. other should be the only rigid person pattern in the languages of the world. In Chapters 3 and 4 I have come across other patterns, however:

- A sentence can only have one speaker, but multiple addressees and others, see Section 3.1.2. A group of three *cannot* chant together *\*I and I and I want more*—even pointing will not help—but one *can* ask the group *Why do you and you and you want more?* Likewise it is okay to say *What did she and she and she want?* This pattern (MULTIPLEREFERENTS) is a speaker vs. addressee/other pattern.
- Another speaker vs. addressee/other pattern of first vs. second/third can be found in the marking of the source of information of evidentials (EVIDENTIALITYSOURCE). For performative, sensory and inferential evidentiality the source of information is always first-person. Sensory evidentials, for example, always express sensory information obtained by the speaker, and never sensory information obtained by the addressee(s) or by others. Note that for performative evidentials this means that the speaker is the only person that is allowed as a topic: in performative evidentiality the topic equals the source of information.

- A different pattern—the addressee vs. speaker/other pattern—can be found in vocatives. Some functions can only be fulfilled by a vocative (e.g. the function of *creep* in *Go away, creep!*) and these functions are therefore restricted to addressees (VOCATIVEFUNCTIONS).

This brings the total number of patterns that go against Lyons’s theory to six. The overview in (1) displays all six patterns.

- (1) Patterns that go against a first/second vs. third view on person

Name	Pattern
EVIDENTIALITYHIERARCHY	first vs. second/third
SPATIALDEIXISHIERARCHY	first vs. second/third
COMMANDHIERARCHY	complex
MULTIPLEREFERENTS	speaker vs. addressee/other
EVIDENTIALITYSOURCE	speaker vs. addressee/other
VOCATIVEFUNCTIONS	addressee vs. speakers/other

The overview clearly shows that the pattern of first and second person on the one hand and third person on the other is neither fundamental nor ineradicable. It all depends on the linguistic phenomenon what the person pattern is. In other words, it is not always “you and me against the world” for speech-act roles and the grammatical category of person. “Shifting alliances” is perhaps a better characterization.



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## Samenvatting

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Een van de grote vragen van de taalwetenschap is: wat in taal is universeel (oftewel, wat is aanwezig in elke taal van de wereld) en wat is taal-specifiek (oftewel, waarop kunnen talen van elkaar verschillen)? Ik heb deze vraag onderzocht voor de grammaticale categorie *persoon*. In het Nederlands omvat de categorie van persoon de eerste persoon (*ik* in het enkelvoud), de tweede persoon (*jij* in het enkelvoud) en de derde persoon (*hij/zij/het* in het enkelvoud).

Er is vaak beweerd in de taalwetenschap dat de derde persoon de vreemde eend in de bijt is. De bijbehorende voorspelling is dat, indien slechts twee van de drie personen zich in een bepaald domein hetzelfde gedragen, dat dat de eerste en de tweede persoon zullen zijn. Een voorbeeld-domein is de “wij leraren”-constructie. Deze constructie is mogelijk voor de eerste persoon meervoud (*wij leraren*) en de tweede persoon meervoud (*jullie leraren*) maar niet voor de derde persoon meervoud (*\*zij leraren* – ik gebruik een asterisk om aan te geven dat iets ongrammaticaal is). Eerste en tweede persoon gedragen zich hier inderdaad hetzelfde, terwijl de derde persoon anders is. Ik zal in deze samenvatting de hypothese dat dit patroon van eerste en tweede tegenover derde persoon inderdaad het enige patroon in taal is de *hoofdhypothese* noemen. In mijn proefschrift heb ik aan de hand van talen van over de hele wereld onderzocht of de hoofdhypothese verworpen moet worden of niet.

### De vierde persoon

Zoals gezegd heeft het Nederlands drie personen. Maar terwijl in het Nederlands voor “ik en jij” en “ik en hij/zij/het” in beide gevallen de vorm *wij* worden gebruikt, hebben sommige talen hier twee verschillende vormen voor. In zulke talen vormt de “ik en jij”-vorm (de zogenaamde *inclusief*) een aparte vierde persoon. Talen kunnen dus verschillen in of ze drie of vier personen hebben. Dat een taal niet meer dan vier personen kan hebben is daarentegen wél universeel. Ook hebben talen sterk de neiging om in alle domeinen niet minder dan drie personen te hebben. Een uitzondering hierop zijn gebarentalen. Doordat er in

gebarentaal direct gewezen wordt naar de spreker en de hoorder is er geen behoefte aan een grammaticale categorie van persoon.

Sommige talen met een vierde persoon (en dus een aparte vorm voor “ik en jij”) beschouwen hun “ik en jij”-vorm niet als meervoud maar als enkelvoud, terwijl er toch duidelijk twee personen mee worden aangeduid. Zulke talen worden *minimal-augmented* talen genoemd. Voor sommige wetenschappers moeten vanwege deze talen de traditionele definities van enkelvoud (één ding) en meervoud (meer dan één ding) op de schop. Ik laat echter zien dat de meeste talen met een inclusieve persoon zich gewoon houden aan de traditionele definities van enkelvoud en meervoud.

Wel geldt voor talen met een vierde persoon dat het te onderzoeken patroon van dit proefschrift (“eerste en tweede tegenover derde persoon”) aangepast moest worden. Voor deze talen heb ik onderzocht of er geen andere patronen waren dan het patroon van eerste, tweede en vierde persoon tegenover derde persoon.

## Flexibele patronen

Ik heb vijf patronen gevonden in taal die met persoon te maken hebben en flexibel zijn. Een flexibel patroon betekent dat talen in een bepaald domein kunnen verschillen maar dat er niettemin een bepaalde tendens zichtbaar is. Zo’n flexibel patroon heeft dus zowel een universeel als een taal-specifiek element.

1. Het eerste patroon is het markeren van persoon op het werkwoord. Het Nederlands heeft hier een patroon van eerste persoon (geen markering: *ik loop*) tegenover tweede en derde persoon (*-t*-markering: *jij/hij loopt*). Voor de meeste talen is dat echter anders. Als er al een verschil is tussen de personen dan is het meestal dat de derde persoon geen markering op het werkwoord heeft en de eerste en tweede persoon wel. Hetzelfde geldt voor talen die het lijdend voorwerp (*Jan* in *ik sla Jan*) markeren op het werkwoord. Dit botst wel met de zogenaamde Silverstein-hiërachië, die zegt dat de markering van het onderwerp op het werkwoord en de markering van het lijdend voorwerp op het werkwoord zich op een tegengestelde manier moeten gedragen. Wat tot slot interessant is is het geringe verschil tussen vragende en mededelende zinnen wat betreft persoonsmarkering. Dit eerste flexibele patroon sluit prima aan bij de hoofdhypothese.
2. Ook het tweede flexibele patroon kan niet echt gezien worden als een schending van de hoofdhypothese. Dit tweede patroon gaat over geslacht (mannelijk, vrouwelijk en onzijdig). Het Nederlands maakt een onderscheid in geslacht bij persoonlijke voornaamwoorden van de derde persoon (*hij/zij/het*) maar niet bij die van de eerste of tweede persoon. In het algemeen hebben talen inderdaad eerder speciale vormen voor geslacht voor de derde dan voor de tweede persoon, maar daarnaast eerder

voor de tweede dan voor de eerste persoon.

3. De andere flexibele patronen spreken de hoofdhypothese wél tegen. Het derde patroon gaat over aanwijzende bijwoorden, zoals *hier* en *daar* in het Nederlands. Dit Nederlandse patroon, “in de buurt van eerste persoon” (*hier*) tegenover “in de buurt van tweede of derde persoon” (*daar*), komt in veel talen voor. Dit patroon van eerste tegenover tweede en derde persoon spreekt inderdaad de hoofdhypothese tegen.
4. Het vierde flexibele patroon gedraagt zich zoals het derde. Dit patroon gaat over evidentialiteit, een markering die sommige talen aan een zin toevoegen en die de bron van informatie aangeeft (bijvoorbeeld “zelf gezien”, “eigen aanname”, of “van horen zeggen”). Als het onderwerp van zo’n zin tweede of derde persoon is, dan kan dit onderwerp weggelaten worden in sommige talen terwijl een onderwerp in de eerste persoon expliciet genoemd moet worden. De reden is dat een zin met evidentialiteit en eerste persoon vaak ongewone situaties zijn. Iets vergelijkbaars is te zien in Nederlandse zinnen met *kennelijk*; zinnen als *je bent kennelijk van gedachten veranderd* of *hij is kennelijk van gedachten veranderd* zijn niet ongewoon, maar uiterst vreemd met de eerste persoon: *ik ben kennelijk van gedachten veranderd*.
5. Ook patroon vijf weersprekt de hoofdhypothese. Dit patroon heeft de gebiedende wijs als domein. In het Nederlands hebben we een speciale korte vorm voor de gebiedende wijs van de tweede persoon (*begin maar*) maar gebruiken we de *laten*-constructie voor de vierde persoon (*laten we maar beginnen*), de derde persoon (*laat hij maar beginnen*) en de eerste persoon (*laat ik maar beginnen*). In de talen van de wereld komt de verkorte vorm het vaakst voor bij de tweede persoon, daarna bij de vierde persoon, daarna bij de derde persoon en daarna bij de eerste persoon.

Samenvattend kunnen we stellen dat er bij de flexibele patronen een paar patronen zitten die anders zijn dan “eerste en tweede tegenover derde persoon” en die daarmee de hoofdhypothese weerspreken.

## Rigide patronen

Taal kent op het gebied van sprekers en hoorders niet alleen maar flexibele patronen maar ook rigide patronen. Een rigide patroon betekent dat in het domein van dat patroon alle talen van de wereld zich hetzelfde gedragen. Zo’n patroon heeft dus alleen een universele kant, geen taal-specifieke kant. Wat opvalt is dat rigide patronen nooit over de grammaticale categorie van persoon gaan maar direct over gespreksrollen als spreker en hoorder. Ik zal het verschil tussen gespreksrollen en persoon illustreren aan de hand van twee voorbeelden. Het Nederlandse *jullie* verwijst naar een groep die een hoorder bevat. Het is

best mogelijk dat de groep een niet-hoorder bevat; in *Hoe deden jullie dat thuis?* kan *jullie* bijvoorbeeld op niet-aanwezige ouders, broers en zussen slaan. Hoe anders is dit bij een vocatief (aanspreekvorm) als *mensen* in *Gaat het hier goed, mensen?* Een vocatief is per definitie beperkt tot de hoorders en kan dus niet naar niet-aanwezige personen verwijzen. Bij de vocatief gaat het volgens mij dan ook direct over gespreksrollen omdat het daarbij alleen maar exclusief over hoorders kan gaan. Bij het persoonlijk voornaamwoord *jullie* is er een complexere relatie met het concept “hoorder”, aangezien de groep waar *jullie* naar verwijst ook niet-hoorders kan omvatten. Deze complexere manier om met gespreksrollen om te gaan is wat de grammaticale categorie van persoon in feite is.

Ik heb drie rigide patronen gevonden in taal; deze patronen hebben dus direct te maken met de gespreksrollen “spreker”, “hoorder” en “buitenstaander” (mijn term voor iemand die noch spreker noch hoorder is).

1. Het eerste rigide patroon is dat een uiting maar één spreker kan hebben. Dit klinkt logisch omdat in de overgrote meerderheid van de situaties een uiting inderdaad door één spreker gedaan zal worden. Toch is een situatie waar twee mensen opzettelijk tegelijkertijd hetzelfde zeggen niet ondenkbaar; denk bijvoorbeeld aan een opera of musical. Toch is het ook dan onmogelijk om zoiets te zeggen als *\*Dit geldt wel voor mij maar niet voor mij*, zelfs niet als de twee personen erbij wijzen. Bij twee hoorders (*Dit geldt wel voor jóú maar niet voor jóú*) of twee buitenstaanders (*Dit geldt wel voor voor háár maar niet voor háár*) levert een soortgelijke situatie geen moeilijkheden op. We zien hier een patroon van spreker aan de ene kant en hoorder en buitenstaander aan de andere.
2. Het tweede rigide patroon gaat over de vocatief. De vocatief is hierboven al kort aan bod gekomen. Eén van de functies van de vocatief is dat de spreker iets naars over de hoorder kan zeggen zelfs als die in de zin verder niet voorkomt: *Het raam staat open, idioot!* Het is echter voor een spreker onmogelijk om iets naars te zeggen over de spreker (zichzelf, dus) als deze in de zin niet voorkomt: *[Jan tegen Piet:] De sleutels zitten nog in de auto, sukkel!* Het woord *sukkel* kan hier niet op Jan, de spreker, slaan. Ook op deze manier iets naars over een buitenstaander (in dit geval de eigenaar van de auto, bijvoorbeeld) zeggen is onmogelijk: *Er staat een auto op mijn parkeerplek, hufter!* Dit geldt niet alleen voor het Nederlands; een nare toevoeging aan een zin over iemand die in de zin niet genoemd wordt kan in alle talen alleen bij de hoorder. Hier tekent zich dus een patroon af met spreker en buitenstaander aan de ene kant en hoorder aan de andere kant.
3. Het derde en laatste rigide patroon is dat zodra een spreker begint te praten het vastligt wie de spreker en wie de hoorder van de zin is. Die mogen niet halverwege een zin veranderd worden. Dit is de reden dat het wisselen van hoorder zoals in *\*Dus jij hebt bij jóú op school gezeten*

onmogelijk is, zelfs als er gewezen wordt. Ook een wisseling van spreker is onmogelijk, maar dat is misschien niet heel verbazingwekkend omdat we hierboven al zagen dat een zin toch maar één spreker mag hebben. Deze restrictie is echter te omzeilen door twee sprekers elkaars zin af te laten maken: [Spreker A:] *Dus ik . . .* [Spreker B:] *. . . heb bij Ján op school gezeten*. Maar als er dan expliciet van spreker wordt gewisseld krijgen we wel weer een ongrammaticale zin: [Spreker A:] *Dus ik . . .* [Spreker B:] *\*. . . heb bij mij op school gezeten*. Oftewel: zowel een wisseling van hoorder als een wisseling van spreker is niet toegestaan binnen een zin. Bij buitenstaanders is er echter geen probleem met wisselen: *\*Dus zij heeft bij háár op school gezeten*. Hier zien we een patroon met spreker en hoorder aan de ene kant en buitenstaander aan de andere.

Hoewel de hoofdhypothese over persoon gaat en niet over gespreksrollen, zouden we in het licht van de hoofdhypothese niettemin voorspellen dat er alleen rigide patronen zouden moeten zijn met spreker en hoorder aan de ene kant en buitenstaander aan de andere. Het derde rigide patroon komt overeen met deze voorspelling maar de andere twee patronen duidelijk niet.

## Conclusie

Er zijn twee soorten patronen die zich bezighouden met sprekers en hoorders. Ten eerste zijn er de rigide patronen die direct met sprekers en hoorders te maken hebben. Ten tweede zijn er de flexibele patronen die over de grammaticale categorie van persoon gaan, wat een complexere indeling van sprekers en hoorders is en de eerste, tweede, derde en vierde persoon omvat. Ook de hoofdhypothese van deze dissertatie – elk patroon op het gebied van persoon is eerste en tweede persoon tegenover derde persoon – gaat over persoon. Er zijn meerdere flexibele patronen die de hoofdhypothese weerspreken. Ook bij de rigide patronen lijkt het erop dat spreker en hoorder niet automatisch samengaan. Mijn conclusie is dan ook dat “eerste en tweede persoon tegenover derde” zeker niet het enige patroon is op het gebied van persoon in de talen van de wereld. In alle gevallen is het goed te verklaren waarom een bepaald patroon bij een bepaald domein (vocatief, gebiedende wijs, evidentialiteit, enz.) hoort.



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## Curriculum Vitae

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Kees de Schepper was born in Nijmegen, the Netherlands, on January 7, 1983. In 2000 he obtained his high school diploma from the Stedelijk Gymnasium Nijmegen, after which he went to Radboud University Nijmegen to study Linguistics (Bachelor's and Master's). He obtained his Master's degree (cum laude) in 2007. After working on a database for case and adpositions as a research assistant for a year in the PIONIER project Case cross-linguistically at Radboud University, he undertook a PhD at the same university as a part of the NWO *klein programma* Local Pronouns. He finished his dissertation in 2012.