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Specificity and Differential Object and Subject Marking  
in Turkish

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# Contents

<b>List of abbreviations</b>	<b>x</b>
<b>1 Introduction</b>	<b>2</b>
<b>2 Indefiniteness and specificity</b>	<b>4</b>
2.1 Existential quantifiers . . . . .	5
2.2 Two kinds of indefinites? . . . . .	8
2.2.1 Introducing referential indefinites . . . . .	8
2.2.2 Against an ambiguity-based approach . . . . .	13
2.2.3 Kratzer’s (1998) extension . . . . .	16
2.2.4 Summary . . . . .	18
2.3 Uniform approaches . . . . .	18
2.3.1 File Change Semantics . . . . .	19
2.3.2 Singleton indefinites . . . . .	25
2.3.3 Referential anchoring . . . . .	27
2.3.4 Summary . . . . .	29
2.4 Types of specificity . . . . .	30
2.4.1 Scopal specificity . . . . .	30
2.4.2 Epistemic specificity . . . . .	32
2.4.3 Partitivity . . . . .	33
2.4.4 Relative specificity . . . . .	34
2.4.5 Referentially anchored specificity . . . . .	36
2.4.6 Summary . . . . .	36
2.5 Conclusions . . . . .	37

<b>3</b>	<b>Turkish data</b>	<b>40</b>
3.1	Introduction . . . . .	40
3.1.1	Cases . . . . .	40
3.1.2	Compounds and possession . . . . .	42
3.1.3	Definiteness and indefiniteness . . . . .	44
3.2	Direct object marking . . . . .	45
3.2.1	Types of direct objects . . . . .	45
3.2.2	Scrambling . . . . .	49
3.2.3	Generics . . . . .	52
3.2.4	Animacy . . . . .	53
3.2.5	Partitivity . . . . .	55
3.2.6	Scope interactions . . . . .	58
3.2.7	Summary . . . . .	59
3.3	Subject marking . . . . .	60
3.3.1	Types of subjects . . . . .	61
3.3.2	Scrambling . . . . .	66
3.3.3	Partitivity . . . . .	67
3.3.4	Other instances of optional genitive marking . . . . .	68
3.3.5	Summary . . . . .	69
3.4	Overview . . . . .	70
<b>4</b>	<b>Analyses of DO/SM in Turkish</b>	<b>72</b>
4.1	The function of DO/SM . . . . .	73
4.1.1	Marking non-archetypicality . . . . .	74
4.1.2	Heterogeneous reasons for marking . . . . .	77
4.1.3	Summary . . . . .	79
4.2	Semantic criteria for DO/SM in Turkish . . . . .	79
4.2.1	Specificity . . . . .	80
4.2.2	Animacy . . . . .	82
4.2.3	Case-marking by specificity . . . . .	82
4.2.4	Summary . . . . .	84
4.3	Morphosyntactic criteria for DO/SM in Turkish . . . . .	84
4.3.1	Partitives . . . . .	84
4.3.2	Scrambling . . . . .	87

4.3.3	Adverb clauses . . . . .	88
4.3.4	Summary . . . . .	97
4.4	Conclusions . . . . .	98
<b>5</b>	<b>Conclusions and open questions</b>	<b>102</b>
5.1	Summary and conclusions . . . . .	102
5.2	Further research . . . . .	104
	<b>Bibliography</b>	<b>108</b>
	<b>Appendix A Abstract (English)</b>	<b>114</b>
	<b>Appendix B Abstract (German)</b>	<b>116</b>
	<b>Appendix C Curriculum Vitae</b>	<b>118</b>



# List of abbreviations

ABIL	ability, possibility
ABL	ablative case
ACC	accusative case
Agr	agreement morpheme
AgrP	agreement phrase
AOR	aorist tense
CAUS	causative
COP	copula
CP	complementizer phrase
DAT	dative case
DOM	Differential Object Marking
DP	determiner phrase
DSM	Differential Subject Marking
ECM	Exceptional Case Marking
FCS	File Change Semantics (Heim 1982)
FUT	future tense
GEN	genitive case
GRND	gerund
INF	infinitive
INSTR	instrumental case



KP	case phrase
LF	Logical Form
LOC	locative case
ModP	modifier phrase
N	noun
NABIL	inability, impossibility
NEG	negation
NMZ	nominalizer
NOM	nominative case
NP	noun phrase
NumP	number phrase
OBLIG	obligation
OPT	optative
OT	Optimality Theory
P	possessive suffix
PASS	passive
PAST	past tense
PASTP	past perfect
PF	Phonological Form
PL	plural
PROG	progressive, durative
PRT	particle
Q	question particle “yes/no”
RC	relative clause
REL	relative clause marker
REP	reportedly, presumably; inferred information

RPAST	reported past
S	sentence node (Heim 1982)
SG	singular
T	text node (Heim 1982)
TP	tense phrase
V	verb
VH	Vowel Harmony
VP	verbal phrase
1	1 <sup>st</sup> person
2	2 <sup>nd</sup> person
3	3 <sup>rd</sup> person
( <i>x</i> )	<i>x</i> is optional (grammaticality judgment applies with and without <i>x</i> )
*( <i>x</i> )	<i>x</i> is obligatory ( <i>x</i> 's absence is ungrammatical)
(* <i>x</i> )	<i>x</i> is prohibited ( <i>x</i> 's presence is ungrammatical)
<i>ellipsis-site</i>	indicates elision (ellipsis)
$x \rightarrow y$	<i>x</i> logically implies <i>y</i>
$x \sqsupset y$	<i>x</i> has bigger scope than <i>y</i>
$x > y$	<i>x</i> has higher prominence than <i>y</i> (OT)
$x \succ y$	<i>x</i> is more harmonic than <i>y</i> (OT)
*X $\gg$ *Y	*X outranks *Y (OT)



# Chapter 1

## Introduction

In this thesis, I will investigate part of the Turkish case system. Accusative marking on direct objects and genitive marking on subjects of subordinate clauses display an interesting distribution: the presence or absence of case marking conveys semantic and syntactic information. These phenomena are more generally known as Differential Object Marking (DOM) and Differential Subject Marking (DSM).

DO/SM can essentially be understood in two ways that differ with respect to what the optionally marked constituent is ‘differentiated’ from. Functional approaches understand DO/SM as a universal principle with homogeneous motivation across many languages, such as to increase the difference between subjects and objects where it is necessary. Non-functional approaches take DO/SM to be merely a unified name of inherently different phenomena in various languages that need to be accounted for separately due to their versatile shapes.

I will argue that the mechanisms that determine Turkish DO/SM are indeed peculiar and that therefore the second view of DO/SM is to be preferred. First, Turkish DO/SM marks outstanding (i.e. definite, specific, and sometimes animate) objects, which can be understood as being delimited from subjects. However, it also marks subjects if they have these properties, and if both object and subject share them, both will receive case marking. This is unnecessary if the function of DO/SM were to disambiguate. Second, there are particular syntactic configurations that neutralize the semantic information conveyed in DO/SM. I will show that there are at least

two ways in which case marking can be forced on objects and subjects, and one way for case marking to be suppressed on subjects. This yields marked objects and subjects that do not fulfill the semantic criteria of definiteness and specificity, and it yields unmarked subjects although they are definite or specific. These properties are likely to be language-unique and thereby difficult to integrate into a cross-linguistic account for DO/SM.

This thesis is structured as follows. In chapter 2, I will discuss specificity in general. I argue against Fodor and Sag's (1982) proposal to distinguish referential from quantifying indefinite articles by showing that the picture is more complex than this (2.2). I review three analyses that can account for some specificity phenomena without assuming an ambiguous article (2.3). I also present an overview over different types of specificity (2.4).

Chapter 3 contains a collection of the relevant Turkish data. I look at direct objects and subjects of incorporated sentences from various angles that may be influential to case marking.

In chapter 4 I analyze the data presented in chapter 3. I will show that specificity is indeed the main reason for DO/SM in Turkish (4.2), but that certain syntactic constructions can neutralize the effect of semantic properties (4.3). I will discuss analyses of syntactic case licensing, especially Kornfilt (2008) and Aygen (2007) about DSM. I also present language-universal theories of DO/SM and discuss the contribution that Turkish can make (4.1).

I conclude my findings in chapter 5 and give an overview over open questions that require further investigation.

All examples that are not marked otherwise have been collected by myself.

## Chapter 2

# Indefiniteness and specificity

Specificity seems to be a notion that, although very important in pragmatics, is hard to define. In this chapter I am going to introduce the main ideas discussing the possible interpretations of indefinites with regard to specificity, as well as various kinds of specificity in general.

It is important to note that indefinites and specificity are closely linked in the sense that when researching one of them, it is inevitable to say something about the other as well. However, it is not the case that specificity is restricted to indefinites. On the contrary, examples like (1) and (2)<sup>1</sup> show that specificity and definiteness are independent of each other. It is possible to understand the definite noun phrase *the dean* in (1) both specifically and non-specifically, and similarly can the indefinite noun phrase *a pretty girl* in (2) be understood both ways as well.

- (1) I'm looking for the dean.
- a. ... whoever it might be. *definite non-specific*
  - b. ... namely for Smith, who happens to be the dean. *definite specific*
- (2) John is looking for a pretty girl.
- a. ... whoever he will meet, he will take her to the movies. *indefinite non-specific*
  - b. ... namely for Mary. *indefinite specific*

---

<sup>1</sup>Both by Quine (1960: sections 30–31, 141ff.), quoted after von Heusinger (2002: 248f.).

Von Heusinger (2002) argues that identifiability can neither be used to define definiteness (see Karttunen 1976), nor to define specificity. He assumes that definiteness expresses familiarity, a discourse pragmatic property, while specificity is a referential property of NPs that can affect definite NPs as well as indefinite ones. “A specific NP indicates that the associated discourse item is referentially anchored to another discourse item and therefore inherits the scopal properties of its anchor (among other properties).” (von Heusinger 2002: 253) He therefore suggests the cross-classification of definiteness and specificity in (3).

- (3) Cross-classification of definiteness and specificity  
(von Heusinger 2002: 253)

	discourse old	discourse new
referentially anchored to discourse referents	<i>specific</i> <i>definite</i>	<i>specific</i> <i>indefinite</i>
referentially bound by operators	<i>non-specific</i> <i>definite</i>	<i>non-specific</i> <i>indefinite</i>

This chapter breaks into four parts. The first three parts will discuss properties of indefinites, and the last part is about different types of specificity. First (in section 2.1), I am going to discuss the essential properties of indefinites as quantifiers, i.e. scope ambiguities. In section 2.2 I will present views on indefinites splitting them into two homophonous indefinite articles to explain certain phenomena. Subsequently (2.3) I discuss alternative views with a uniform analysis. In the last section (2.4) I turn to specificity in general and give an overview over some important functions of specificity.

## 2.1 Existential quantifiers

The first property of indefinites that comes to mind is the association with an existential quantifier from classical logic. A sentence like (4a) could thus be formalized like (4b), given appropriate relations.

- (4) a. John sees a cat.  
 b.  $\exists c [\text{cat}(c) \wedge \text{see}(J, c)]$

A characteristic of logical quantifiers is their scope, i.e. the range of the variable they introduce. By changing the order/scope of more than one quantifier, truth values can change. Consider (5) with the two possible readings in (5a) and (5b).<sup>2</sup> Scope is indicated by square brackets.

- (5) Every man loves a woman.  
 a. For every man there is a woman he loves.  
 $\forall m [\text{man}(m) \rightarrow \exists w [\text{woman}(w) \wedge \text{love}(m, w)]]$   
 b. There is a woman who every man loves.  
 $\exists w [\text{woman}(w) \wedge \forall m [\text{man}(m) \rightarrow \text{love}(m, w)]]$

As we will see in the following sections, indefinites are more complicated than this. In (6), the indefinite is ambiguous, but no other quantifier is present.

- (6) Melinda wants to buy a motorcycle.  
 a. ... She will buy it tomorrow. *specific*  
 b. ... She will buy one tomorrow. *non-specific*

Fodor (1970) has argued that these ambiguities don't arise because of a feature [+spec] on the NP, but because of scope interactions with an opaque context. She defines opaque contexts as a class of sentences in which existential generalization and substitutivity of identicals yield invalid sequiturs. An indefinite occurring inside an opaque context is interpreted non-specifically, while an indefinite in a non-opaque (i.e. transparent) context is specific. She notes that any sentence with an opaque reading seems to also have a non-opaque reading. Examples for opaque contexts for indefinites are: predicates like *believe*, *want*, *intend*, negation, modals, ...

For an ambiguous sentence like (6), Fodor would therefore assume representations as in (7).

---

<sup>2</sup>First elaborated with Quantifier Raising by May (1985).



- (7) a.  $\exists x [x \text{ is a motorcycle} \wedge \text{Melinda wants to buy } x]$  *specific*  
 b. Melinda wants  $\exists x [x \text{ is a motorcycle} \wedge \text{Melinda buys } x]$   
*non-specific*

However, the non-specific representation can sometimes trigger false meanings. In (7b), Mary may well hope that there is a motorcycle, but in (8), John does not have to hope for fish to exist in order to hope to catch one—he might as well know that fish exist.

- (8) John hopes to catch a fish.  
 a. John hopes  $\exists x [x \text{ is a fish} \wedge \text{John will catch } x]$

An even more striking example is (9): John certainly didn't order the existence of squirrels. Fodor notes that these differences depend on the matrix verb.

- (9) John ordered Mary to shoot a squirrel.  
 a. John ordered  $\exists x [x \text{ is a squirrel} \wedge \text{Mary shoots } x]$

In order to rule out existence entailments when there should be none, Fodor (1970: 67) suggests the use of a new operator ( $Sx$ ) that works identically to  $\exists$  but does not make existential claims.

Ioup (1977: 236) writes that this operator would not have been necessary since historically speaking, the logical existential operator does not necessarily entail existence. There is at least one other reading, the substitutional reading, which can be paraphrased by 'for at least one substitution value of  $x$ ,  $P(x)$  is true'. She continues (p. 236f):

Translating the substitutional reading into the semantics of specificity, a sentence is true on the specific reading if there is at least one substitution instance of the variable representing the indefinite noun phrase. On the non-specific reading it is not necessarily the case that the variable will be instantiated, for though the speaker may have a set in mind, no single substitution instance may satisfy the open sentence.

Concluding this section, we have seen an important quantificational property of indefinites, namely scope ambiguities with respect to another quanti-

fier. Furthermore, we have gotten a closer idea about specificity ambiguities and seen an analysis of specificity using scope of the operator versus the sentence (an ‘opaque context’). Therein it has become clear that this operator should not entail existence of the indefinite.

I will now compare two opposing theories about the nature of indefinites. In section 2.2 I present approaches claiming that indefinites are ambiguous between a quantificational and a referential reading. In section 2.3 I discuss alternative views that account for the unique behaviour of indefinites without postulating ambiguity.

## 2.2 Two kinds of indefinites?

In example (2) on page 4 and in example (6) on page 6 we have seen that indefinites can be ambiguous between a specific and a non-specific reading. Analyses for this phenomenon fall into two major groups. The first one (presented in this section) argues that there are in fact two kinds of indefinites: a quantifier, and a referential expression similar to definite articles. In the next section (2.3) I will present approaches that use only one indefinite article.

### 2.2.1 Introducing referential indefinites

Fodor and Sag (1982) have provided a well-known argumentation for two inherently different indefinite articles. They present data which shows that indefinites behave differently from all other quantifiers, and they conclude that in order to account for this behaviour, one would either have to overthrow quantifier theory as we know it or allow this special behaviour by postulating a second, homophone indefinite article that is subject to different rules. I will show in section 2.2.2 that these are not the only options.

In the following, their three most important arguments for this conclusion are presented.

**Argument 1: Scope islands.** For certain types of syntactic constituents a quantifier inside of such a constituent cannot take bigger scope than this constituent. Such environments are called *scope islands*. The classification of constituents into scope islands may vary with speakers, but for every speaker there exist some.

Example (10) shows that a quantifier (here *each*) cannot scope out of a subordinate clause.

- (10) John thinks that for **each of my students** to be called before the dean would be preposterous.
- a. matrix predicate  $\sqsupset$  *each*  
John **thinks** that it would be preposterous if **each of my students** were called before the dean.
  - b.  $\#each$   $\sqsupset$  matrix predicate  
For **each of my students**, John **thinks** that it would be preposterous for her to be called before the dean.

Examples like (10) are valid for all quantifiers except *a*. Even *each*, which shares with *a* a preference for wide scope, is subject to scope islands. Example (11) shows that it is possible for *a* to scope out of scope islands.

- (11) John thinks that for **a student I know** to be called before the dean would be preposterous.
- a. matrix predicate  $\sqsupset$  *a*  
John **thinks** that it would be preposterous if there is **a student I know** who is called before the dean.
  - b. *a*  $\sqsupset$  matrix predicate  
There is **a student I know** such that John **thinks** it would be preposterous if she were called before the dean.

**Argument 2: Intermediate scope.** Fodor and Sag observe that island-escaping indefinites do not exhibit every possible scope relation. In sentences with three quantified operators and a scope island following the scheme in (12), we expect the three interpretations in (12a–c). The configuration

is such that the indefinite can take three different positions, whereas it is impossible for  $x_2$  to take higher scope because it is locked inside the scope island.

- |      |                                  |                           |
|------|----------------------------------|---------------------------|
| (12) | $x_1 x_2 \exists p$              | $x_1, x_2 \neq \exists$   |
|      | a. $x_1 x_2 \exists p$           | <i>narrow scope</i>       |
|      | b. $x_1 \exists x_2 t \exists p$ | <i>intermediate scope</i> |
|      | c. $\exists x_1 x_2 t \exists p$ | <i>wide scope</i>         |

However, looking at an instance of this scheme as in (13), where  $x_1$  is a universal quantifier and  $x_2$  the matrix predicate, Fodor and Sag find that the intermediate scope reading in (13b) is not available. (13) cannot mean that for every professor there is a specific student such that when exactly this student cheats, she will be fired. Note that in (13), opposed to (12), the island is in the front.

- (13) If a student in the syntax class cheats on the exam, every professor will be fired.
- a. *every*  $\sqsupset$  matrix predicate  $\sqsupset$  *a*  
For **every professor** it is the case that she **will be fired** if there is **a student in the syntax class** who cheats on the exam.
  - b.  $\#$ *every*  $\sqsupset$  *a*  $\sqsupset$  matrix predicate  
For **every professor**, there is **a student in the syntax class** such that the professor **will be fired** if the student cheats on the exam.
  - c. *a*  $\sqsupset$  *every*  $\sqsupset$  matrix predicate  
There is **a student in the syntax class** such that **every professor will be fired** if the student cheats on the exam.

An adapted quantifier theory that allows *a* to escape scope islands, would also have to explain the lacking of the intermediate scope reading in (13). Fodor and Sag suggest to establish two phonologically identical indefinite articles  $a_q$  (quantificational) and  $a_r$  (referential), of which the former does

not have any peculiarities and is subject to scope islands yielding (13a), and the latter always takes wide scope similar to a definite article yielding (13c). This explains the absence of the reading in (13b). They write (Fodor and Sag 1982: 375),

A true referential phrase doesn't so much escape from a scope island as shine right through it; and it also shines right through any scoped elements in the sentence. It is precisely for this reason that the existential entailment (or presupposition) of a referential phrase is a maximally wide scope existential.

**Argument 3: VP deletion.** Another argument comes from VP deletion, which is subject to a semantic identity condition, defined in Fodor and Sag (1982: 377, ex. (80)) as follows.

A verb phrase may be deleted only if its logical translation is an alphabetic variant of an expression in the logical translation of the surrounding discourse.

Consider (14). There's an existential and a universal quantifier, and a VP ellipsis elides the universal quantifier. The two possible interpretations of the intact clause (Sandy's thinking) are represented in (14a) and (14b), but only (14a) is a valid antecedent for Chris' ellipsis.

- (14) Sandy thinks that someone loves everyone. Chris thinks that someone does too.
- a. Sandy thinks that  $\exists x$  loves  $\forall y$ .  
Chris thinks that  $\exists x$  loves  ~~$\forall y$~~  too.
  - b. Sandy thinks that  $\forall y \sqsupset \exists x$  loves  $y$ .  
#Chris thinks that  $\forall y \sqsupset \exists x$  loves  ~~$y$~~  too.

In (14a), where a single person loves everyone, the ordering of the quantifiers at LF matches the surface ordering. Strikethrough indicates the deletion site which shows that the lower quantifier is deleted. In (14b), the ordering of the quantifiers is reversed, yielding a reading where everyone is loved by some person or another. Since the existential quantifier is not part of the deletion site, the universal quantifier also cannot be deleted because it has bigger scope.

Quoting Sag's (1976a, 1976b) general condition on VP deletion, Fodor and Sag (1982) explain that the interpretation in (14b) is not valid because the logical representation of the deleted VP is not equivalent to its antecedent. In (14b) the universal quantifier, having scope bigger than the elided VP, is outside of the deletion site, which makes  $y$  a free variable. In the antecedent of (14b), however, no variables are free. The semantic identity condition has thus been violated.

Compare this to (15), where a larger VP that contains both quantifiers is deleted. Here, both interpretations are available.

- (15) Sandy thinks that someone loves everyone. Chris does too.
- a. Chris does ~~think that  $\exists x$  loves  $\forall y$~~  too.
  - b. Chris does ~~think that  $\forall y \supset \exists x$  loves  $y$~~  too.

But, as Fodor and Sag observe, an indefinite noun phrase is not subject to this condition. (16) gives an example that can be interpreted with Chris sharing Sandy's belief about this particular student, represented in (16a).

- (16) Sandy thinks that every student in our class plays chess better than **a guy I beat this morning**. Chris { does / thinks that every student does } too.
- a.  $\exists g \supset \forall s$  Chris thinks that  ~~$s$  plays chess better than  $g$~~ .

They take this as "strong evidence that what look like wide scope interpretations are in some instances referential interpretations" (p. 376), because as illustrated above, this construction cannot be explained by a quantificational analysis.

Let us now turn to some problems with Fodor and Sag's analysis of ambiguous indefinites.

## 2.2.2 Against an ambiguity-based approach

### 2.2.2.1 The scope islands argument

Fodor and Sag (1982) have argued (here: ‘Argument 1’) that indefinites are special because they can escape scope islands, which other quantifiers cannot do; compare (10) to (11) on page 9. They spend a lot of energy arguing that ambiguity theory is not less economical than the ‘standard’ quantifier-only theory. The latter will have to develop a special mechanism allowing indefinites to escape islands, while the former uses an additional homophonous referential determiner.

However, (King 1988: 433) provides examples that show how another quantifier exhibits special scope behaviour too, which would damage Fodor and Sag’s economic argument. In (17), *any* takes wide scope with respect to the initial *if*-clause while *every* and *each* must take narrow scope.

- (17)
- a. If any woman leaves work early, she will be fired.
  - b. \*If every woman leaves work early, she will be fired.
  - c. \*If each woman leaves work early, she will be fired.

King thus argues that neither quantifier theory nor ambiguity theory have exceptionless rules, but for quantifier theory it’s easy to classify *any* together with *a*, while ambiguity theory must posit another ambiguity and loses its economical equivalence.

### 2.2.2.2 The intermediate readings argument

Recall Fodor and Sag’s (1982) second argument (‘Argument 2’), which states that the lack of intermediate scope readings shows that indefinites are either quantifiers when they obey the same island rules as other quantifiers, or they are referentials when they widest scope. This was illustrated in (13) on page 10.

This argument can easily be falsified by seeing that there are in fact lots of examples with intermediate scope.

- (18) Each author in this room despises every publisher who wouldn't publish a book that was deemed pornographic. (King 1988: 434)  
 a. each author  $\sqsupset$  a book  $\sqsupset$  every author
- (19) Each student has to come up with three arguments that show that some condition proposed by Chomsky is wrong. (von Heusinger 2002: 266)  
 a. each student  $\sqsupset$  some condition  $\sqsupset$  three arguments
- (20) Every professor rewarded every student who read a book he had recommended. (von Heusinger 2002: 267)  
 a. every professor  $\sqsupset$  a book  $\sqsupset$  every student

For Fodor and Sag (1982), these readings would have to be quantifiers since referentials have widest scope by definition. But allowing quantifiers to escape scope islands at all puts them in the same lines as their rival theory.

### 2.2.2.3 The VP deletion argument

Fodor and Sag's (1982) third argument comes from VP deletion. They argue that a VP cannot be deleted if it contains a variable bound by a quantifier which has scope greater than the VP. In such a case, the variable on the deletion site would be free while the same variable in the antecedent wouldn't be. An example was given in (14) on page 11.

Another interesting example is (16) on page 12 in which deletion is possible although the indefinite has wider scope than the VP. Fodor and Sag argue that under such a deletion construction, the indefinite has to be understood referentially, and by assuming a referential determiner, the problem of quantifier scope no longer arises. They state that a non-ambiguity theory could not analyze this phenomenon.

King (1988) agrees with them but thinks that this is a good thing, since this deletion condition may well be wrong. He gives the following three examples of violations against this condition such that if any one example is good, the condition falls.



- (21) Someone in Debbie's division gets promoted to management every month. Someone in Sharon's division does too.
- (22) John thinks that every witness was pressured by a person high up in the administration. Sue thinks that every witness was too. Unfortunately, neither John nor Sue has any idea who the administrative could be.
- (23) Brad thinks that someone becomes a millionaire every day. Bill thinks that someone does too.

We have now seen counter-arguments to all three of Fodor and Sag's (1982) arguments in favour of ambiguous indefinites. A quantifier-only theory does not have the economical disadvantage of having to account for the special scope behaviour of indefinites since *any* also shows these properties. It would simply assume a separate class of quantifiers, which the ambiguity-based theory would also have to do.

Second, while it may be challenging to explain why the intermediate readings in Fodor and Sag's examples are missing, it is clearly not the case that intermediate readings are not possible at all. They are in fact quite common, leaving Fodor and Sag with the challenge of explaining the scope escaping behaviour of their quantification indefinites (these indefinites can't be referential as they would by definition always have widest scope).

Finally, King (1988) suggests that the inability of quantifier-only theories to explain the VP deletion phenomena would be desirable as the whole argument from VP deletion may well be invalid. He suggests three (somewhat okay) examples that disprove the VP deletion theory if they are found acceptable.

In the following, we turn to an approach by Kratzer (1998) that accounts for intermediate readings of quantificational indefinites while maintaining the ambiguity of indefinites.

### 2.2.3 Kratzer's (1998) extension

Fodor and Sag's (1982) analysis is extended by Kratzer (1998) in order to account for intermediate scope readings. Kratzer observes that such readings are easier to get if there is a bound pronoun involved, as can be seen in (24a) and (25a), whereas (24b) and (25b) hardly have an intermediate reading.

- (24) a. [Every professor]<sub>*i*</sub> rewarded every student who read some book **she**<sub>*i*</sub> had recommended.  
 b. Every professor rewarded every student who read some book **I** had recommended.
- (25) a. [Each teacher]<sub>*i*</sub> overheard the rumour that some student of **his**<sub>*i*</sub> had been called before the dean.  
 b. Each teacher overheard the rumour that some student of **mine** had been called before the dean.

Kratzer argues that the account by Fodor and Sag (1982) only needs a small modification in order to capture this phenomenon. For this, she also assumes two kinds of indefinites, but uses a different distinction. As for Fodor and Sag, for her the one type also is a quantifier with local scope and usual quantifier properties. However, she assumes that specific readings do not occur because of referentiality, but rather that they are dependent on a contextually determined choice function. A choice function is a function from sets of individuals to individuals that 'picks' one element from a given set.<sup>3</sup> In (26) for instance, *a book* refers to one book of a given set of books. For every student there is a different choice function picking out the book that she read. This analysis yields the narrow scope reading of (26).

- (26) Every student read a book.

Kratzer refers to Hintikka (1986)'s analysis of *a certain*. Hintikka argues that contrary to usual beliefs, *a certain* doesn't always have widest scope.

In (27) for instance, *a certain* expresses a specific relationship between

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<sup>3</sup>I think choice functions should be defined as picking a subset rather than one element in order to capture quantifiers like *two*, *most* etc.

every man and the woman he wants to marry, but by no means does (27) mean that every man wants to marry the same woman.

- (27) According to Freud, [every man]<sub>i</sub> unconsciously wants to marry a certain woman — his<sub>i</sub> mother.

Hintikka further argues that, while *a certain* doesn't have priority over logical notions, it does have priority over epistemic operators like questions or *I know*. Furthermore, he provides an explanation for the fact that *a certain* often seems to take scope over universal quantifiers.

(27) has two readings. In both readings, *a certain* has scope over the epistemic operator and the epistemic operator has scope over *every*. However, the scope relation between *a certain* and *every* can vary. If the former has bigger scope, a possible referent would be the Queen; if the latter has bigger scope, *his mother* could be inserted. For this interpretation, Hintikka suggests the second-order formalization of (28) in (28a).

- (28) I know that every true Englishman adores a certain woman.  
 a.  $\exists f \sqsupset \text{know} \sqsupset \forall y (\text{TrueEnglishman}(y) \rightarrow \text{adores}(y, f(y)))$

Hintikka predicts that a reading where *every* has scope over *a certain* is more natural if the function exemplified in (28a) is easily available. Since there is no such function for (29), scope for *a certain* over *every* is preferred.

- (29) Every one of these young men hopes to marry a certain woman.

Kratzer (1998) applies this analysis of *a certain* to *some* and assumes that the specific interpretation of *some* corresponds to *a certain* and that it additionally has a quantificational reading. The difference can be seen in (30).

- (30) a. [Every professor]<sub>i</sub> rewarded every student who read some book **she**<sub>i</sub> had reviewed for the New York Times.  
 b. Every professor rewarded every student who read some book **I** had reviewed for the New York Times.

(30a) contains a bound pronoun and has a narrow scope reading, made

available by quantificational *some*, and an intermediate scope reading, given by the specific reading (via choice function). In (30b), a narrow scope reading is available, as well as a referential reading which is due to the lack of a bound pronoun.

Also, Kratzer notes that not all indefinites have intermediate readings, for instance bare plurals and modified numerals (such as *at least one*) don't have one. She explains this by saying that not all indefinites allow specific interpretations — for them, only a narrow scope reading (quantificational interpretation) is possible.

### 2.2.4 Summary

In this section I have presented the main opinions pro and contra referential indefinites. We have seen Fodor and Sag's (1982) original claim that brought the idea of ambiguity of indefinites firmly into people's minds, namely quantifier-unlike behaviour (extraction out of scope islands), lacking of intermediate readings, and the impossibility of VP deletion under certain conditions. There have been many arguments against these data, of which the most important one says that there are in fact lots of intermediate readings. Kratzer (1998) has provided insights into why intermediate readings sometime exist and sometimes don't, and has offered an account that allows the distinction of referential versus quantificational indefinites to be upheld. For this, she assumes indefinites to correspond to choice functions, which have an inherent parameter that can be contextually bound.

## 2.3 Uniform approaches

This section is about uniform approaches to indefinites, which are opposed to the ambiguity-based approaches presented in the last section. I will discuss three selected approaches that deal with the concept of specificity and the ability of indefinites to violate scope islands. In 2.3.1, I present Abusch's (1994) approach that is based on Heim's (1982) File Change Semantics and argues that indefinites do not have any inherent quantificational force. The

unique behaviour of indefinites can be explained by saying that their nature differs from ‘true’ quantifiers, and Abusch suggests a formalism to allow them to not violate scope islands via binding either. In 2.3.2, Schwarzschild’s (2002) account is discussed, which contextually narrows an indefinite NP’s domain to a single element and thereby annihilates the NP’s scope. Finally, in 2.3.3 I introduce von Heusinger’s (2002) analysis based on choice functions: an element is picked from a given set, but the function making this decision has to be contextually anchored to a different expression (another NP, a quantifier, the speaker, etc.)

### 2.3.1 File Change Semantics

A quite distinguished approach to indefinites has been established by Heim (1982).<sup>4</sup> She argues that indefinites are not quantifiers but rather variables without any quantificational force of their own. Their nature can best be seen by comparing the sentences in (31) to their truth equivalents in (32).

- (31)
- a. If **a man** owns **a donkey**, he always beats it.
  - b. Sometimes, if **a cat** falls from the fifth floor, it survives.
  - c. If **a person** falls from the fifth floor, he or she will very rarely survive.
- (32)
- a. For **every man** and **every donkey** such that the former owns the latter, he beats it.
  - b. **Some cats** that fall from the fifth floor survive.
  - c. **Very few people** that fall from the fifth floor survive.

The sentences in (31) contain a quantificational adverb, and the paraphrases in (32) display unexpected variation in the indefinite. Heim suggests that is unnecessary to assume such versatile meanings for indefinites, and that the data in (31) and (32) can be explained perfectly fine by assuming that the indefinite takes the adverb’s quantificational force. In this subsection, I will present Heim’s formalism and then discuss a possible extension by Abusch (1994), who tries to capture specificity in Heim’s framework.

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<sup>4</sup>A similar idea was proposed by Kamp (1981). I focus on Heim’s version here.

Heim (1982) introduces a couple of rules that transform a sentence/text into its logical form.

**NP-Indexing:** *Assign every NP a referential index.* Every NP receives a numerical subscript that can link to a previously established discourse referent or introduce a new one (by Heim’s **Novelty Condition**, *an indefinite NP must not have the same referential index as any NP on its left.*)<sup>5</sup>

**NP-Prefixing:** *Adjoin every non-pronominal NP to S.* The NP is raised to S and leaves a trace behind. This rule is relevant for scope ambiguities since in more complex clauses it doesn’t state which S to attach to.

**Quantifier/Operator Construal:** *Attach every quantifier as a leftmost immediate constituent of S.* For NPs, this rule has to apply after NP-prefixing. The quantifier will be extracted from the NP and raised to become a sister of the NP it has extracted out of. A tripartite structure is created consisting of quantifier, restrictor, and scope. For adverbs, negation and the like, the same tripartite structure is created.

**Existential Closure.** There are two subrules of existential closure. One is responsible for the narrow scope reading, the other for the wide scope reading of indefinites. The first one says, *adjoin a quantifier  $\exists$  to the nuclear scope of every quantifier* (narrow scope reading). It is obligatory where applicable. Assuming that a text is a sequence of sentences under a T node, the other subrule states to *adjoin the quantifier  $\exists$  to T*, which allows to create a referential index that can appear in any sentence under T (wide scope reading).

**Quantifier/Operator Indexing.** Apart from referential indices, there are also selection indices which appear on quantifiers. There may be more

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<sup>5</sup>Heim argues against Karttunen (1976) that a discourse referent is always created but “lives” only inside the scope of an operator binding the NP, while Karttunen suggests that in some instances (e.g. under negation) no discourse referent is created.

than one selection index on a node. When a quantifier is moved out of an NP during Quantifier Construal, it takes the NP's referential index as a selection index. Furthermore there is the rule to *copy the referential index of every indefinite NP as a selection index onto the lowest c-commanding quantifier*.<sup>6</sup>

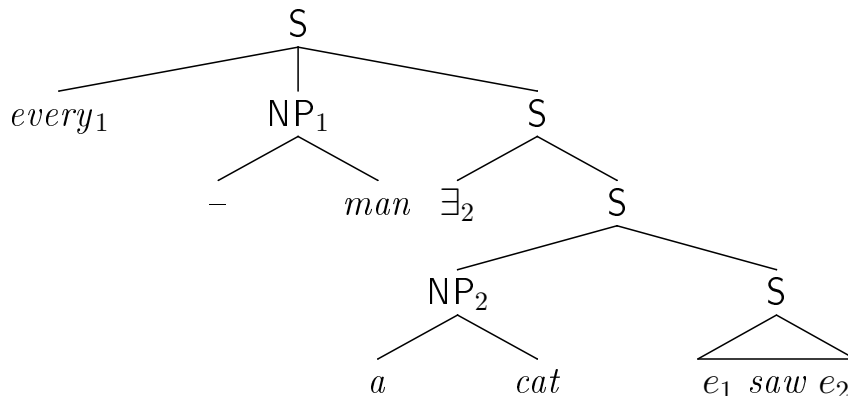
Let's take a look at how scope ambiguities are realized in Heim's framework by means of example (33).

(33) [Every man]<sub>1</sub> saw [a cat]<sub>2</sub>.

First, NP-Indexing applies, the indices are already given in (33). Then, NP-Prefixing attaches *every man* and *a cat* separately to S. Depending on the order respectively which S these two NPs raise to/in, the different scope readings will be derived, as I will show in detail. Because of Quantifier Construal, *every* attaches to the mother S of its NP creating a tripartite structure [*every*][*man*][...]. Into the last part (the nuclear scope of *every*) an existential quantifier is inserted by Existential Closure. Depending on whether *a cat* is below or above *every*, it may index this existential (Quantifier Indexing). *every* will be co-indexed with *man* because it extracted from this NP.

The narrow scope reading is given in (34a), with its tree in (34b).

(34) a.  $\forall x_1 \exists x_2 [(man(x_1) \wedge cat(x_2)) \rightarrow saw(x_1, x_2)]$   
 b.



<sup>6</sup>Heim (1982: 97) notes that these two possibilities to receive a selection index might not be distinct since an NP whose quantifier has moved out, might count as indefinite.

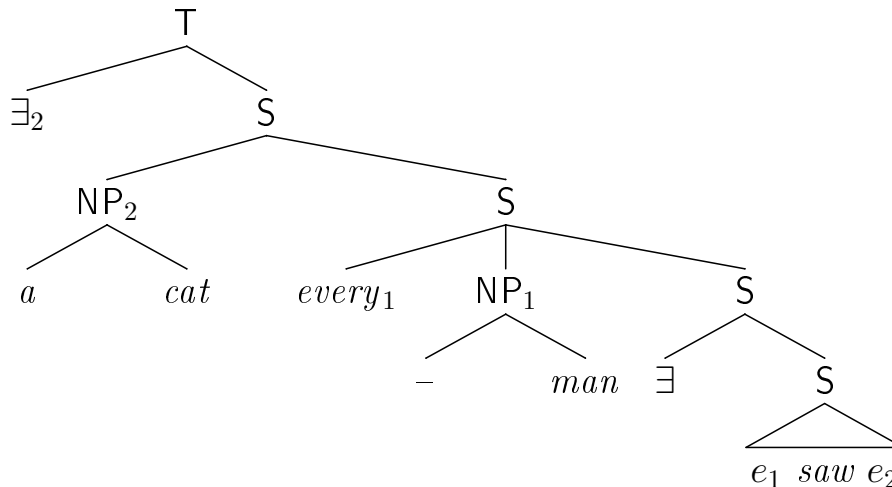
For the wide scope reading, Heim discusses what would happen if the constraint on Quantifier Indexing that an NP is always co-indexed with the lowest c-commanding quantifier, were dropped. Inserting an existential by part 2 of Existential Closure (to T on top of S), *a cat* could be bound by this high existential, triggering the reading in (35).

$$(35) \quad \exists x_2 \forall x_1 [(\text{man}(x_1) \wedge \text{cat}(x_2)) \rightarrow \text{saw}(x_1, x_2)]$$

However, the truth conditions of (35) are too weak: anything that exists and is not a cat will make it true ('ex falso quodlibet'). But if *a cat* is attached to the matrix S rather than the minimal S that contains it, it will only have the high existential above it therefore not changing Quantifier Indexing, and it will yield the correct truth conditions, given in (36a).

$$(36) \quad \text{a. } \exists x_2 [\text{cat}(x_2) \wedge \forall x_1 [\text{man}(x_1) \rightarrow \text{saw}(x_1, x_2)]]$$

b.



### 2.3.1.1 An FCS account for intermediate scope readings

Abusch (1994) tries to account for intermediate readings, which, as we have seen in section 2.2.1, can scope out of syntactic islands. She follows Heim (1982) in that indefinites do not have quantificational force of their own — this will allow her to explain why indefinites differ from “genuine” quantifiers. Heim’s approach for different scope readings cannot explain this since during NP-Prefixing, an NP must always be adjoined to *its* S, and only the exact



level of **S** may vary. Example (37) has an intermediate scope reading given in (37a) with a possible (Heim)-formalization in (37b).

- (37) Every person who likes everyone who likes a cat, likes the cat.
- a. For every person  $x_1$ , if  $x_1$  has the following property: there is a cat  $x_3$  such that  $x_1$  likes every  $x_2$  who likes  $x_3$ ; then  $x_1$  likes  $x_3$ .
  - b.  $\forall x_1[\text{person}(x_1) \wedge \exists x_3[\text{cat}(x_3) \wedge \forall x_2[(\text{person}(x_2) \wedge \text{likes}(x_2, x_3)) \rightarrow \text{likes}(x_1, x_2)] \rightarrow \text{likes}(x_1, x_3)]]]$

However, the formula in (37b) cannot be correct since it would become vacuously true by the existence of anything that is not a cat and that  $x_1$  likes. Abusch concludes that the problem lies in the conjunction of restrictor and nuclear scope. She creates a mechanism that will automatically preserve the restrictor during derivation: in semantic metalanguage, propositions are written as  $\phi : U$  with  $\phi$  containing the nuclear scope's predicates and  $U$  consisting of pairs of free variables and their restrictors, e.g.  $\{\langle x_1, \text{man}(x_1) \rangle, \langle x_2, \text{woman}(x_2) \rangle\}$ . When carrying information up a tree,  $\phi$ -formulas are conjugated and  $U$ -sets united.

Existential closure can remove free indefinites from a  $U$ -set by adding an existential quantifier to  $\phi$  as well as a conjunction with the indefinite's restrictor. Similarly, binding by a universal quantifier will remove the universal's restrictor NP's free indefinites from its  $U$ -set, conjugate them to  $\phi$ , and add an implication to the universals's scope's  $\phi$ -formula. Universal quantifiers for the removed indefinites will be added to  $\phi$  and the remaining  $U$ -set will be united with the nuclear scope's  $U$ -set. An example is given in (38).

- (38) Every dog barked at every postman, and a cat meowed.
- a.  $\text{bark}(x_1, x_2) : \{\langle x_1, \text{dog}(x_1) \rangle, \langle x_2, \text{postman}(x_2) \rangle\}$
  - a'.  $\forall x_1 \forall x_2 [\text{dog}(x_1) \wedge \text{postman}(x_2) \wedge \text{bark}(x_1, x_2)] : \{\}$
  - b.  $\text{meow}(x_3) : \{\langle x_3, \text{cat}(x_3) \rangle\}$
  - b'.  $\exists x_3 [\text{cat}(x_3) \wedge \text{meow}(x_3)] : \{\}$
  - c.  $\left[ \forall x_1 \forall x_2 [\text{dog}(x_1) \wedge \text{postman}(x_2) \wedge \text{bark}(x_1, x_2)] \wedge \exists x_3 [\text{cat}(x_3) \wedge \text{meow}(x_3)] \right] : \{\}$

Since in these rules, the restrictor is again put in conjunction with the nucleus, there might not be a big difference on first sight. However, the restrictor does not have to be turned into a conjunct immediately. This allows to generate correct formalizations.

Let us turn back to example (37). Abusch’s approach, which doesn’t hinge on employing Existential Closure wherever possible nor on having an NP bound by the lowest c-commanding quantifier, allows to derive the semantic representation in (39)<sup>7</sup>.

$$(39) \quad \forall x_1 \forall x_3 [\text{person}(x_1) \wedge \text{cat}(x_3) \wedge \forall x_2 [(\text{person}(x_2) \wedge \text{likes}(x_2, x_3)) \rightarrow \text{likes}(x_1, x_2)]] \rightarrow \text{likes}(x_1, x_3)]$$

Since *a cat* in (37) is embedded in two islands, we wouldn’t want to argue that it gets scope by movement out of there. Rather, Abusch allows the indefinite to keep its LF position under the lowest S-node dominating its surface position, by adding its content to the *U*-set and passing it up until the top. There it receives scope by the same universal quantifier that also binds *person* and the proposition  $\text{cat}(x_3)$  (as well as  $\text{person}(x_1)$ ) is added to the  $\phi$ -formula.

By assuming that genuine quantifiers receive their scope via movement and that indefinites can be passed up to any convenient quantifier, Abusch is able to account for the fact that genuine quantifiers are subject to island constraints but that indefinites are not. This allows her to explain the island insensitive intermediate scope phenomenon of indefinites in Heim’s (1982) framework, where indefinites do not have any quantificational force of their own.

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<sup>7</sup>While the intended reading is specifically intermediate, there are differences in truth conditions between (37b) and (39). While the representation in (37b) with an existential quantifier between two universal ones may look more reasonable at first sight, the representation in (39) allows to capture scenarios where somebody doesn’t like any cats, and doesn’t satisfy situations in which Peter doesn’t like Scratchy although he is friends with all of Scratchy’s fans (independently of Peter’s further cat befriendings).

Note that due to *the cat* in the sequent, a narrow scope reading is not possible at all. Since the reading in (39) is definitely not wide scope either, the reader may find it easier to accept this as an intermediate scope reading.

However, as Kratzer (1998: 165f) herself notes, this approach makes the derivation procedure a lot more complex without independent motivation for such assumptions. Additionally it is not able to account for the lack of some intermediate readings as in Fodor and Sag's (1982) original examples. I will leave the discussion at this and present two different approaches based on a unified view of indefinites.

### 2.3.2 Singleton indefinites

Schwarzschild (2002) offers a rather pragmatic approach to deal with the unique scopal behaviour of indefinites. He assumes that indefinites are existential quantifiers and have their domain narrowed by an overt or covert restrictor. He argues that quite often the restrictor is covertly specified by the context, which can reduce the domain to a single element, a singleton. If a quantifier's domain is singleton, its scope cannot interact with the scope of other quantifiers. Because of this, the singleton may seem to have wide scope outside of scope-islands.

In (40), such a contextual implicature is exemplified, together with the scope neutralization of the singleton.

- (40) a. Everyone at the party voted to watch a movie that Phil said was his favourite.<sup>8</sup>  
 b. A movie that Phil said was his favourite was such that everyone at the party voted to watch it.

Assuming there is exactly one favourite movie of Phil's and that it is the one he claimed to be such, the indefinite in (40) has a singleton extension. We can easily understand (40a) referentially. In (40b), the indefinite has visible scope above the universal quantifier, and (40a) and (40b) share the same meaning.

This approach can also account for intermediate scope as in (41a) with the intermediate reading in (41b).

---

<sup>8</sup>Schwarzschild's choosing "favourite" favours a singleton reading, but nothing hinges on this. Replace "his favourite" with "good", and on the assumption that there was only one movie that Phil said was good, the indefinite will be (must be) understood referentially.

- (41) a. Most linguists have looked at every analysis that solves some problem.  
 b. For most linguists  $l$ , there is some problem  $p$ , and  $l$  knows every analysis that solves  $p$ .

By making the implicit restriction overt, cf. (42), it is clear that (41) makes a statement about  $l$ 's pet problem which is usually a singleton.

- (42) Most linguists<sub>1</sub> have looked at every analysis that solves some problem *that they<sub>1</sub> have worked on most extensively*.

With this explanation, it is not necessary to postulate scope-violating movement or inherent ambiguity of indefinites. By restricting the quantifier domain to a single element, seemingly weird scoping behaviour can be explained. The indefinite does not escape its island; but since singleton scope is neutralized, we cannot distinguish narrow singleton scope from wide singleton scope.

Specific cases in which the referent of an indefinite noun phrase is not known to the hearer and possibly not even to the speaker, can also be accounted for. Fodor and Sag's (1982) example in (43a) has a specific interpretation.

- (43) a. If a friend of mine from Texas had died in the fire, I would have inherited a fortune.  
 b. Nobody believed Ivan's claim that if a friend of his from Texas had died in the fire, he would have inherited a fortune.

The hearer may not know which friend is being referred to, and in (43b) nor may the speaker, but if they perceive the utterance to be about a specific friend, i.e. if the context is restricted to a singleton, they will be able to refer to this friend as "the friend that was just talked about" or "the friend from Texas who if he had died in the fire, the speaker would have inherited a fortune". For this purpose, Schwarzschild provides the rough principle in (44).

(44) *Privacy Principle* (Schwarzschild 2002: 307)

It is possible for a felicitous utterance to contain an implicitly restricted quantifier even though members of the audience are incapable of delimiting the extension of the implicit restriction without somehow making reference to the utterance itself.

### 2.3.3 Referential anchoring

A different approach is by von Heusinger, who takes specificity to indicate that an expression is “referentially anchored” to another object in the discourse (2002: 268). This means that the referent of a specific NP has to be functionally dependent on another expression in the same sentence. Familiarity on the other hand is represented by definiteness and is discourse bound. Similarly to Heim’s (1982) Familiarity Condition<sup>9</sup> he presents the Specificity Condition in (45).

(45) *Specificity Condition* (von Heusinger 2002: 268f)

An  $NP_i$  in a sentence  $\phi$  with respect to a file  $F$  and the Domain of filenames  $DOM(\phi)$  is [+specific] if there is a contextual salient function  $f$  such that  $i = f(j)$  and  $j \in DOM(\phi)$ .

Von Heusinger builds his approach on two main assumptions: 1. Indefinite NPs are translated into indexed epsilon terms, which are interpreted as choice functions. 2. Epsilon terms are indexed by a referential variable that must be anchored to another discourse item.

The epsilon operator  $\varepsilon$  is defined as in (46). It is the logical correspondence of the semantic choice function  $\phi$  (46a), which assigns an element from a given set to this set (46b).

(46) “a condition” =  $\varepsilon_i x[\text{condition}(x)]$   
 a.  $\|\varepsilon_i x[\text{condition}(x)]\| = \phi_1(\|\text{condition}\|)$   
 b.  $\phi_1(\|\text{condition}\|) \in (\|\text{condition}\|)$

---

<sup>9</sup>Given in detail in (59) on page 33.

The actual selection depends on the context, indicated by the index  $i$ . Von Heusinger writes that this treatment is similar to FCS (compare section 2.3.1), but has the advantage that indefinites need not be moved or raised in order to account for various dependencies.

The referential index postulated in assumption 2 above can be understood similarly to the temporal index introduced by Enç (1986) in examples like (47).

(47) The fugitives are now in jail.

Enç (1986) has shown that the temporal index can be freely assigned to the NP; and von Heusinger assumes the same for his referential index.

In (48), two possible interpretations are represented by epsilon terms. (48a) indicates the (in von Heusinger's terms) 'absolute' specific reading, i.e. the wide scope reading, where the speaker has the referent in mind. (48b) indicates a reading where the speaker doesn't necessarily know who is referred, but has reason to believe that George knows the referent.<sup>10</sup>

(48) George met a (certain) student of his.

- |    |                                                                               |                       |
|----|-------------------------------------------------------------------------------|-----------------------|
| a. | $\text{met}(\text{george}, \varepsilon_{\text{speaker}}x[\text{student}(x)])$ | <i>wide scope</i>     |
| b. | $\text{met}(\text{george}, \varepsilon_{\text{george}}x[\text{student}(x)])$  | <i>relative scope</i> |

In (49), the narrow scope reading as well as the wide scope and relative scope readings are exemplified.

(49) William didn't see a book.

- |    |                                                                                 |                       |
|----|---------------------------------------------------------------------------------|-----------------------|
| a. | $\neg\exists i \text{see}(\text{william}, \varepsilon_i x[\text{book}(x)])$     | <i>narrow scope</i>   |
| b. | $\neg\text{see}(\text{william}, \varepsilon_{\text{speaker}}x[\text{book}(x)])$ | <i>wide scope</i>     |
| c. | $\neg\text{see}(\text{william}, \varepsilon_{\text{william}}x[\text{book}(x)])$ | <i>relative scope</i> |

There is no distinction between (49b) and (49c) in terms of scope. But there is a difference if the epsilon term is embedded under a universal quantifier as in (50).

---

<sup>10</sup>This example is due to Higginbotham (1987: 64), see section 2.4.4.

(50) According to Freud, every man unconsciously wants to marry a certain woman.

- a.  $\forall x[\text{man}(x) \rightarrow \text{want}(x, \text{marry}(x, \varepsilon_x y[\text{woman}(y)]))]$  *relative scope*
- b.  $\forall x[\text{man}(x) \rightarrow \text{want}(x, \text{marry}(x, \varepsilon_{\text{speaker}} y[\text{woman}(y)]))]$  *wide scope*

### 2.3.4 Summary

In this section I have presented three selected approaches that deal with the specificity of indefinites without assuming that they are inherently ambiguous between a quantificational and a referential reading as suggested by Fodor and Sag (1982).

The first approach by Abusch (1994) in subsection 2.3.1 works in a File Change Semantics framework, where indefinites do not have any quantificational force of their own but must be bound by existing quantifiers or inserted existentials. Abusch analyzes the island escaping behaviour of indefinites by assuming that they do not have to be bound immediately but can be passed up the tree to be bound at a suitable location.

Contrary to this, Schwarzschild (2002) argues that indefinites are existential quantifiers that have their scope narrowed by overt or covert contextual restrictors. He explains island escaping by arguing that scope is restricted to a single element, which annihilates scope as such and creates a ‘referential’ reading for the one element. The hearer does not require further contextual information to make out the single element; this can be achieved by solely referring to the proposition itself.

Von Stechow (2002) suggests, similarly to Kratzer (1998), that indefinites are choice function operators that have to be contextually bound to an established discourse referent. While this approach may seem a bit general, it allows him to account for all kinds of scope behaviour as well as island escaping.

## 2.4 Types of specificity

In this section I give an overview over the different kinds of specificity.<sup>11</sup> Scopal (2.4.1), epistemic (2.4.2), relative (2.4.4), and referentially anchored (2.4.5) specificity have been introduced in earlier parts of this chapter. An idea of specificity as partitivity is given in subsection 2.4.3 and will be important when turning to some Turkish data in chapter 4.

### 2.4.1 Scopal specificity

Some specificity effects arise when the indefinite is in interaction with another quantifier or operators like negation, propositional attitudes, etc. The indefinite is considered specific if it has wide scope.

The scope distinctions with respect to negation is exemplified in (51), and with respect to a quantifier in (52) (examples due to Karttunen (1976)).

- (51) Bill didn't see **a** misprint.
- a.  $\exists \sqsupset \neg$ : There is a misprint which Bill didn't see.
  - b.  $\neg \sqsupset \exists$ : Bill saw no misprints.
- (52) **Most** boys in this town are in love with **a** go-go dancer.
- a.  $\exists \sqsupset most$ : There is a go-go dancer who most boys in this town are in love with.
  - b.  $most \sqsupset \exists$ : For most boys in this town, there is some go-go dancer they're in love with.

It is also possible to combine the indefinite with two other operators like in (53).

- (53) Bill **intends** to visit **a** museum **every** day.<sup>12</sup>
- a.  $\exists \sqsupset intend \sqsupset \forall$ : There is a certain museum that Bill intends to visit every day.
  - b.  $intend \sqsupset \exists \sqsupset \forall$ : Bill intends that there be some museum that he visits every day.

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<sup>11</sup>My categorization follows roughly von Heusinger (2002).



- c. *intend*  $\sqsupset \forall \sqsupset \exists$ : Bill intends to do a museum visit every day.

Ioup (1977) argues that specificity and scope over other quantifiers are two completely independent things. She gives an example similar<sup>13</sup> to (54) with four possible discourse continuations which she classifies as the cross-product {wide scope, narrow scope}  $\times$  {specific, non-specific}.

- (54) Everyone claimed that a witch killed the baby.
- a. *wide scope / non-specific*  
If they ever find out who she is, they'll try to catch her.
  - b. *narrow scope / non-specific*  
If they ever find out who they are, they'll try to catch them.
  - c. *wide scope / specific*  
They know who she is and they're trying to catch her.
  - d. *narrow scope / specific*  
They know who they are and they're trying to catch them.

There seems to be a bit of a contradiction in her paper. She writes (p. 242) that any indefinite in interaction with another quantified noun phrase must receive a specific reading, i.e. require the existence of a discourse referent, and that scope variations with the other quantifier only yield a different number of instances but never no instance at all. However, the examples given in (54) (her page 243f.) are clearly labelled “non-specific”. In fact, to me, readings (54a) and (54b) do not necessarily imply the existence of witches.

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<sup>12</sup>Note that in all interpretations in (53), *intend*  $\sqsupset \forall$  holds. The missing three readings (there are six possibilities to combine these three items) with  $\forall \sqsupset$  *intend* are available in (i). This is evidence for (53)'s *every day* to be within the infinitival clause.

- (i) Every day Bill intends to visit a museum.

<sup>13</sup>Ioup's example is actually (i), but since there might be additional effects due to *believe* and the bound pronoun *their*, I made the example more transparent.

- (i) Everyone believes that a witch blighted their mares.

In (55), I suggest a formalism that will allow to account for the four different interpretations of (54), thereby ‘resolving’ Ioup’s (1977: 244) “dilemma for standard logic” (because it is impossible for a linear arrangement of two quantifiers to generate the readings of (54)). In (55), Ioup’s non-specific readings are formalized with an existential quantifier, while the specific readings contain a function  $f$  similar to Hintikka (1986)<sup>14,15</sup>. In (55c) everyone claims the same specific witch killed the child. I take this to be the claim of a group rather than of individuals and add a contextual specificity function  $f$  of the group.

- (55) Let  $W$  be the set of witches, and  $X$  the set of relevant discourse referents.
- a.  $\exists w \in W \sqsupset \forall x \in X : \text{claimed}(x, \text{killed}(w, \text{the baby}))$
  - b.  $\forall x \in X \sqsupset \exists w \in W : \text{claimed}(x, \text{killed}(w, \text{the baby}))$
  - c.  $\forall x \in X : \text{claimed}(x^{16}, \text{killed}(f(X), \text{the baby}))$
  - d.  $\forall x \in X : \text{claimed}(x, \text{killed}(f(x), \text{the baby}))$

## 2.4.2 Epistemic specificity

However, in the absence of other quantifiers and operators, specificity can still arise. In (56) (by Fodor and Sag 1982) ambiguity arises in the absence of any other operator.

- (56) **A student** in syntax 1 cheated on the exam.
- a. ... His name is John.
  - b. ... We are all trying to figure out who it was.

Epistemic specificity is often explained by pragmatic principles such as ‘the referent being in the mind of the speaker’. Since most of sections 2.2 and 2.3 have dealt with such examples, I will not go into it further. (56) has instan-

<sup>14</sup>See relative specificity in section 2.4.4 as well as 2.2.3.

<sup>15</sup>(55d) is somewhat against Hintikka’s (1986) observation that the selectional function has to be familiar. I believe (55) has a reading with arbitrary pairs of claimers and claimees.

<sup>16</sup>In fact, the claim may also be made by the group as a whole:  $\text{claimed}(X, \dots)$ .

tiated the idea of ambiguous indefinites, and we have seen how epistemic specificity can be explained otherwise.

### 2.4.3 Partitivity

Partitive NPs, such as *a/two/some/... X* or more explicitly *a/... X of the Y*, can be specific but do not have to be. If there is no overt modification like *certain*, their specificity is determined contextually. Enç (1991) suggests the modification in (57) of Heim's theory of definiteness in order to account for specificity. NPs carry a pair of indices which can each have a definiteness feature. The first index determines the definiteness of the NP itself while the second index links the NP to other discourse items. If and only if the second index is definite, the NP is specific. (Enç 1991: 7)

- (57) Every  $[\text{NP } \alpha]_{\langle i, j \rangle}$  is interpreted as  $\alpha(x_i)$  and  $x_i \subseteq x_j$  if  $\text{NP}_{\langle i, j \rangle}$  is plural,  
 $\{x_i\} \subseteq x_j$  if  $\text{NP}_{\langle i, j \rangle}$  is singular  
 a. Iff  $i$  is [+definite], the NP is definite.  
 b. Iff  $j$  is [+definite], the NP is specific.

In a discourse like (58), the NP *two girls* can be interpreted partitively.

- (58) Several children entered my room. Two girls were crying.

Since, when parsing the second clause, the preceding NP *several children* has already established a discourse referent with index  $j$ , according to Heim's Familiarity Condition (given in (59) below),  $j$  is part of the domain of filenames (i.e. the set of previously established indices of discourse referents) and therefore definite. Next, *two girls* is introduced with index  $i$ , making the NP indefinite since  $i$  is not yet part of the domain of filenames.

- (59) Heim's (1982) *Familiarity Condition*:  
 An  $\text{NP}_i$  in a sentence  $\phi$  with respect to a file  $F$  and the Domain of filenames  $\text{DOM}(F)$  is [+definite] if  $i \in \text{DOM}(F)$ , and it is [-definite] if  $i \notin \text{DOM}(F)$ .

Following the definition in (57), *two girls* is specific iff it carries the pair of indices  $\langle i, j \rangle$  with  $j$  being definite. In a discourse like (60),

(60) Several boys entered my room. Two girls were crying.

*two girls* cannot be part of the set described by *several boys*. We perceive it as non-specific because its second index is different from the first index on *several boys*.

However, there is a problem with Enç's analysis. She claims that overt partitives such as *two of the books* are necessarily specific (Enç 1991: 10), compare (61) to (62), because "the NPs defined as nonspecific in this article are exactly those that are allowed to occur in existential sentences" (Enç 1991: 14).

(61) \*There are two of the books on the table.

(62) There are two books on the table.

(63) Two of the books are on the table.

Enç furthermore argues for the specificity of *two of the books* by assigning the indices as exemplified in (64).

(64) [two of [the books] $_{\langle u, x \rangle}$ ] $_{\langle v, u \rangle}$

The second index  $u$  of the larger NP is identical to the first index of the smaller NP. Since the smaller NP is definite,  $u$  must be [+definite], thereby making the larger NP specific. However, the phrase *two of the books* is not necessarily specific, consider (65).

(65) Mary has already read two of the books, but I don't know which ones.

#### 2.4.4 Relative specificity

We have seen that specificity can arise when the indefinite has wide scope over another quantifier, operators like negation, or verbs of propositional

attitudes (“scopal specificity”). There is also the kind where the indefinite can be ambiguous between an existential and a referential reading (“epistemic specificity”). Hintikka (1986) has given an interesting account about *a certain*, which forces specificity onto the NP. There are readings where such a specific NP has narrow scope with respect to another quantifier. This phenomenon can be described as “relative specificity”<sup>17</sup>.

Hintikka’s (1986) examples include the following, (66) is already given as (27) above:

- (66) According to Freud, every man unconsciously wants to marry a certain woman — his mother.
- (67) Each husband had forgotten a certain date — his wife’s birthday.

In (66) and (67), the woman resp. the date vary with the man. However, the usage of *certain* seems justified because the relation between man and woman/date seems to be the same (specified after the hyphen). Hintikka (1986: 332) argues that *certain* does not take priority over logical notions, but over epistemic operators like *I know that*, questions, or implicit epistemic operators as in usual assertive sentences. A striking difference can be seen in (68):

- (68) a. Richard does not have time to date a **certain** woman, but he sends her flowers.
- b. \*Richard does not have time to date a woman, but he sends her flowers.

There is a tacit epistemic operator in (68), and in (68a), *certain* takes scope over it and the negation, thereby establishing a discourse referent that can later be continued by *her*. In (68b), a reading with scope like (68a) can only be obtained by stress on the indefinite. The much more salient reading is with low scope for *a woman*, and in this case the negation prohibits<sup>18</sup> the introduction of a new discourse referent.

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<sup>17</sup>Terminology e.g. by von Heusinger (2002).

<sup>18</sup>Cf. fn. 5 on page 20.

### 2.4.5 Referentially anchored specificity

There are also differences with respect to specificity that do not involve different scope over tacit epistemic operators. The following example in (69) is by Higginbotham (1987: 65), illustrating that specificity does not have to be speaker-bound.

- (69) a. George: “I met a certain student of mine today.”  
 b. James: “George met **a certain student of his** today.”

In (69), James reports George’s statement about having met a certain student of his. It is possible that James does not have the referent of *a certain student* in mind, but relies on George’s state of mind. However, James can still use a specific NP to express this situation. Examples like this have motivated von Heusinger’s (2002) analysis (presented in section 2.3.3 above) of ‘licensing’ the specific NP by relating it to another discourse referent. In (69b) *a certain student* can be related to George or to James (the speaker).

### 2.4.6 Summary

In this section, five different kinds of specificity were discussed. For instance, specificity may arise scopally, that is by having greater scope than another quantifier (but see the discussion of Ioup (1977) in section 2.4.1). However there are instances where the indefinite noun phrase has narrow scope and is still interpreted specifically (‘relative specificity’). For such cases, Hintikka (1986) has suggested that all iterating entities of the wide scope universal and their specific appendants share the same relation, expressed by a familiar/salient function.

There are also other kinds of specificity that arise without the presence of another quantifier or operator. Partitives for instance are argued by Eng (1991) to always be specific because their set would have to already be established in the discourse. There is also referentially anchored specificity, by von Heusinger (2002) to be taken to account for all types of specificity, which states that a specific NP can/must be bound to another discourse item. The binder can be understood as the person choosing the function that will

pick the specific entity, i.e. the person ‘having the referent in mind’. Finally, epistemic specificity is a general term for ambiguities that fall under neither other category.

## 2.5 Conclusions

Specificity and indefiniteness are closely connected to each other, and one can barely look at the one without saying something about the other. Definiteness raises the question of whether the referent has already been introduced to the discourse or can nonetheless be constructed easily. Examples for the latter include deictics as well as items of shared focus, and unique objects if they are not unknown to the hearer (*‘the dean’* or *‘the first man in space’* are fine, whereas *‘the aluminium toothbrush’*<sup>19</sup> should for most hearers be introduced with an indefinite).

Specificity is a notion that should be treated independently of definiteness. As we have seen in the beginning of this chapter, definite NPs can, like indefinite ones, be specific or non-specific. In sections 2.2 to 2.4, I have presented several analyses that try to capture and formalize the idea of specificity, which is casually described as ‘the speaker has the referent in mind’. This definition seems to be a good starting point, but is not in fact correct. There are a lot of examples where the referent of a specific indefinite is not known to the speaker. In these examples, however, the referent is always unique in some other sense. Von Stechow (2002) and Kratzer (1998) take the uniqueness to arise from a discourse referent’s intentions. They treat indefinites as choice functions in order to extract a specific individuum. For this, an inherent argument is required that specifies who gets to make the selection. Von Stechow takes this idea further than Kratzer and states that specificity correlates with linking to another discourse item.

Schwarzschild (2002) suggests a different approach and treats specificity merely as a felt side-effect that arises when the domain of discourse is contextually narrowed down to a singleton element. No additional information

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<sup>19</sup>According to Schwarzschild (2002: 292) such a toothbrush exists in a museum in New Hampshire. I haven’t been able to verify this.

other than the size of the domain are required on part of the speaker or the hearer to feel the specificity. This allows him to also account for the potential specificity of phrases like *'two books'* or *'two of the books'*, which is perceived as specific if there are exactly two books in the domain of discourse. These examples could also be covered with the use of choice function, but this would require a formally slightly more complex redefinition that makes choice function pick a subset of the required size rather than a single element.

In section 2.4 I have made it clear that specificity is more complex than one might assume. There are various kinds of contexts in which an NP can be specific, and one would like to have a theory that can cover all instances with minimal ado. It is my opinion that of the theories presented in this chapter, von Stechow's (2002) and Schwarzschild's (2002) are the most suited, for reasons given in the respective sections.

The next chapter will turn to modern standard Turkish data that will allow us to obtain further insights into specificity. In chapter 4 I will then present selected analyses of the Turkish data.





# Chapter 3

## Turkish data

This chapter introduces the relevant data from contemporary standard Turkish as spoken in the Republic of Turkey. The next chapter will then present some analyses of the data discussed here.

This chapter breaks into four sections. In 3.1, general properties of Turkish are explained. Those will be of influence in sections 3.2 and 3.3 where the distributional properties of Differential Object resp. Subject Marking are presented. In section 3.4, a short overview is given.

### 3.1 Introduction

#### 3.1.1 Cases

We now turn to Turkish differential object and subject marking data. Turkish is an agglutinative language and makes use of two kinds of Vowel Harmony (VH): Front/back harmony, also called the ‘small’ VH, alternates a low unrounded front vowel (*e*) with a low unrounded back vowel (*a*). Vowels following the small VH will be abbreviated as *A*. Rounding harmony, also called labial harmony or ‘big’ VH, alters a high vowel on the dimensions round and front, yielding four possibilities: *ı* [ɨ], *i*, *u*, *ü* [y], abbreviated as *I*<sup>20</sup>. Examples can be seen on the suffixes in (70).

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<sup>20</sup>I will also use the capitals *C* [ɟ], *D*, *G* to indicate alternation with their voiceless equivalents. The distribution is usually voiceless after voiceless consonants and in word-final position,

There are five to seven cases, given in (70). For two cases their status is disputed: genitive and instrumental. Genitive is never governed by a verb and it is only used in possessive constructions, as we will see in sections 3.1.2 and 3.3. Instrumental can be marked as a cliticized suffix or as a postposition, and both options do not occur with other cases.

(70) Turkish cases

- a. Nominative (NOM):  $\emptyset$
- b. Accusative (ACC):  $-i, -i, -u, -ü, -yı, -yi, -yu, -yü \Rightarrow -(y)I$
- c. Genitive (GEN):  $-ın, -in, -un, -ün, -nın, -nin, -nun, -nün \Rightarrow -(n)In$
- d. Dative/Allative (DAT):  $-a, -e, -ya, -ye \Rightarrow -(y)A$
- e. Locative (LOC):  $-da, -de, -ta, -te \Rightarrow -DA$
- f. Ablative (ABL):  $-dan, -den, -tan, -ten \Rightarrow -DAn$
- g. Instrumental/Comitative (INSTR):  $ile, -la, -le, -yla, -yle \Rightarrow ile/-(y)IA$

In (70b,d,g),  $y$  for accusative, dative, and instrumental as well as  $n$  for genitive in (70c) appear if the noun ends in a vowel. This is generally the case for all bracketed sounds at the beginning of an ending. Turkish phonology follows the (C)V(C) pattern and avoids hiatuses.

Genitive has further allomorphs for first persons, the suffixes given in (70c) hold for second<sup>21</sup> and third persons. The allomorph for first persons is  $-(I)m$ , namely *ben-im* “I-GEN” for singular and *biz-im* “we-GEN” for plural (cf. also von Heusinger and Kornfilt 2005: 37f.).

There are (at least) three criteria to distinguish ordinary suffixes from case endings. The first one is government by a verb or an adposition. Genitive is never governed by a verb, it only appears in possessive constructs and may very restrictedly be assigned by four postpositions (cf. section 3.3.4.2). Instrumental is governed by some verbs, e.g. *evlen* “marry”, but never by

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voiced otherwise.

<sup>21</sup>Kornfilt (1997: 217) additionally notes  $-(I)n$  for second persons, but I am not sure what evidence she has in mind to distinguish it from  $-(n)In$  for third persons since “you.SG-GEN” is *sen-in* and “you.PL-GEN” is *siz-in*.

postpositions.

A second criterion may be the incapability to constitute an independent word. Genitive fulfills this, but instrumental can appear as independent postposition *ile* as well as clitic *-(y)lA*. The cliticized version is not equivalent to other case endings because it does not receive the otherwise word-final stress. It does however follow Vowel Harmony, which usually stops at word boundaries<sup>22</sup> (Kornfilt 1997: 214).

The third criterion involves the morphological alternations of the third person singular possessive suffix, *-(s)I* and *-(s)In*. The latter version with the so-called ‘pronominal *n*’ appears only before the case endings in (70b,d–f). However, as (70c) demonstrates, genitive adds *n* between the noun and the ending if the noun ends in a vowel, so *annesinin* ‘of his mother’ could be analyzed as *anne-sin-in* or *anne-si-nin* (mother-3SG.P-GEN). The pronominal *n* does not appear before instrumental.

It appears that those grammarians who treat genitive as a case, follow the second criterion, while for those who do not treat it as a case, a combination of first and second criterion is important. The third criterion cannot be applied to the question of the role of genitive.

Instrumental is most often not viewed as a case, probably because of its transparency as turning from a postposition into a clitic (criterion two). The cliticized version is strongly preferred in contemporary Turkish.

### 3.1.2 Compounds and possession

Turkish has a set of possessive suffixes to indicate the pronominal possessor of a noun. Some examples are given in (71).

- (71) a. *kitab-ım*  
           book-1SG.P  
           ‘my book’

---

<sup>22</sup>Another example where Vowel Harmony applies to clitics is the question particle *mI*, which also never receives stress.

- b. *arkadaş-lar-ı*  
friend-PL-3SG.P  
“his/her friends” or “their friend” or “their friends”
- c. *gel-me-n*  
come-NMZ-2SG.P  
“your coming” resp. “that you will come”

If the possessor is focused or not pronominal, it will stand left of the possessee and will be marked with genitive, as in (72). As mentioned earlier, this is (almost) the only functionality of genitive.

- (72)
- a. *Zeyneb-in arkadaş-lar-ı*  
Zeynep-GEN friend-PL-3SG.P  
“Zeynep’s friends”
  - b. *siz-in ad-ınız*  
you.PL-GEN name-2PL.P  
“*your* name” (formal or to a group)

Compounds are realized by adding the possessive suffix of by default third person singular to the denominator. The specifier does not receive genitive (but see section 3.3.4.1). Some examples are given in (73).

- (73)
- a. *kadın doktor-u*  
woman doctor-3SG.P  
“gynaecologist”
  - b. *tutukla-ma emr-i*  
arrest-NMZ order-3SG.P  
“warrant of arrest”
  - c. *ev kapı-sı*  
house door-3SG.P  
“front door”

Turkish syntax allows only one possessive suffix to appear on any noun. Possessing a compound will thus lead to the third person singular suffix being replaced by the fitting suffix, as demonstrated in (74a). Because of this, any compound can be understood as being possessed by a third person

singular, see (74b). To disambiguate, an explicit possessor can be added, (74c).

- (74) a. *cep telefon-(\*un)-um*  
 pocket phone-(3SG.P)-1SG.P  
 “my cell phone”  
 b. *cep telefon-u*  
 pocket phone-3SG.P  
 “cell phone” or “his/her cell phone”  
 c. *Ayşe-nin cep telefon-u*  
 Ayşe-GEN pocket phone-3SG.P  
 “Ayşe’s cell phone”

These constructions of genitive + possessive suffix exemplify the functionality of genitive and will be important in section 3.3.

### 3.1.3 Definiteness and indefiniteness

Turkish has an indefinite article *bir*, derived from the numeral *bir* “one”, from which it differs in distribution. While the numeral will be the first element in a sequence *bir*-adjective-noun, the indefinite article will take the middle position adjective-*bir*-noun (e.g. Kornfilt 1997: 275)<sup>23</sup>.

Turkish does not have a definite article. Any noun that is not preceded by *bir* is likely to be understood definite. As I will show in section 3.2, there are also unmarked incorporated nouns that will receive a generic reading. Nouns with a possessive suffix usually receive a definite reading, such as (75a), but can be modified with *bir* to generate a partitive reading, (75b). (75c) is equivalent to (75b) and makes the partitive reading visible.

- (75) a. *arkadaş-ım*  
 friend-1SG.P  
 “my friend”

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<sup>23</sup>See Özge (2010: 13ff.) for further distinction between the indefinite article and the numeral. This goes against Aygen-Tosun (1999), who claims that *bir* is always a numeral.

- b. *bir arkadaş-ım*  
 a friend-1SG.P  
 “a friend of mine”
- c. *arkadaş-lar-ım-ın bir-i*  
 friend-PL-1SG.P-GEN one-3SG.P  
 “one of my friends”

Further ways to mark a noun as definite will be presented in the following two sections.

## 3.2 Direct object marking

### 3.2.1 Types of direct objects

Turkish NPs fall mainly into four categories: definite/demonstrative, indefinite-specific, indefinite-nonspecific, and incorporated. In (76), direct objects of each type are exemplified.

- (76) a. (Ben) *kitab-ı oku-du-m.* *definite*  
 (I) book-ACC read-PAST-1SG  
 “I read the book.”
- b. (Ben) *bir kitab-ı oku-du-m.* *indefinite-specific*  
 (I) a book-ACC read-PAST-1SG  
 “I read a certain book.” resp.  
 “I read one of the books.”
- c. (Ben) *bir kitap oku-du-m.* *indefinite-nonspecific*  
 (I) a book read-PAST-1SG  
 “I read a book.”
- d. (Ben) *kitab oku-du-m.* *incorporated*  
 (I) book read-PAST-1SG  
 “I was (book-)reading.”

In immediate preverbal position, the base position for the direct object, the different possibilities of case marking as given in (76) are available. (76a) and (76b), both case marked, express a relatedness to the object either through

discourse givenness (definiteness) or referential anchoring (specificity). In (76c) and (76d), case marking is omitted. (76c) uses the indefinite article to restrict the number of books read to a single one without specifying it further. In (76d), no such number restriction is employed, thereby only specifying the kind of literature. Let us look at the status of such objects more closely.

### 3.2.1.1 Incorporated objects

Aydemir (2004) makes a distinction in the syntactic positions between incorporated objects and others, specifically indefinite unmarked objects.<sup>24</sup> She notes that incorporated objects cannot be modified (77) or elided (78) (both by Aydemir 2004: 467f.).

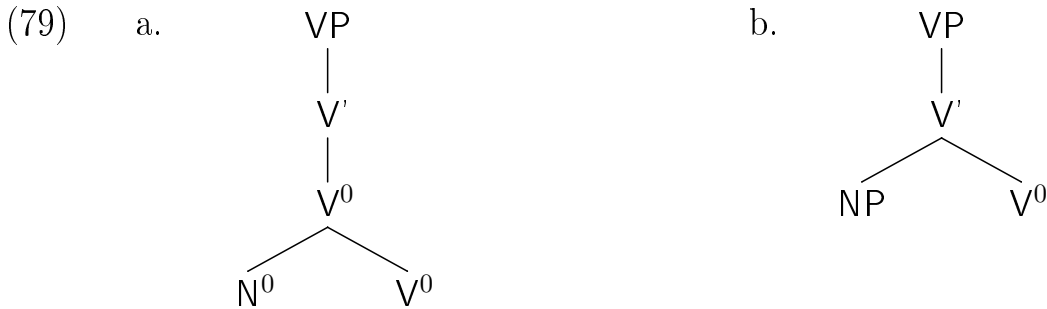
- (77) a. *Mehmet kötü araba kullan-ıyor.*  
 Mehmet bad car use-PROG  
 “Mehmet drives badly.”  
 #“Mehmet drives bad cars.”
- b. *Mehmet kötü araba-lar kullan-ıyor.*  
 Mehmet bad car-PL use-PROG  
 “Mehmet drives bad cars.”  
 #“Mehmet drives cars badly.”
- (78) \**Bütün gün kitap oku-du-m, sana da kitap*  
 all day book read-PAST-1SG you.SG.DAT also book  
*oku-ma-n-ı tavsiye ed-er-im.*  
 read-NMZ-2SG.P-ACC recommend-AOR-1SG  
*intended:* “I read books all day, I recommend you to read too.”

Note that when adding plural to (77a), yielding (77b), an adjectival reading of *kötü* “bad” becomes available. Aydemir (2004: 467, fn. 4) observes that adverbs of manner must always occur in immediate preverbal position, thus the object in (77a) must be in V. From these and similar data, she

<sup>24</sup>Aydemir seems to use ‘specific’ as a synonym for ‘marked’, but here, ‘specific’ is a semantic label whereas ‘marked’ is syntactic. I will show that there can be non-specific marked objects.



draws the conclusion that a bare ‘incorporated’ noun is situated in a different syntactic position than an NP modified with *bir*. She suggests that bare objects constitute a complex predicate as given in (79a), while ‘usual’ objects appear in the complement position of V as in (79b).



Modifying the bare object in (79a) with anything at all is not allowed because its syntactic status is  $N^0$  rather than NP. Thereby even making it plural would require a functional projection and would not allow the object to remain inside  $V^0$  (Aydemir 2004: 471, ftn. 11). This is why in (77b) *kötü* cannot be understood adverbally. Note, however, that, as we will see in section 3.2.2.1, incorporated objects can undergo syntactic movement.

There is also the argument that incorporated objects do not establish discourse referents, and generally this claim holds, cf. (80) by Erguvanlı (1984: 23) and (81) by Nilsson (1985: 25).

- (80) *Ali kaç gündür resim<sub>1</sub> yap-ıyor-du nihayet*  
 Ali how many day picture make-PROG-PAST finally  
*bugün (\*on<sub>1</sub>-u) bitir-di.*  
 today (it-ACC) finish-PAST  
 “Ali was painting for days, finally he finished (\*it) today.”

- (81) *Ayşe<sub>1</sub> balık<sub>2</sub> tut-uyor. On<sub>1</sub>/\*<sub>2</sub>-u gör-dü-n mü?*  
 Ayşe fish catch-PROG she/it-ACC see-PAST-2SG Q  
 “Ayle is fishing. Did you see her/\*it?”

There is, however, a counterexample to this. In (82), the unmarked object *köylü* is continued as the subject of the second clause (pro-dropped but indicated on the verb). Nilsson (1985: 155, ftn. 36) notes that this is the

only counterexample she is aware of, despite the corpus analyses she has conducted.

- (82) *Yemek ye-r-ken utan-an köylü<sub>1</sub>-Ø çok*  
 food eat-AOR-while be.embarrassed-REL villager much  
*gör-dü-m. Ayıp-mış gibi yemek yi-yor-lar<sub>1</sub>-dı.*  
 see-PAST-1SG shame-be.REP as if food eat-PROG-3PL-PAST  
 “I have often seen villagers eating with embarrassment, as if that  
 were something shameful.”

### 3.2.1.2 (In-)Definiteness

As I have shown in section 3.1.3, there is no definite article in Turkish, but nouns can be marked with the indefinite article *bir*. This does not mean, however, that every noun that is not modified with *bir* is interpreted definitely. The reading depends rather on the noun’s syntactic position.

For subjects, Erguvanlı (1984: 37–39, 158f) has shown that the topic position (sentence initial) is the unmarked position and yields by default a definite interpretation. To mark a subject as indefinite, the indefinite article *bir* can be used or the subject can be incorporated into the verb (cf. section 3.3.1.3).

Objects naturally occur in the focus position (immediately preverbal) and are by default interpreted indefinitely. This can be seen by the incorporation examples in the previous section (3.2.1.1). A direct object can be made definite by marking it with case, as in (76a). As such it also has the possibility to take the topic position, see (83) and section 3.2.2.

- (83) *Para-yı kanep<sub>e</sub>-nin alt-ın-da bul-abil-di-m.*  
 money-ACC couch-GEN bottom-3SG.P-LOC find-ABIL-PAST-1SG  
 “I was able to find the money under the couch.”

Recall that in the beginning of chapter 2 we have seen that definiteness and specificity are two distinct properties. The following example by von Heusinger and Kornfilt (2005: 18) shows that specific as well as non-specific definite NPs in Turkish are marked with accusative.

- (84) *Dekan-ı ödüllendir-eceğ-iz ...*  
 dean-ACC give.prize-FUT-1PL  
 “We will give a prize to the dean ...”
- a. ... *fakat kendisini bulamıyoruz.* *specific*  
 “...but we are unable to find him.”
- b. ... *fakat yeni dekan seçilinceye kadar beklememiz gerek.*  
 “...but we have to wait until a new dean will have been elected.”  
*non-specific*

Nouns that are inherently definite, are always marked accusative. Into this category fall personal pronouns, demonstratives, proper names, and universal quantifiers (Nilsson 1985: 33).

- (85) *sen-i / bun-u / Ahmed-i / herkes-i / her*  
 you.SG-ACC / this-ACC / Ahmet-ACC / everyone-ACC / every  
*şey-i isti-yor-um.*  
 thing-ACC want-PROG-1SG  
 “I want you/this/Ahmet/everybody/everything.”

### 3.2.2 Scrambling

Erguvanlı (1984: 27), amongst others, observes that non-case-marked objects can only appear in immediate preverbal position. We have seen that in immediate preverbal position, accusative can be used to distinguish indefinite non-specific objects from indefinite specific objects. When an indefinite non-specific object scrambles out of the focus position, it will receive case marking, cf. (86). This does not, however, mean that the object will be interpreted specifically.

- (86) *Murat bir kitab-ı acele-yle oku-yor.* *(non)-specific*  
 Murat a book-ACC haste-INSTR read-PROG  
 “Murat is reading a book *hastely*.”

There is a difference between scrambling objects to an intermediate position, as in (86), and raising them to the sentence-initial topic position. Von

Heusinger and Kornfilt (2005: 12, ftn. 4) assume that subjects are canonically sentence-initial and by default specific. To them, anything that appears before a specific, non-focalized subject is a topic. In (87), the indefinite object can be raised to topic position, whereas in (88), it cannot.

- (87) *Mavi kaplı bir kitab-ı Murat acele-yle ok-uyor.*  
 blue of.cover a book-ACC Murat haste-INSTR read-PROG  
 “As for a book with a blue cover, Murat is hastily reading it.”
- (88) \**Bir kitab-ı Murat acele-yle ok-uyor.*  
 a book-ACC Murat haste-INSTR read-PROG  
*intended:* “As for a book, Murat is hastily reading it.”

The adjectival modification seems to be important for (87) to be grammatical since omitting it causes ungrammaticality as in (88). Erguvanlı (1984: 27) argues that it is generally impossible for non-specific objects to appear in topic position. The reason why (87) is good could be that because the overt modification shows some knowledge about the book on part of the speaker, she is more likely to be able to pinpoint the exact referent as well.

### 3.2.2.1 Scrambling of incorporated objects

Recall Aydemir’s (2004) analysis of incorporated objects as presented in section 3.2.1.1. There is evidence that strongly discourages her treatment of incorporated objects as mere heads instead of phrases: As (89), taken from Aygen-Tosun (1999: 1), and (90), from Nilsson (1991: 100), my emphasis, show, incorporated objects can also be scrambled and will receive accusative case, thus becoming ambiguous between an incorporated and a definite reading. This is unexpected if the noun is inside  $V^0$ .

- (89) a. *Ben hızlı kitap oku-r-um.*  
 I fast book read-AOR-1SG  
 “I read fast.”
- b. *Ben kitab-ı hızlı oku-r-um.*  
 I book-ACC fast read-AOR-1SG  
 “I read *fast*.” or “I will read the book fast.”

- (90) *Keyf-im, yalnız balık tut-mak-tır. Balığ-ı*  
 pleasure-1SG.P alone fish catch-INF-COP fish-ACC  
*yapayalnız tut-mak-tır.*  
 completely alone catch-INF-COP  
 “My pleasure is to go fishing on my own. That is, to go fishing completely alone.”

### 3.2.2.2 Scrambling to the right of the predicate

Constituents can also be moved to the right of the predicate, a process which Erguvanlı (1984: ch.2) calls “backgrounding”. She notes three restrictions on backgrounded elements: They can never bear stress, must not be indefinite or non-referential (incorporated), and may not be question words. A well-formed example is given in (91).

- (91) *Ben senle bir-daha sinema-ya git-mem bir daha*  
 I movies-DAT go-AOR.NEG.1SG once again  
*sen-le.*  
 you.SG-INSTR  
 “I won’t go to the movies with you again.”

For backgrounded NPs, she gives (p. 56–63) four pragmatic conditions under which they can appear in post-predicate position: *a.* The information must be discourse-predicatable (that is, “given” in the sense of Chafe (1976) or recoverable); *b.* after-thoughts; *c.* Provided the restrictions are met, it is also possible to move all constituents to the right of the predicate. This will put a strong focus on the action/state described by the predicate; *d.* Lastly, it is possible for elements that convey new information to appear to the right of the predicate, if they should appear backgrounded with respect to other elements in the sentence.

- (92) *Siz-in seyahatiniz nasıl geç-ti seyahat-iniz?*  
 you.PL-GEN how pass-PAST trip-2PL.P  
 “How did *your* trip go?”

### 3.2.3 Generics

In Turkish, generic direct objects can optionally be case-marked, as (93) (from Dede 1986: 157) shows.

- (93) *Çocuk-lar çikolata-(y) sev-er.*  
 child-PL chocolate-(ACC) like-AOR  
 “Children like chocolate.”

Nilsson (1985: 63ff.) distinguishes the ‘categorical’ from the ‘generic’ status of a noun. While the former refers to the class as a whole and is realized in Turkish by bare (incorporated) nouns, the latter lets the hearer know that she is free to choose any member of the given class to satisfy the statement. Nilsson hypothesizes that generic nouns should therefore always be marked with accusative, a hypothesis that is not borne out as she herself shows with (94).

- (94) *Bir çocuG-(u) büyüt-mek zor-dur.*<sup>25</sup>  
 a child-(ACC) raise-INF difficult-COP  
 “It is difficult to raise a child.”

The accusative marking in (94) is optional, and does not alter the meaning. It is a generic statement, the corresponding categorical object is given in (95). (94) and (95) indicate neither number nor discourse-binding.

- (95) *Çocuk büyüt-mek zor-dur.*  
 child raise-INF difficult-COP  
 “It is difficult to raise a child/children.”

There is a further difference between the two categories. Nilsson (1985: 66) notes that “‘categorical’ has been related exclusively to the noun, whereas ‘generic’ was linked as much to the whole proposition as to the reference status of nouns.” Genericity can often be induced by other elements in the sentence as well, especially common is aorist marking on the verb as in (93)

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<sup>25</sup> *G* will be realized as *k* when word-final (*çocuk*) and as *ğ* when inter-vocalic (*çocuğ-u*). Cf. footnote 20 on page 40.

above. In (96), by Dede (1986: 157), where aorist has been replaced by past tense, accusative is obligatory.

- (96) *Çocuk-lar çikolata-\*(y) sev-di.*  
 child-PL chocolate-(ACC) like-PAST  
 “The children liked \*(the) chocolate.”

### 3.2.4 Animacy

While Turkish is in general not sensitive to animacy, we can observe some instances where object marking differs for animate and inanimate nouns. As Erguvanlı (1984: 19f.) has shown, animate (human) nouns cannot appear as incorporated objects, but they have to be marked plural and accusative (97a,b). On the other hand, inanimate nouns cannot receive a generic reading when marked plural and accusative (97c,d).

- (97) a. *\*Ben insan sev-er-im.*  
 I human like-AOR-1SG  
*intended:* “I like human beings.”
- b. *Ben insan-lar-ı sev-er-im.*  
 I human-PL-ACC like-AOR-1SG  
 “I like human beings.”  
 “I like the human beings.”
- c. *Ben elma sev-er-im.*  
 I apple like-AOR-1SG  
 “I like apples.”
- d. *Ben elma-lar-ı sev-er-im.*  
 I apple-PL-ACC like-AOR-1SG  
 “I like the apples.”  
 #“I like apples.”

Second, the question word for objects, *ne* “what” is usually<sup>26</sup> not case-marked, whereas the question word for persons, *kim* “who”, is case-marked

<sup>26</sup>In section 3.2.5 we will see that there is a form *ne-yi* “what-ACC” that can appear in partitive contexts (cf. (112) on page 57).

obligatorily, cf. (98) and (99). I do not mark (99) as ungrammatical with accusative because this version exists in a different meaning, cf. section 3.2.5.)

(98) *Kim-\*(i) gör-dü-n?*  
 who-(ACC) see-PAST-2SG  
 “Who did you see?”

(99) *Ne gör-dü-n?*  
 what see-PAST-2SG  
 “What did you see?”

Third, Dede provides examples that show that under some verbs, inanimate objects cannot be case-marked. She writes (Dede 1986: 158),

The ACC case ending is optionally used to distinguish REF[erential] versus NON-REF[erential] interpretations of animate objects of some nonfactive verbs such as *aramak* “look for” and *istemek* “want”, which induce ambiguity, but the use of the ACC case ending is not permitted with inanimate objects.

In (100), an unmarked direct object under *ara* “look for” can be interpreted specifically as well as non-specifically. If it is marked, the non-specific reading is not available. In (101), the direct object is inanimate. Again, without case-marking it can be understood specifically or non-specifically. But there is no way to clarify the object’s specificity by using accusative since (101b) is ungrammatical.

(100) a. *Bir öğrenci arı-yor-um. Bul-ami-yor-um.*  
 a student look.for-PROG-1SG find-NABIL-PROG-1SG  
 “I am looking for a student. I can’t find him.” *specific*  
 “I am looking for a student. I can’t find one.” *non-specific*  
 b. *Bir öğrenci-yi arı-yor-um. Bul-ami-yor-um.*  
 a student-ACC look.for-PROG-1SG find-NABIL-PROG-1SG  
 “I am looking for a student. I can’t find him.”  
 #“I am looking for a student. I can’t find one.”



- (101) a. *Bir kitap arı-yor-um. Bul-amı-yor-um.*  
 a book look.for-PROG-1SG find-NABIL-PROG-1SG  
 “I am looking for a book. I can’t find it.”  
 “I am looking for a book. I can’t find one.”
- b. \**Bir kitab-ı arı-yor-um. Bul-amı-yor-um.*  
 a book-ACC look.for-PROG-1SG find-NABIL-PROG-1SG  
*intended:* “I am looking for a book. I can’t find it.”

### 3.2.5 Partitivity

As famously noted by Enç (1991), Turkish accusative appears in partitive constructions. There are overt and covert partitive constructions, and overt partitives can have either ablative or genitive on the group denoting noun. Examples are given in (102) to (104).

- (102) *Kız-lar-dan iki-sin-i tanı-yor-du-m.*  
 girl-PL-ABL two-3SG.P-ACC know-PROG-PAST-1SG  
 “I knew two of the girls.”
- (103) *Kız-lar-ın iki-sin-i tanı-yor-du-m.*  
 girl-PL-GEN two-3SG.P-ACC know-PROG-PAST-1SG  
 “I knew two of the girls.”
- (104) *Oda-m-a birkaç çocuk gir-di. İki kız-ı*  
 room-1SG.P-DAT several child enter-PAST two girl-ACC  
*tanı-yor-du-m.*  
 know-PROG-PAST-1SG  
 “Several children entered my room. I knew two girls.”

Leaving out the accusative in (102) and (103) results in ungrammaticality. In (104), it is possible, but excludes the possibility that the two girls that the speaker knew are part of the children that entered my room. While Enç (1991) has argued that this was because partitives are always specific, von Heusinger and Kornfilt (2005) have shown that the data are more complicated. They argue that the possessive suffix on the head noun is a kind of agreement marker that morphologically forces the accusative marking.

There are alternatives to the possessive suffix: for humans *kişi* “person” can be used, for objects *tane* “item” is common. These agreement markers do not demand accusative, as shown in (105) and (106).

- (105) *Ali kadın-lar-dan iki kişi tanı-yor-du.*  
 Ali woman-PL-ABL two person know-PROG-PAST  
 “Ali knew two individuals of the women.”
- (106) *Bak-ma-dan kitap-lar-dan iki tane al-dı-m.*  
 look-NEG-ABL book-PL-ABL two item buy-PAST-1SG  
 “I bought two of the books without looking.”

In these constructions, accusative can optionally appear, triggering a specific reading. Note that another animacy effect can be observed here. In (107), accusative on *kişi* is possible, but in (108) it is ungrammatical on *tane*.

- (107) *Ali kadın-lar-dan iki kişi-yi tanı-yor-du.*  
 Ali woman-PL-ABL two person-ACC know-PROG-PAST  
 “Ali knew two (specific, particular) individuals of the women.”
- (108) \**Ali kitap-lar-dan iki tane-yı al-dı.*  
 Ali book-PL-ABL two item-ACC buy-PAST  
*intended:* “Ali bought two (specific) items of the books.”

Von Heusinger and Kornfilt (2005) provide further evidence for a morphological compulsion for accusative by observing that even when it appears, the partitive’s reading does not have to be specific.

- (109) *Kitap-lar-ın/-dan iki-sin-i al, geri-sin-i*  
 book-PL-GEN/-ABL two-3SG.P-ACC take rest-3SG.P-ACC  
*kutu-da bırak.*  
 box-LOC leave  
 “Take (any) two of the books and leave the remainder [of the books] in the box.”

They argue that while there is no difference in meaning between ablative and genitive on the group denominator, there is a morphological difference:

the examples in (105) to (107) only work with ablative, but genitive seems to always require a possessive suffix. There is the possibility to have a classifier in combination with genitive, but a possessive suffix will still be required, cf. (110).

- (110) *Kitap-lar-ın iki tane-(sin)-(i)*<sup>27</sup> *al-dı-m.*  
 book-PL-GEN two item-(3SG.P)-(ACC) buy-PAST-1SG  
 “I bought two of the books.”

However, the claim that possessive suffixes always trigger accusative marking, which Dede (1986: 158) also notes, doesn’t seem to hold. There are examples such as (111) (from Nilsson 1985: 36f.) where the compound (cf. section 3.1.2) is not marked.

- (111) *Balık çorba-sı ye-di-k.*  
 fish soup-3SG.P eat-PAST-1PL  
 “We ate fish soup.”

Similarly, accusative can appear on *ne* “what” and *kimse* “anyone” (and possibly on others, too). There as well, a relation to previously established discourse items is expressed. In (112) and (113) (by Nilsson 1985: 50f.), the (b) readings express existential presupposition. (112b) does not allow the speaker to refuse all offered options.

- (112) a. *Ne iste-r-sin?*  
 what want-AOR-2SG  
 “What would you like to have, (if anything)?”  
 b. *Ne-yi iste-r-sin?*  
 what-ACC want-AOR-2SG  
 “(Among the things present), what would you like to have?”

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<sup>27</sup>Due to allomorphs of the third person singular possessive suffix and the accusative suffix, leaving out one of the morphemes would yield *tane-yi* rather than *\*tane-i*, and *tane-si* rather than *\*tane-sin* respectively.

- (113) a. *Kimse gör-me-di-m.*  
 anyone see-NEG-PAST-1SG  
 “I didn’t see anybody (at all).”  
 b. *Kimse-yi gör-me-di-m.*  
 anyone-ACC see-NEG-PAST-1SG  
 “I didn’t see anyone (of them).”

### 3.2.6 Scope interactions

Accusative marking can influence the scope interactions of a direct object with other quantifiers. In (114), where the direct object is case-marked, three scope readings are possible. In (115), a not-accusative-marked object can only be interpreted with narrow scope (examples from Özge 2011: 254).

- (114) *Çoğu dilbilimci önemli bir problem-i çöz-en her*  
 most linguist important a problem-ACC solve-REL every  
*makale-yi oku-muş-tur.*  
 article-ACC read-RPAST-COP  
 “Most linguists have read every article that solves an important problem.”  
 a.  $most \sqsupset \forall \sqsupset \exists$  *narrow scope*  
 b.  $most \sqsupset \exists \sqsupset \forall$  *intermediate scope*  
 c.  $\exists \sqsupset most \sqsupset \forall$  *wide scope*
- (115) *Çoğu dilbilimci önemli bir problem-Ø çöz-en her*  
 most linguist important a problem solve-REL every  
*makale-yi oku-muş-tur.*  
 article-ACC read-RPAST-COP  
 “Most linguists have read every article that solves an important problem.”  
 a.  $most \sqsupset \forall \sqsupset \exists$  *narrow scope*  
 b.  $\#most \sqsupset \exists \sqsupset \forall$  *N.A.: intermediate scope*  
 c.  $\#\exists \sqsupset most \sqsupset \forall$  *N.A.: wide scope*

Usually quantifiers are interpreted in-situ. We will take up the questions whether *bir* “a/one” behaves as a ‘usual’ quantifier in chapter 4. In (116) the two quantifiers *bazı* “some” and *her* “every” take scope according to their surface position. ((116a) is by Aygen-Tosun 1999: 12, ex. (49); (116b) is what I believe she had meant for her example (50). The judgment is verified by my informants.)

- (116) a. *Bazı çocuk-lar her kitab-ı oku-du.*  
 some child-PL every book-ACC read-PAST  
 “Some children read every book.” *some*  $\sqsupset$   $\forall$ <sup>28</sup>
- b. *Her kitab-ı bazı çocuk-lar oku-du.*  
 every book-ACC some child-PL read-PAST  
 “Some children read every book.”  $\forall$   $\sqsupset$  *some*

### 3.2.7 Summary

The functionality of the accusative suffix in modern standard Turkish seems to be mainly fourfold.

1. For objects in immediate preverbal position, it indicates *definiteness* and/or *specificity*.
2. It is obligatory on *scrambled* objects (left or right of the immediate preverbal position) and therefore does not indicate definiteness or specificity in these positions. Recall that we saw that even incorporated objects receive case-marking when scrambled.

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<sup>28</sup>My informants report that (116a) has an additional interpretation where the group of ‘some children’ can be understood as a single agent. In this case it is not possible to construct a scenario which makes (116b) true and (116a) false such as the following. There are three children  $c_1$  to  $c_3$ , and two books  $b_1$  and  $b_2$ .  $c_1$  read  $b_1$ ,  $c_2$  read  $b_2$ , and  $c_3$  didn’t read anything. Then a ‘ $\forall \sqsupset some$ ’ reading is satisfied, and a ‘*some*  $\sqsupset \forall$ ’ reading is unsatisfied. However since ‘some children’ can be understood as a single agent, the latter reading would be satisfied too because the group  $\{c_1, c_2\}$  has read every book. My informants report, however, that the original ungrammaticality of (116a) under this scenario is still felt.

3. It is obligatory after a *possessive suffix* indicating actual possession or partitivity. It is not obligatory after the possessive suffix on a compound. If the accusative appears because it is morphologically forced to, it does not indicate definiteness or specificity.
4. If the direct object is to take *scope* greater than its surface position, it must be marked with accusative. The reverse, however, does not hold: an accusative-marked object can still be interpreted with scope according to its surface position.

Additionally to these conditions, we have also seen that the accusative suffix is optional on generics and shows slight distributional differences between animate and inanimate objects. However, these appearances won't concern us further.

Let us now turn to genitive marking on subjects of embedded clauses, which we will find to have striking similarities with accusative marking on direct objects.

### 3.3 Subject marking

In Turkish main clauses, subjects are morphologically unmarked, which corresponds to nominative marking. In some subordinate clauses however, genitive marking may appear. This section will look in detail at the distribution of such genitive marking.

Turkish has three kinds of subordinate clauses: noun clauses (or argument clauses), adjective clauses (or relative clauses), and adverb clauses (or adjunct clauses). Apart from two loaned complementizers (*ki* “that” and *çünkü* “because”, both from Persian), the verb of a subordinate clause is usually nominalized and thereby infinite. There are three nominalizers: *-DIG* for present and past tense and *-(y)AcAG* for future tense are factual nominalizers, while *-mA* is a subjunctive nominalizer. The subject is obligatorily marked by possessive endings on the nominalized verb, and can be made explicit by an NP. Noun clauses and adjective clauses exhibit dif-



An indefinite inanimate subject as in (119) can appear without case (example by von Heusinger and Kornfilt 2005: 15). Adding or omitting genitive on the subject NP (in immediate preverbal position, cf. section 3.3.2) indicates its specificity.

- (119) a. [ *Yol-dan bir araba-Ø geç-tiğ-in* ]-i  
 road-ABL a car pass-NMZ-3SG.P -ACC  
*gör-dü-m.* *non-specific*  
 see-PAST-1SG  
 “I saw that a/some car went by on the road.”
- b. [ *Yol-dan bir araba-nın geç-tiğ-in* ]-i ... *specific*  
 road-ABL a car-GEN pass-NMZ-3SG.P -ACC  
 “I saw that a (certain) car went by on the road.”

### 3.3.1.2 Adverb clauses

Adverb clauses do not generally allow case-marking of their subjects. There are examples such as (120) that seem to allow case-marking, and at first glance (120b) may seem to differ from (120a) in making the time of the event more specific, i.e. as if genitive on the subject would render the whole subordinate clause more specific. However, this is not the case. The difference in meaning can be traced back to the ambiguity of *zaman* between the complementizer “when” in (120a) and the noun “time” with a relative clause in (120b). I will go into this in more detail in section 4.3.3.

- (120) a. *Erdi var-dığ-ı zaman*  
 Erdi arrive-NMZ-3SG.P time  
*okul-da-y-dı-m.*  
 school-LOC-COP-PAST-1SG  
 “I was at school when Erdi arrived.”
- b. *Erdi-nin var-dığ-ı zaman*  
 Erdi-GEN arrive-NMZ-3SG.P time  
*okul-da-y-dı-m.*  
 school-LOC-COP-PAST-1SG  
 “I was at school at the time when Erdi arrived.”



- c. *O zaman okul-da-y-dı-m.*  
 that time school-LOC-COP-PAST-1SG  
 “At that time I was at school.”

Other adverbial complementizers with the factive nominalizer *-DIG* are given below. In all examples the subject must bear nominative (from Kornfilt 2008: 97f.).

- (121) [[ *Sen-(\*in)* *yemek pişir-diğ-in* ] *için* ] *ben*  
 you.SG-(GEN) food cook-NMZ-2SG.P because I  
*konser-e gid-ebil-di-m.*  
 concert-DAT go-ABIL-PAST-1SG  
 “Because you cooked, I was able to go to the concert.”
- (122) [[ *Sen-(\*in)* *yemek pişir-diğ-in* ]-e *göre* ]  
 you.SG-(GEN) food cook-NMZ-2SG.P -DAT according to  
*hep-iniz ev-de kal-acak-sınız.*  
 all-2PL.P home-LOC stay-FUT-2PL  
 “Given that you cooked, all of you will stay at home.”
- (123) [ *Sen-(\*in)* *konser-e git-tiğ-in* ]-de *ben ev-e*  
 you.SG-(GEN) concert-DAT go-NMZ-2SG.P -LOC I home-LOC  
*dön-üyor-du-m.*  
 return-PROG-PAST-1SG  
 “When you were going to the concert, I returned home.”

Interestingly, when the adverb clause uses the subjective nominalizer *-mA*, genitive marking is possible (in (124) it is obligatory because the subject is a pronoun). I will turn to possible reasons for this in section 4.3.3.

- (124) [[ *Sen-in* *yemek pişir-me-n* ] *için* ] *ben ev-de*  
 you.SG-GEN food cook-NMZ-2SG.P because I house-LOC  
*kal-dı-m.*  
 stay-PAST-1SG  
 “I stayed at home so that you should cook.”

### 3.3.1.3 Incorporation vs. definiteness

Subjects can also be incorporated into the verb (see Kornfilt 1997: 396–400), such readings are available if the bare NP appears in immediate preverbal position. Lack of all kinds of overt marking is preferred, however there can be overt plural marking, which is strictly forbidden for an incorporated reading of direct objects (Kornfilt 1997: ftn. 83). Incorporation of subjects also effects the agreement on the verb. For non-pro-drop third person plural subjects, the verb can usually bear either a 3SG or 3PL ending. When the subject is incorporated, a 3SG ending is preferred (Kornfilt 1997: 385f., 397f.):

- (125) *Köy-ü haydut-lar bas-mış-Ø.* *incorporated*  
 village-ACC robber-PL raid-RPAST-3SG  
 “(They say that) robbers raided the village.”
- (126) *Köy-ü haydut-lar bas-mış-lar.* *focused*  
 village-ACC robber-PL raid-RPAST-3PL<sup>29</sup>  
 “(They say that) **the** robbers raided the village.”

Recall that we have seen that the immediate preverbal position is also the focus position. We should therefore expect that an incorporated subject should also be able to receive focus, a prediction that is borne out. Consider (127).

- (127) *Çocuğ-u arı sok-tu.*  
 child-ACC bee sting-PAST  
 “Bees stung a child.” *incorporated*  
 “*The bee* stung the child.” *focused*

This ambiguity arises because there is no way to distinguish a focused subject from an incorporated subject in terms of case-marking since nominative is morphologically null. However, in embedded noun and adjective clauses, subjects can be case-marked with genitive. In (128), we can see that this

<sup>29</sup>The two *lar* in (126) are not the same morpheme, as indicated in the glosses. They differ in pronunciation: while PL is stressed, the copula 3PL is unstressed (Nilsson 1985: 47).

ambiguity is resolved parallel to the accusative-marking of direct objects.

- (128) a. [ *Çocuğ-u ari sok-tuğ-un* ]-u *duy-du-m.*  
 child-ACC bee sting-NMZ-3SG.P -ACC hear-PAST-1SG  
 “I heard that bees stung the child.” *incorporated*
- b. [ *Çocuğ-u ari-nın sok-tuğ-un* ]-u *duy-du-m.*  
 child-ACC bee-GEN sting-NMZ-3SG.P -ACC hear-PAST-1SG  
 “I heard that the bee stung the child.” *focused*

Note that unlike incorporated direct objects, incorporated subjects cannot be scrambled. This may be due to the fact that for subjects the topic position is unmarked, and only referential NPs are allowed as topics (Erguvanlı 1984: 37–39, 158f.). The incapability to scramble holds for subjects of main clauses as well as for those of embedded clauses (case-marked or not).

### 3.3.1.4 Adjective clauses

There are three principal suffixes for adjective clauses: *-(y)An*, *-DIG*, and *-(y)AcAG*<sup>30</sup>. The former is chosen when the target of relativization is the subject or part of a bigger subject, the other two are used for relativizing other constituents (Kornfilt 1997: 57–61). *-DIG* and *-(y)AcAG* are marked with a possessive suffix that agrees with the subject of the relative clause, which is marked genitive — as in noun clauses. *-(y)An* cannot bear personal marking.

Taking a closer look at *-(y)An*, we find that it is also used for targeting a non-subject if the subject is incorporated. Compare (129) to (130) (from Kornfilt 1997: 386).

- (129) [ *doktor-un gir-me-diğ-i* ] ev *definite*  
 doctor-GEN enter-NEG-REL-3SG.P house  
 “the house which the doctor didn’t/doesn’t enter”
- (130) [ *doktor gir-me-yen* ] ev *incorporated*  
 doctor enter-NEG-REL house  
 “the house which doctors didn’t/don’t enter”

<sup>30</sup>The past participle *-mİş* and the aorist participle *-r/-Ar/-Ir* can also occur.

### 3.3.2 Scrambling

As mentioned previously, the topic position is sentence initial, the focus position is immediately preverbal, and the backgrounding position is post-predicate (cf. section 3.2.2.2).

When looking at the scrambling possibilities in embedded clauses, we find interesting parallels to direct objects (in main clauses as well as in embedded clauses). If a subject is raised to topic position, it must be marked with genitive. Because marking is obligatory in such instances, it is no longer an indicator of specificity. This is shown in (131) and (132), both by von Heusinger and Kornfilt (2005: 15f).

- (131) [ *Bir haydut*-(\*)*(un) köy-ü*      *bas-tığ-in*      ]-*i*      *duydum*.  
 a robber-(GEN) village-ACC raid-NMZ-3SG.P -ACC  
 “I heard that a robber raided the village.”      (*non*)-*specific*
- (132) [ *Bir araba*-(\*)*(nın) yol-dan*      *geç-tiğ-in*      ]-*i*      *gördüm*.  
 a car-(GEN) road-ABL pass-NMZ-3SG.P -ACC  
 “I saw that a car went by on the road.”      (*non*)-*specific*

In terms of backgrounding it is notable that nothing can be moved from inside the embedded clause to the right of the nominalized verb. Backgrounding is possible however, if the constituents are moved to the end of the main clause, consider (133) by Erguvanlı (1984: 95).

- (133) *Erol* [*Ali-nin Ankara'dan dön-düğ-ün*]-*ü*      (\**Ankara-dan*)  
*Erol* *Ali*-GEN      return-NMZ-3SG.P-ACC (*Ankara*-ABL)  
*bil-mi-yor*      (*Ankara-dan*).  
 know-NEG-PROG (*Ankara*-ABL)  
 “Erol doesn’t know that Ali returned from Ankara.”

The whole embedded clause can also be backgrounded, further extraction will still be possible as can be seen in (134) by Erguvanlı (1984: 61).

- (134) *İşte ben [bu işin böyle sıkışıklığa geleceğini]i bil-di-m*  
 there know-PAST-1SG  
*ben [ bu işin böyle sıkışıklığ-a gel-eceğ-in ]-i*  
 I thus contested-DAT come-NMZ-3SG.P -ACC  
*bu iş-in.*  
 this matter-GEN  
 “There, I knew that this (matter) was going to be blocked like this.”<sup>31</sup>

### 3.3.3 Partitivity

Opposed to direct objects, the case-marking of embedded subjects does not seem to be optional for partitives. While examples parallel to (135a) and (135b) showed the same obligation of case-marking after a possessive suffix for direct objects, (135c) is surprising. In (105) and (107) on page 56, we saw that after ablative the agreement morpheme can disappear and with it the obligation for structural case. In (135c) this does not seem to be the case, instead genitive is mandatory.

- (135) a. [ *Kız-lar-dan iki-si-\*(nin) öl-düğ-ün* ]-ü ...  
 girl-PL-ABL two-3SG.P-(GEN) die-NMZ-3SG.P -ACC  
 b. [ *Kız-lar-ın iki-si-\*(nin) öl-düğ-ün* ]-ü ...  
 girl-PL-GEN two-3SG.P-(GEN) die-NMZ-3SG.P -ACC  
 c. [ *Kız-lar-dan iki kişi-\*(nin) öl-düğ-ün* ]-ü ...  
 girl-PL-ABL two person-(GEN) die-NMZ-3SG.P -ACC  
 d. [ *Kız-lar-ın iki kişi-\*(si)-\*(nin)*  
 girl-PL-GEN two person-(3SG.P)-(GEN)  
*öl-düğ-ün* ]-ü *duy-du-m.*  
 die-NMZ-3SG.P -ACC hear-PAST-1SG  
 “I heard that two of the girls had died.”

<sup>31</sup> “[T]his matter’ refers to the speaker’s desire to invite the hearer to dinner, for which she had made several attempts at finding a date and had failed to do so.” (Erguvanlı 1984: 61)

### 3.3.4 Other instances of optional genitive marking

#### 3.3.4.1 In compounds

Recall the structure of compounds from section 3.1.2. The denotator is marked with a possessive suffix of third person singular by default, and the specifier will stand to its left. Interestingly, the possessor can carry or omit its genitive marking depending on the generality or concreteness of its meaning. Compare (136a) to (136b).

- (136) a. *balık kuyruğ-u*  
 fish tail-3SG.P  
 “fishtail”  
 b. *balığ-ın kuyruğ-u*  
 fish-GEN tail-3SG.P  
 “(the) tail of the fish”

The compound in (136a) is analyzed as a fixed constituent and does not allow modifiers to intervene between the two nouns, nor does it allow modifiers on the left to describe anything but the whole phrase. (136b) on the other hand does allow this, cf. (137) and Nilsson (1985: 24–30).

- (137) a. *büyük bir balığ-ın yüzgeci*  
 big a fish-GEN fin-3SG.P  
 “the fin of a big fish”  
 b. *büyük bir balık yüzgeci*  
 big a fish fin-3SG.P  
 “a big fish-fin”  
 c. *balığ-ın büyük bir yüzgeci*  
 fish-GEN big a fin-3SG.P  
 “a big fin of the fish”  
 d. \**balık büyük bir yüzgeci*  
 fish big a fin-3SG.P

### 3.3.4.2 By postpositions

Four postpositions, *için* “for”, *ile* “with”, *gibi* “as”/“like”, and *kadar* “as much as”, govern nominative. However, all four govern genitive on pronouns, demonstratives, and the question word *kim* “who” (though not on *kimler* “who all” and *onlar* “they”). Interestingly, Ersen-Rasch (2012: 113) remarks that on these words some native speakers also allow nominative and describe a change of focus between the nominative and genitive versions, as can be seen in (138). Cf. also example (91) on page 51 where “with you” is deaccented and appears therefore with nominative *sen-le* “you.SG-*ile*” rather than with genitive *sen-in-le* “you.SG-GEN-*ile*”.

- (138) a. *Kim-in-le disko-ya git-ti-n?*  
 who-GEN-*ile* disco-DAT go-PAST-2SG  
 “Who did you go to the disco with?”  
 b. *Kim-le disko-ya git-ti-n?*  
 who-*ile* disco-DAT go-PAST-2SG  
 “Who did you go to the disco with?”

### 3.3.5 Summary

In this section we have seen the distribution and informational contribution of the genitive suffix on subjects of embedded clauses. Embedded clauses are characterized by a nominalized verb that bears possessive endings in order to indicate the subject. An explicit subject is marked with genitive, indicating the possessor of the verb or, according to Aygen (2007), being the default case when nominative assignment isn’t possible. We will pick up this idea in chapter 4.

There are also subjects of embedded sentences that lack genitive marking. We have seen that in immediate preverbal position genitive indicates specificity. Incorporated subjects are unmarked, but can bear plural marking for instance. When subjects get scrambled, they must bear genitive case. An incorporated subject cannot be scrambled, perhaps because the genitive-marking would favour a definite reading too strongly.

It is also interesting to see that genitive marking on the specifier of a compound indicates the specifier's specificity. Similarly, some postpositions (including the one for instrumental case) can assign nominative or genitive case to pronouns, depending on the pronoun's focus. Since pronouns are always specific, this would be a rare instance where a specific constituent that has the possibility to receive case marking does not receive it.

### 3.4 Overview

Turkish direct objects as well as subjects of subordinate clauses are not marked homogeneously. Objects may be marked with accusative or without case resp. nominative, and subjects of subordinate clauses may be marked with genitive. Such a variation in case marking is called Differential Object Marking (DOM) and Differential Subject Marking (DSM) respectively. In this chapter I have identified some properties that influence the presence or absence of case.

It is striking to see that the accusative marking of direct objects on the one hand and the genitive marking of subjects of embedded clauses on the other hand show great similarities. An overview is given in (139).

(139)	<i>property of case-marking</i>	ACC	GEN
I.	case indicates definiteness when preverbal	✓	✓
II.	case indicates specificity when preverbal	✓	✓
III.	can have a specific reading without case	✗	✓
IV.	no case on incorporated NPs	✓	✓
V.	case is obligatory when scrambled	✓	✓
VI.	scrambling of incorporated NPs is allowed	✓	✗
VII.	inanimates tend to be non-marked	✓	✓
VIII.	case can indicate specificity in partitives	✓	✗
IX.	case is obligatory after possessive suffixes	✓	✓

Accusative and genitive share the property of marking definiteness (property I) and specificity (property II) in immediate preverbal position (which is, at the same time, *i.* the base position for direct objects, *ii.* the position



of incorporated objects and subjects, and *iii.* the focus position). In short, every definite noun is case-marked, and every indefinite specific one.

Another shared property is the obligation of case-marking on subjects and direct objects when they get scrambled out of the immediate preverbal position (property V). Both can be incorporated into the verb, but they differ in their ability to scramble as incorporated constituents (property VI): while incorporated objects, which are non-case-marked, can scramble out of their immediate preverbal base position and receive case, subjects lose their incorporated reading when doing so.

While Turkish is usually not sensitive to the animacy as an inherent property of nouns, there are some instances where DOM and DSM adhere to this fact. Animate indefinite objects tend to allow a specific reading even though unmarked, while marking of inanimate objects is sometimes dispreferred. This distinction may extend to indefinite subjects, of which animate ones seem to always bear genitive unlike inanimate ones (property VII).

In relation to specificity, it is also interesting to see that case-marking plays a role in partitivity. Specificity can be analyzed as indicating discourse-anchoring (cf. chapter 2), which is also crucial in partitivity: the partitive's base set has to be contextually given. However, the two do not correlate and it is possible to construct non-specific partitives. Accusative can be used to distinguish between specific and non-specific indefinites, while this does not seem to be the case for genitive (property VIII).

DOM and DSM in Turkish thereby show many similarities in the conditions that trigger their respective marking. I will now discuss possible analyses of the observed behaviour of case marking and the contribution that Turkish data can make to language-universal theories of DO/SM.

## Chapter 4

# Analyses of DO/SM in Turkish

Differential Object Marking (DOM) and Differential Subject Marking (DSM) are well-known and much studied phenomena that arise in a variety of languages. In short, they denote the peculiarity that there is variation in the grammatical encoding of objects/subjects, often with respect to the case assignment, but also in terms of agreement or the syntactic position. The term was first used by Bossong (1985), who observes that DOM can emerge disparately in closely related languages. It seems thus that languages have an inherent capability for DO/SM, making it an interesting question whether there is a universal principle behind it. Bossong (1985) and many others (e.g. Aissen 2003) investigate the purpose or *function* of DO/SM, trying to reduce the versatile shapes to a common denominator. Others (e.g. Woolford 2008, Kornfilt 2008, Aygen 2007) argue that there is too much variation and that each instance of DO/SM should be accounted for separately before drawing universal conclusions.

In this chapter, we will see that data from Turkish supports the non-functional approach to DO/SM. I will first (section 4.1) introduce Aissen's (2003) OT-formalization of a functional approach based on differentiating untypical ("non-archetypical") objects from subjects. While this account explains the marking of Turkish objects in base position, it cannot account for the marking on scrambled constituents and crucially makes false predictions about the marking of Turkish subjects in subordinate clauses. I present alternate explanations for the Turkish data; section 4.2 will discuss semantic criteria for case-marking and section 4.3 morphosyntactic criteria.

## 4.1 The function of DO/SM

The function of Differential Object/Subject Marking is commonly assumed to be a disambiguation of direct objects from subjects when other grammatical encodings would not suffice (such as agreement, position, semantic features, argument structure, information structure, etc.). This idea is captured better by the term ‘*Differentiated* Object/Subject Marking’. In a language without or with very little grammatical encoding to differentiate between objects and subjects, the possibility may arise that a ‘prominent’ object (to be defined below) may be mistaken for the subject while a ‘non-prominent’ subject may be mistaken for the object (i.e., subjects are naturally prominent and objects are naturally non-prominent). The claim is that DO/SM arises precisely to prevent such misperception.

Apart from this *distinguishing* function of DO/SM, there is also an *identificational* function. If case-marking is triggered by prominence, it can not only be used to differentiate prominent objects from subjects and vice-versa, but also to convey the information encoded in prominence, thus making it possible to tell apart a prominent object/subject from a non-prominent one. This is the case for some Turkish objects, as we shall see.

The notion of prominence is used to express the fact that a phrase’s semantic features are high in a prominence scale. Languages vary as to which prominence scales are important for DO/SM, Aissen’s (2003) analysis focuses on the two scales given in (140) and (141). She claims that “the higher in prominence a direct object, the more likely it is to be overtly case-marked” (p. 436).

(140) **Animacy scale** (Croft 1988)  
Human > Animate > Inanimate

(141) **Definiteness scale** (Croft 1988, Comrie 1986)  
Personal pronoun > Proper name > Definite NP > Indefinite specific NP > Indefinite non-specific NP

It seems to hold universally that subjects tend to be agents (animate) and

topics (definite), while objects tend to be patients (inanimate) and focussed (indefinite). From this it follows that subjects naturally have high prominence on the scales above while objects naturally have low prominence, as expressed by the relational scale in (142).

- (142)    **Relational scale**  
           Subject > Object

This can also be nicely seen on the Turkish data in chapter 3, where a bare N is interpreted as indefinite in object position and as definite in subject position. Aissen builds a formal system around this, saying that DOM serves to mark objects that are unnaturally high in prominence, and that DSM is used to mark subjects that are unnaturally low in prominence.

We will now look at Aissen's (2003) proposal in detail, and then see Woolford's (2008) non-functional counter-proposal.

#### 4.1.1 Marking non-archetypicality

Aissen (2003) takes the scales in (140) and (141) to be iconic with respect to DOM: The more marked an NP is with respect to its canonical position on the prominence scales, the more likely it is to be marked morphologically as well. In order to express this, she uses Optimality Theory (Prince and Smolensky 1993). There is variation among languages with respect to which scale they use to mark objects as well as in at what level in the scale the marking starts. There are quite some exceptions and the picture is not as simple as this, but for some languages this surely works.

For instance, in Hebrew definite objects are case-marked (independent of their animacy), while Spanish marks objects that are both human and specific. For Hebrew, a combination of the definiteness scale and the relational scale is therefore applicable, while an analysis of Spanish requires a three-dimensional scale consisting of animacy scale, definiteness scale, and relational scale.

I will now present in detail Aissen's analysis of a language that only uses animacy to differentially mark objects. (I choose animacy over definiteness

because the scale is shorter.) The prominence scales in (140) and (142) can be combined via ‘harmonic alignment’ to yield two pairs of scales as in (143). Aissen (2003: 441, ftn. 7) explains that harmonic alignment can be applied to two scales of which one is binary (the relational scale here) by combining the more prominent element of the binary scale with all elements of the other scale in order of descending prominence (143a), and the less prominent element of the binary scale with all elements of the other scale in order of ascending prominence (143b).

- (143) a. Su/Hum  $\succ$  Su/Anim  $\succ$  Su/Inan  
 b. Oj/Inan  $\succ$  Oj/Anim  $\succ$  Oj/Hum

A harmonic scale defines a constraint hierarchy by inverting the order of its elements (the least harmonic element has the strongest constraint against its appearance). This yields (144).

- (144) a. \*SU/INAN  $\gg$  \*SU/ANIM  $\gg$  \*SU/HUM  
 b. \*OJ/HUM  $\gg$  \*OJ/ANIM  $\gg$  \*OJ/INAN

Aissen (2003: 446) notes that there are three ways for morphological distinctions between high- and low-prominence objects: *a.* only mark high-prominence objects; *b.* only mark low-prominence objects; *c.* mark both high- and low-prominence objects but with different morphemes. Since “overwhelmingly, DOM is implemented by overtly marking the marked class of objects, and leaving the unmarked ones with no morphological mark” (Aissen 2003: 446, with reference to Bossong 1985: 125), Aissen introduces two more constraints that will allow her to generate a privative case-marking pattern.

- (145) \* $\emptyset_C$  ‘star zero’ ... penalizes the absence of a value for the feature CASE (Aissen 2003: 447), i.e. faithfulness

- (146) \*STRUC<sub>C</sub> ... penalizes a value for the morphological category CASE (Aissen 2003: 448), i.e. laziness

Aissen then uses constraint conjunction between the constraints in (144) and \* $\emptyset_C$  to penalize non-marking on any object or subject in the ranking defined

in (144). She argues that languages whose DOM is sensitive to the object's animacy, still vary with respect to the point in the animacy hierarchy where marking becomes obligatory. This can be described by inserting \*STRUC<sub>C</sub> into the hierarchy at the appropriate point. A language which only marks human objects would therefore have a constraint ranking as in (147).

- (147) \*OJ/HUM & \*∅<sub>C</sub> >>  
 \*STRUC<sub>C</sub> >>  
 \*OJ/ANIM & \*∅<sub>C</sub> >>  
 \*OJ/INAN & \*∅<sub>C</sub>

A non-marked human object violates a higher constraint (namely the first one) than a marked human object (the second one), so the marked one wins. A non-marked animate or inanimate object violates the third resp. fourth constraint, but a marked animate or inanimate object violates a higher constraint (the second one), therefore such objects will not be marked.

A different language that case marks human and animate objects, but not inanimate ones, would have a constraint ranking as in (148).

- (148) \*OJ/HUM & \*∅<sub>C</sub> >>  
 \*OJ/ANIM & \*∅<sub>C</sub> >>  
 \*STRUC<sub>C</sub> >>  
 \*OJ/INAN & \*∅<sub>C</sub>

For languages that base DOM solely on definiteness, Aissen's argument goes in parallel. For instance, Hebrew marks pronouns, proper names, and definite objects, so \*STRUC<sub>C</sub> would be inserted into the constraint ranking based on (141) and (142) between \*OJ/DEF & \*∅<sub>C</sub> and \*OJ/SPEC & \*∅<sub>C</sub>. Turkish on the other hand marks pronouns, proper names, definite objects, and indefinite specific objects. \*STRUC<sub>C</sub> would therefore be inserted below \*OJ/SPEC & \*∅<sub>C</sub> and above \*OJ/INDEF & \*∅<sub>C</sub>, as given in (149). There are also languages which use a combination of animacy and definiteness to decide whether to mark an object (e.g. Romanian, Hindi), and such two-dimensional DOM systems are also treated by Aissen (2003: section 5).

- (149) \*OJ/PRON & \*Ø<sub>C</sub> >>  
 \*OJ/PN & \*Ø<sub>C</sub> >>  
 \*OJ/DEF & \*Ø<sub>C</sub> >>  
 \*OJ/SPEC & \*Ø<sub>C</sub> >>  
 \*STRUC<sub>C</sub> >>  
 \*OJ/INDEF & \*Ø<sub>C</sub>

While this representation is correct for Turkish objects in immediate preverbal position, it cannot account for the subject marking in immediate preverbal position. Turkish subject marking is parallel to object marking, i.e. pronouns, proper names, definites, and specifics are marked, and non-specifics are unmarked. This turns Aissen's constraint hierarchy, given in (150), upside down and destroys the iconicity in her approach.

- (150) \*SU/INDEF >> \*SU/SPEC >> \*SU/DEF >> \*SU/PN >>  
 \*SU/PRON

#### 4.1.2 Heterogeneous reasons for marking

Aissen's (2003) proposal has been criticized on many accounts (see a.o. Bány 2012: 83–88 for discussion). A counter-proposal comes from Woolford (2008) who argues that DSM is too manifold to be captured by a single grammatical rule. She gives examples of where DSM arises from argument structure, syntax, and spell-out, which makes it difficult to assume a universal grammatical module for DO/SM phenomena. She also offers a simpler OT analysis than Aissen's. Woolford's criticism is twofold. First, some of Aissen's (2003) constraints seem to lack motivation, e.g. \*OJ/INAN would mean that there are languages that don't allow inanimate objects — a highly dubious claim. Second, Aissen (2003) proposes that \*Ø<sub>C</sub> can be conjoined with a universal constraint ranking and \*STRUC<sub>C</sub> can be inserted into the ranking at the fitting position. What should then prohibit \*STRUC<sub>C</sub> from conjoining and \*Ø<sub>C</sub> from inserting, which would yield the exact opposite paradigm? Aissen's (2003) central idea about morphologically marking the semantically marked items would be lost.

Woolford suggests an OT account based on PF constraints. She observes that in Marathi and Hindi, which have differential ergative case marking (see Comrie 1984), there are sentences in which ergative case is not expressed phonologically but must still be present in a more abstract layer because ergative-triggered agreement is visible. She suggests an analysis capturing these facts by using the animacy hierarchy in (140), the person hierarchy in (151) and the number hierarchy in (152).

(151) **Person hierarchy**  
first > second > third

(152) **Number hierarchy**  
plural > singular

From these hierarchies, Woolford derives contextually restricted constraints like \*ERG/1PL or \*ERG/HUM that crucially occur in natural languages. Furthermore she proposes a faithfulness constraint MAX( $\cdot$ ) which demands that the overt case correspond to the abstract case; MAX(ERG) for her example. This analysis allows her to account for gaps in hierarchies, such as in the person/animacy hierarchy of Aranda subjects in (153) (from Silverstein 1976).

(153) Person/animacy hierarchy for Aranda subjects  
1PL > 1SG > 2PL > 2SG > 3HUM.PL > 3HUM.SG > 3ANIM.PL  
 $\emptyset$     ERG     $\emptyset$      $\emptyset$      $\emptyset$      $\emptyset$      $\emptyset$   
> 3ANIM.SG > 3INAN  
 $\emptyset$                     ERG

Woolford's analysis with faithfulness constraints, which can account for the paradigm in (153), is given in (154). The first constraint prohibits ergative marking on 1PL, the second one demands case on first persons (matches only 1SG here), subsequently case-marking is again turned off for all animates (2PL to 3ANIM.SG), and finally enabled for the rest of the hierarchy.

(154) \*ERG/1PL  $\gg$  MAX(ERG)/1  $\gg$  \*ERG/ANIM  $\gg$  MAX(ERG)



While Woolford is able to eliminate one of her criticisms of Aissen (2003), namely that of unmotivated constraints per se, she still has the problem that textually constrained faithfulness constraints can be used to produce the reverse pattern as well (she notes so herself, Woolford 2008: 38).

Aissen (2003), representing Silverstein's (1976) 'mirror-image pattern' between DOM and DSM more precisely, cannot capture the Aranda data in (153). However, the mirror-image is contradicted by the data of Turkish subjects, showing that the reasons for DO/SM are more complex, as Woolford (2008) has also argued. This makes it difficult to see how the same grammatical module would be able to produce all observed markings.

### 4.1.3 Summary

In this section, I have discussed the advantages and downsides of functional views on DO/SM. The idea that optional marking appears when it is needed and will put some kind of emphasis on the constituent, seems 'logical'. The mirror-image account putting objects and subjects on different ends of various semantic scales and arguing that features from the unnatural end will force case-marking, seems 'intuitive'. Yet, data from many languages contradicts such a 'differentiated' view (apart from Turkish and Aranda, Hindi and Vafsi also provide counter-examples, see chapters in de Hoop and de Swart 2008). The reasons for differential case-marking on direct objects and subjects vary from language to language, and so far it seems difficult to find a differentiated approach that can account for all forms of DO/SM.

I will now present some non-functional analyses of the Turkish DO/SM data introduced in chapter 3.

## 4.2 Semantic criteria for DO/SM in Turkish

This section will analyze some semantic parameters of differential case marking in Turkish. In subsection 4.2.1 I discuss the influence of specificity on case marking with respect to the properties of specificity in chapter 2. In 4.2.2 I

make a few comments on the role of animacy, concluding that further data is necessary. Finally, in subsection 4.2.3 I discuss a brief syntactic account by Kornfilt (2008) on the assignment of structural case. I conclude the role of semantic criteria in 4.2.4.

### 4.2.1 Specificity

Recall the case-marking paradigms in (76) on page 45 for objects, and in (117) and (119) on page 61 for subjects. From these minimal pairs, it becomes clear that case-marking plays a role for definiteness and specificity, epistemic specificity in this case (cf. section 2.4.2). I will now compare the Turkish data to the aspects of specificity discussed in chapter 2.

Similar to English, which I have used to discuss specificity in general, the Turkish indefinite article *bir* is ambiguous between a [+specific] and a [-specific] reading. Additionally, there is an even less specific construction: incorporation of the object or subject, which does not denote number; opposed to *bir*, which denotes singular. For direct objects and for subjects of subordinate clauses, case-marking can help to distinguish *bir*'s specificity.

In example (114) on page 58, the direct object is able to take scope greater than its surface position because of its case-marking. It can take widest scope, intermediate scope, and keep the narrow scope reading. This could be argued to be an instance of referentially anchored specificity (see section 2.4.5 and 2.3.3). The ability to take scope may be connected to the property that any constituent (object or subject) that is scrambled away from the immediate preverbal position must<sup>32</sup> bear case — but that does not mean that it must be specific. While incorporated subjects/objects cannot take scope, they can still scramble and will then receive case.

Note that it is not a unique property of *bir* to have ambiguous specificity. As we have seen in the partitive examples in (102) or (103) on page 55, numerals such as *iki* “two” can also be interpreted as [+specific] or [-specific]. This is an argument against Enç (1991), who claims that all partitives are specific, as well as against approaches of two inherently distinct kinds of

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<sup>32</sup>Actually, there are few counterexamples, cf. Nilsson's (1985) and Bolgün's (2005) corpus studies.

indefinites, cf. section 2.2. Rather, Schwarzschild’s (2002) idea about contextually restricting the set is applicable here (section 2.3.2). If the elements in the set are determined and thereby no variation is possible, the set will be perceived as specific. Otherwise the remaining ignorance on the speaker or any other discourse referent’s part will trigger a non-specific reading.

Relative specificity in the sense of Hintikka (1986) (cf. section 2.4.4) does not correspond to Turkish data directly either. (155) is the translation of (66) on page 35. In Turkish, accusative is not obligatory but optional (though preferred).

- (155) *Her koca<sub>1</sub> bir tarih-(i) unut-uyor: karı-sın<sub>1</sub>-in*  
 every husband a date-(ACC) forget-PROG wife-3SG.P-GEN  
*doğum gün-ün-ü.*  
 birth day-3SG.P-ACC  
 “Every husband forgets a date: his wife’s birthday.”

Bolgün (2005) has suggested that specificity may not be the underlying reason for case-marking but something he calls ‘individuation’ (following Erguvanlı-Taylan and Zimmer 1994), which denotes “being separate from all other [entities] in the discourse” (Bolgün 2005: 120). He takes individuation to be a scale rather than binary, and speculates that specificity may be a subset of individuation.

It seems thus that while specificity may be a sufficient explanation for some instances of case-marking, it does not account for many other instances where one would expect case-marking but it is only optional. There may be a dispreference for the *bir*-N-ACC construction since its frequency in Bolgün’s (2005) corpus study has been very low. Note that accusative is not optional on objects without *bir* because there it serves to distinguish incorporated from definite constituents. Accusative can thus be seen to detach the direct object from the verb, something Grønbech (1936) has observed for older stages of the language where a noun by itself always denotes the category and would be dis-incorporated by case. Interestingly, case-marking does not only add referentiality but also a singular meaning. This could be explained by assuming that there must always be a NumP below a DP, and that the

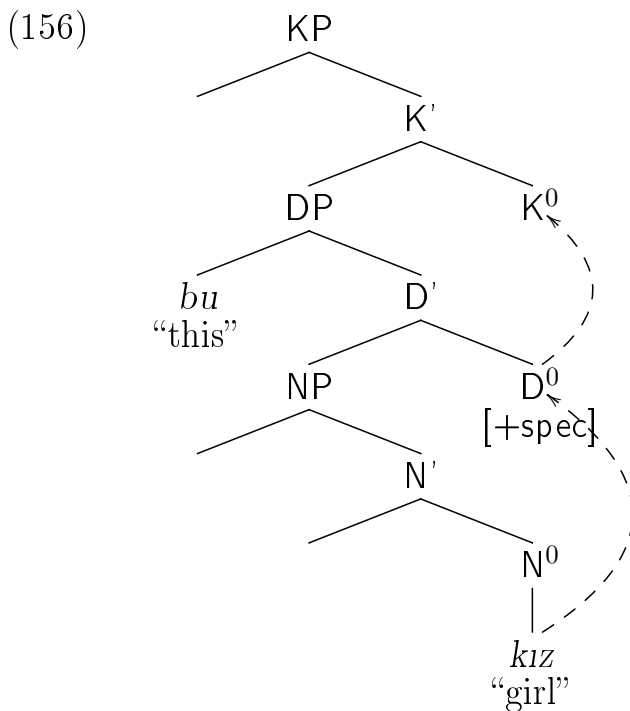
NumP defaults to singular (a likely assumption given that Turkish has a plural denoting morpheme but not a singular denoting one).

### 4.2.2 Animacy

Animacy is usually considered to not have an influence on Turkish grammar, but some effects can be observed in correlation with case-marking. There seems to be a tendency for animate nouns to receive case-marking (cf. e.g. (97) on page 53 for objects, and (118) on page 61 for subjects), and to have a specific reading even if they do not bear case — and none of the other investigated syntactic mechanisms that involve case-marking apply — (e.g. (100) on page 54). In (100), however, case on an inanimate object is surprisingly ungrammatical. This can be traced back to the verb *ara* “to look for”, but it shows that a more detailed analysis than this thesis can provide is required.

### 4.2.3 Case-marking by specificity

Kornfilt (2008: 104–108) proposes a (sketchy, as she calls it) formalism that will case mark only specific objects and subjects. Woolford (2008) has shown that various modules can be responsible for case marking, so when trying to provide a unified account, it is sensible to focus on the one that applies last: PF. PF, however, has no direct access to the semantic features controlling the marking. Kornfilt suggests that for PF only the content of  $K^0$  matters, and that the necessary properties in  $K^0$  are or aren't provided by syntactic movement. If the DP in the argument position of  $K^0$  contains a [+specific] feature, the content of  $D^0$  raises to  $K^0$ . If  $D^0$  is [—specific], or if the DP is not present at all (e.g. on incorporated nouns), the raising does not occur. PF will look at  $K^0$  and insert the appropriate case-marking (i.e. nominative, accusative, or genitive case respectively) if  $K^0$  is not empty. Inherent and lexical case (dative, locative, ablative) are analyzed to be directly on  $N^0$  so that their presence can be accounted for even when there is no DP. Example (156) shows a syntactic tree that will receive structural case marking.



This explanation by Kornfilt (2008) can account for 1. the influence of the feature  $[\pm\text{specific}]$  on case-marking, 2. the lacking of case on non-referential subjects and objects, and 3. the presence of lexical case irrespective of features or argument status. It does so by assuming PF to be the component ultimately responsible for overt case-marking. Although case-marking depends on semantic features, PF does not require access to the semantic features directly, as they are parsed by syntax first.

This analysis can, however, not account for the fact that (at least for some speakers) incorporated objects can scramble and will then receive accusative case while still being interpreted as incorporated, that is without number specification or referent. For Kornfilt, a DP is a requirement to receive case, something that would not be assumed for an incorporated noun. Since incorporated *indirect* objects can receive inherent case (in base position or elsewhere), it would be possible to assume that for scrambled incorporated *direct* objects accusative also resides in  $N^0$  directly. This would, however, entail *i.* losing the difference between structural and inherent case, and *ii.* having to find a syntactic explanation of how case that is generated by syntactic movement can appear in a lexical position.

#### 4.2.4 Summary

In this section I have shown that the two main semantic criteria involved in DO/SM, specificity and animacy, are not the only influences. Specificity (or a similar notion) has a major influence on the distribution of accusative on direct objects and genitive on subjects of subordinate clauses, but specificity as discussed in chapter 2 does not account for all observed phenomena in Turkish. Some examples are influenced by animacy, which usually plays a minor role in Turkish grammar, in the sense that case-marking is more often available on animate nouns than on inanimate ones.

I will now turn to a discussion of morphosyntactic reasons to have case-marking. In Turkish, these always override semantic reasons, i.e. I will present and discuss analyses dealing with the appearance of case where it is not expected by semantic criteria (DOM and DSM), as well as with the absence of case when it should be there (DSM only).

### 4.3 Morphosyntactic criteria for DO/SM in Turkish

The case-marking of Turkish subjects in nominalized ('embedded') clauses and of Turkish objects (in any type of clause) does not solely depend on the NP's semantic criteria. Both subjects and objects can be syntactically forced to bear case even when the relevant semantic criteria do not apply, and subjects can furthermore be prohibited from bearing case when the semantic criteria do apply. In this section, we will look at these mechanisms more closely.

#### 4.3.1 Partitives

Recall the data I have shown in section 3.2.5. Enç (1991) has argued that the accusative marking in partitive constructions is obligatory because all partitives are specific, and specificity on direct objects is marked by accusative case in Turkish. This first part of this claim has been refuted on two grounds:

1. Not all partitives are semantically specific.
2. Not all partitive constructions in Turkish have accusative marking.

I have also introduced the analysis of Turkish partitives by von Heusinger and Kornfilt (2005), who make the problems in Enç's (1991) proposal explicit and suggest that accusative marking on partitives is syntactically triggered by the obligatory agreement morpheme. The data put together in section 3.2.5 supports their claim.

The following generalization seems to hold: the head of a partitive phrase must either be an overt noun or a nominal agreement marker. In fact, this is not only true for partitives, but also for constructions like (157) (cf. Kornfilt 2008: 90, ftn. 12).

- (157) a. \**Üç*                      *al-dı-m*.  
           three                    buy-PAST-1SG
- b. *Üç-ün-ü*                *al-dı-m*.  
           three-3SG.P-ACC buy-PAST-1SG  
           “I bought three.”

On this basis, Kornfilt (2008: 89) introduces the Overt Nominal Head Constraint (ONHC):

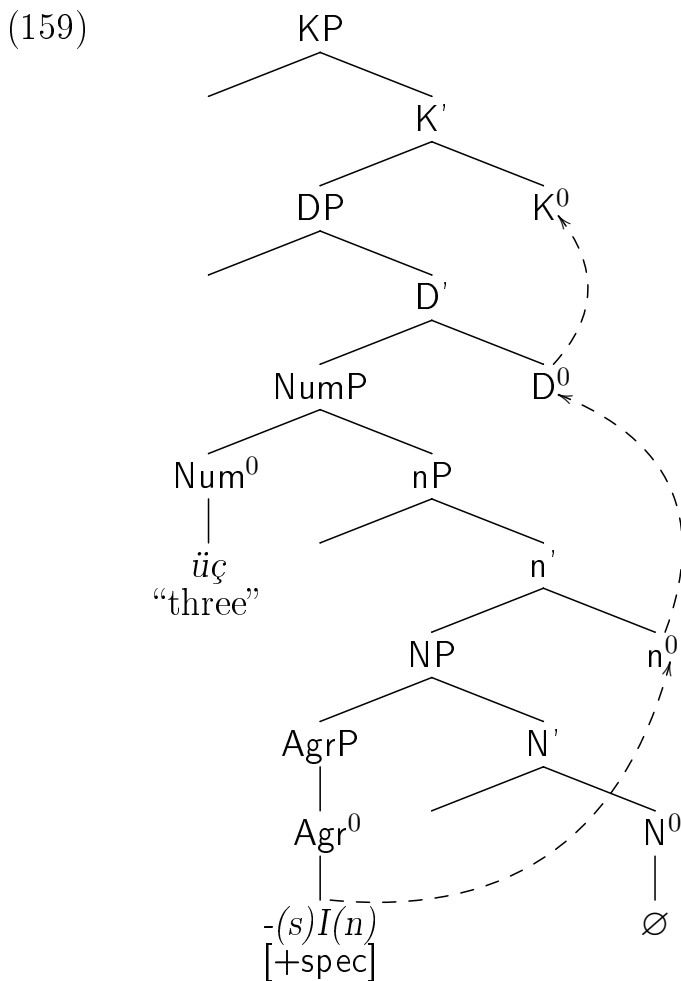
- (158) **Overt Nominal Head Constraint** (ONHC, Kornfilt 2008: 89)  
 NP/DPs must have an overt head, occupied by nominal features.

Further, she introduces small nP, similar to vP, which carries nominal agreement features Agr (we will see the motivation for this in section 4.3.3 below). It seems thus that the ONHC in partitives can either be realized by a classifier noun like *kişi* “person” or *tane* “entity”, by Agr, or by both. If Agr is present, case marking becomes obligatory. Kornfilt (2008: 91, ftn. 14) notes that this may well be because of the pronominal features in Agr, as pronouns are usually specific. I will adopt this account but it leaves open the question of how the agreement marker in compounds, which looks the same but is non-specific, fits into this. See example (111) on page 57.

Following her description of the formal mechanisms of case marking already presented in section 4.2.3 above, it seems to me that the account she intends for partitives goes like this. The ONHC can be formalized as a requirement on  $n^0$  to be filled by movement from either  $N^0$  or  $Agr^0$ . The DP below KP will be exchanged for a NumP, and the overt nominal head in  $n^0$  raises to  $Num^0$ . Further raising to  $K^0$  applies if  $Num^0$  contains a [+specific] feature that can either *a.* originate from  $Num^0$  itself, or *b.* have been carried up by  $Agr^0$ . This is exemplified in (159).

As we shall see in a later section, Kornfilt (2008) argues that the licensing of genitive can only be done by nominal Agr in  $n^0$ . This is the case in (158). The set denotator is not prohibited from bearing ablative, but if it is in genitive and there is a classifier noun present, Agr is still required to do the licensing.





### 4.3.2 Scrambling

Recall the data on scrambling of direct objects I have presented in section 3.2.2 and on subjects of subordinate clauses in section 3.3.2. While there are very rare examples of scrambled objects that do not bear case (cf. e.g. Nilsson 1985: ftn. 45, quoting Tura 1973: 137), it seems to hold generally that scrambled objects and subjects must bear case, but it is not necessary that they be specific. Scrambling will thus create an ambiguity about the constituent's specificity (as do all instances of case-marking or non-marking by morphosyntactic criteria), since case as the only possibility for distinction cannot fulfill this function.

Scrambling can involve the topic position (sentence-initial) an interme-

mediate position. Erguvanlı (1984: 27) notes that indefinite or non-specific NPs are strongly disfavoured in topic position. This is to be expected since the topic position connects to previously introduced referent, and indefinite or non-specific NPs are characterized by being new to the discourse. This restriction does not hold for scrambling to an intermediate position, which is a technique often employed to put another constituent into the focus position (immediately preverbal, which is also the base position for the direct object).

The fact that case enables a constituent's raising ability may remind one of the scoping behaviour (section 3.2.6). It seems that case licenses overt raising (i.e. scrambling) as well as covert raising (i.e. scope taking). However, while widest overt raising (topicality) entails specificity, widest covert raising (widest scope) does not necessarily do so.

A problem that syntactic accounts for scrambling-induces case-marking have to face, is the fact that even incorporated objects can be scrambled and receive case. There are good reasons to assume that incorporated objects and subjects consist of a bare N without further phrases on top (cf. sections 3.2.1.1 and 3.3.1.3). To account for the appearing case-marking, one either has to find a way to put a phrase above N, or one has to argue that the case appears within N — something undesired for structural case.

In any case, this shows very clearly that in Turkish, syntactic criteria for case-marking override semantic criteria.

### 4.3.3 Adverb clauses

As I have demonstrated in section 3.3.1.2 on page 62, subjects of adverb clauses with indicative nominalizers never receive genitive — neither the most prominent nor the most specific subjects —, but if the clause consists of a subjunctive nominalizer, genitive is possible. In this section, I will introduce two syntactic explanations for these phenomena. First, in 4.3.3.1, I will present Kornfilt's (2008) account that argues for genitive licensing by a personal agreement morpheme (Agr hereafter). In 4.3.3.2, I will discuss Aygen's (2007) analysis which assumes that genitive is licensed by ECM but encounters some configurational difficulties. Both accounts are syntactic in

nature and lie far from a functional or even archetype-based approach to DSM.

#### 4.3.3.1 Licensing by Agr

Observing that genitive is licensed by Agree (Agr) — it seems genitive never occurs without a possessive suffix close by, cf. section 3.1.2 on page 42 —, Kornfilt develops a syntactic mechanism that allows genitive licensing with *-DIG*, *-(y)AcAG*, and *-mA* in noun clauses and restricts it with *-DIG* and *-(y)AcAG*, but not *-mA* in adverb clauses. Kornfilt assumes that when genitive is not licensed, nominative as default case in the sense of Schütze (2001) is assigned.<sup>33</sup>

In ‘regular’ possessive phrases like (160) and (161), the licensing of genitive happens irrespective of the possessive phrase’s status as argument or adjunct.

- (160) *Hasan [ Ali-nin kitab-ın ]-ı oku-du.*  
 Hasan Ali-GEN book-Agr.3SG -ACC read-PAST  
 “Hasan read Ali’s book.”

- (161) *Hasan kitab-ı [[ Ali-nin kız-ı ] için ] al-dı.*  
 Hasan book-ACC Ali-GEN daughter-Agr.3SG for buy-PAST  
 “Hasan bought the book for Ali’s daughter.”

Kornfilt observes that therefore *i.* the licensing happens domain-internally, and *ii.* in such ‘clearly nominal domains’ genitive doesn’t unexpectedly disappear. She draws a parallel between these nominal domains and noun clauses (argument clauses in her terminology) by postulating an nP-shell above noun clauses which achieves a category shift. Agr raises to n<sup>0</sup> and licenses genitive on the subject which raises to the specifier position or Agr. If I read her correctly, she assumes that *-DIG*, *-(y)AcAG*, and *-mA* are in n<sup>0</sup>, too, projecting the nP.

What about adverb clauses? Apart from the ones we have seen in section 3.3.1.2 on page 62, there are others without Agr that do not assign

<sup>33</sup>Aygen-Tosun (1999: 12) argues for genitive as default case since there is no lexical governor.

genitive to their subjects either. (This is not surprising if genitive is always licensed by Agr.) The suffixes on the latter type of adverb clauses are, unlike *-DIG* etc., restricted to adverb clauses, and Kornfilt (2008: 101f) takes them as heads of modifier phrases (ModP).

- (162) [ *Ali ev-den çık-ınca* ] *Oya konser-e git-ti.*  
 Ali house-ABL exit-“when” Oya concert-DAT go-PAST  
 “When Ali left the house, Oya went to the concert.”

- (163) [ *Ali ev-den çık-ar-ken* ] *Oya konser-e*  
 Ali house-ABL exit-AOR-“while” Oya concert-DAT  
*gid-iyor-du.*  
 go-PROG-PAST  
 “While Ali was leaving the house, Oya was going to the concert.”

The modifier heads in (162) and (163) do not appear with Agr, and their subjects can only appear in nominative. In parallel to these examples, Kornfilt analyzes adverb sentences with Agr as ModPs. In (121), repeated below as (164), Agr *is* present, but cannot license genitive because it raises to Mod<sup>0</sup> — genitive can only be licensed by Agr in n<sup>0</sup>.

- (164) [ [ *Sen yemek pişir-diğ-in* ] *için* ] *ben konser-e*  
 you.SG food cook-NMZ-Agr.2SG because I concert-DAT  
*gid-ebil-di-m.*  
 go-ABIL-PAST-1SG  
 “Because you cooked, I was able to go to the concert.”

It must follow that *-DIG* and *-(y)AcAG* are ambiguous between heads of nP and ModP. *-mA* however, licenses genitive in adverb clauses as well as in noun clauses, so Kornfilt must assume that it always projects an nP. However, *-mA* (or something similar, as we shall see) can also appear without Agr as is illustrated in (165).

- (165) [ [ *Müdür tatil-e çık-ma* ]-dan önce ] *ofis*  
 director vacation-DAT leave-mA -ABL before office

*yan-dı.*

burn-PAST

“Before the director went on vacation, the office burnt down.”

Kornfilt (1997: 70) offers two analyses for this *-mA* in (165). It could either be the subjunctive nominalizer discussed in this section, or negation, which looks identical (*-mA-*) but differs in stress. Main stress always falls on the syllable preceding negation, which happens in (165), whereas the subjunctive nominalizer does not change the usual word-final stress. However, case doesn't usually attach to verbs, which *çık-ma-* “leave-NEG” would be then. If the reading as nominalizer is correct, Kornfilt's (2008) analysis fails to explain why *-mA* projects an nP in adverb clauses with Agr, and a ModP in adverb clauses without Agr (or an nP for which the ONHC (158) does not apply). If *-mA* in (165) is indeed negation, as Kornfilt (1997: 70) prefers, one would have to account for the fact that case attaches to a verb stem directly, something otherwise unique.

There is a variation of (165) with Agr on *-mA* where genitive becomes available:

- (166) [[ *Müdür-ün tatil-e çık-ma-sın* ]-dan önce ]  
 director-GEN vacation-DAT leave-NMZ-Agr.3SG -ABL before  
*ofis yan-dı.*  
 office burn-PAST  
 “Before the director went on vacation, the office burnt down.”

In (166), *-mA* is unanimously analyzed as nominalizer. My informants have described the difference between (165) and (166) as sharing the same meaning essentially, but (166) was said to draw the attention to the event rather than neutrally specifying a time adjunct.

Like *-mA*, *-DIG* without Agr can also occur in adverb clauses, as illustrated in (167). I have not been able to find any examples of *-(y)AcAG* without Agr.

- (167) [[ *Ali ev-den çık-tık* ]-tan sonra ] *Oya konser-e*  
 Ali house-ABL exit-NMZ -ABL after Oya concert-DAT

*git-ti.*

go-PAST

“After Ali had left the house, Oya went to the concert.”

Kornfilt (2008: 102f) observes that ModPs with Agr differ from ModPs without Agr additionally with respect to their choice of PRO vs. pro as subjects. In ModPs without Agr, an empty subject must be co-referential with the subject of the main clause, exemplified in (168), whereas in a ModP with Agr, it can refer to someone different, see (169).

- (168) [ PRO *ev-den*      *çık-ınca*      ] *Oya ayağ-ın-ı*      *burk-tu.*  
           house-ABL exit-“when”    Oya foot-3SG.P-ACC sprain-PAST  
 “When she<sub>*i*/\**j*</sub> left the house, Oya<sub>*i*</sub> sprained her ankle.”

- (169) *Oya* [ [ pro *ev-e*              *erken dön-düğ-ü*              ] *için*      ]  
       Oya      house-DAT early return-NMZ-Agr.3SG    because  
       *dinlen-ebil-di.*  
       rest-ABIL-PAST  
 “Because (s)he<sub>*i*/*j*</sub> returned home early, Oya<sub>*i*</sub> was able to rest.”

Kornfilt does not offer an explanation as to when Agr appears and when it doesn't. *-DIG* seems to have both possibilities, but the Agr-less construction is limited to the construction in (167). *-mA* may have both possibilities as well, depending on whether one agrees with her (1997) analyses of *-mA* in (165) as negation. *-(y)AcAG* seems to only occur with Agr, and all other modifier heads do not occur with Agr.

### 4.3.3.2 Licensing by ECM

An approach from a different angle comes from Aygen (2007). She argues that genitive licensing does not happen clause-internally but clause-externally, and is not by Agr but by a (possibly null) nominal head. This allows her to stipulate a common syntactic mechanism for multiple Turkic languages, but runs into at least one major problem, as I will show.

As I have shown previously, there are clauses in which Agr is present but the subject cannot be marked with GEN. Aygen uses this to argue that the

licensing of GEN is not done by Agr. There are minimal pairs like (170a) and (170b) (from Aygen 2007: 2, my glosses, her translation) which seem at first sight to only differ in the subject's case marking.

- (170) a. *Ben* [ *Ali-nin cam-ı kır-dıĝ-ı zaman* ]-ı  
 I Ali-GEN glass-ACC break-NMZ-Agr time -ACC  
*bil-iyor-du-m.*  
 know-PROG-PAST-1SG  
 “I knew when Ali broke the glass.”
- b. *Ben* [ *Ali-Ø cam-ı kır-dıĝ-ı zaman* ] *gerçeĝ-i*  
 I Ali-NOM glass-ACC break-NMZ-Agr time truth-ACC  
*bil-iyor-du-m.*  
 know-PROG-PAST-1SG  
 “I knew the truth when Ali broke the glass.”

Furthermore, the distribution of genitive also does not follow the subordinate clause's syntactic status. There are adverb clauses with genitive-marked subjects (171a), and others with nominative-marked subjects (171b).

- (171) a. [ *Hasan-in duy-duĝ-un-a göre* ] *herkes*  
 Hasan-GEN hear-NMZ-Agr-DAT according to everybody  
*duy-acak-mıŝ.*  
 hear-FUT-REP  
 “According to what Hasan heard, everybody will hear (it).”
- b. [ *Hasan-Ø duy-duĝ-un-a göre* ] *herkes*  
 Hasan-NOM hear-NMZ-Agr-DAT since everybody  
*duy-acak.*  
 hear-FUT  
 “Given that/since Hasan heard, everybody will hear (it).”

Aygen employs some tests to determine the syntactic structure of these clauses. The first test is to insert a head noun at the end of the subordinate clause to see whether there is a null head there. This is only possible for (171a) and yields (172). Note that the noun has to be inserted left of the case marker.

- (172) [ *Hasan-ın duy-duğ-u şey-e göre* ] *herkes*  
 Hasan-GEN hear-NMZ-Agr thing-DAT according to everybody  
*duy-acak-mış.*  
 hear-FUT-REP  
 “According to what Hasan heard, everybody will hear (it).”

The second test involves adding a constituent in the subordinate clause to see whether there is a trace of syntactic movement. Ungrammaticality indicating such a trace arises in (170a), see (173a), and (171a), see (173b).

- (173) a. \**Ben* [ *Ali-nin dün saat üç buçuk-ta cam-ı*  
 I Ali-GEN yesterday hour three half-LOC glass-ACC  
*kır-dığ-ı zaman* ]-ı *bil-iyor-du-m.*  
 break-NMZ-Agr time -ACC know-PROG-PAST-1SG  
 \*‘‘I knew when Ali broke the glass yesterday at half past three.’’
- b. \* [ *Hasan-ın haber-i duy-duğ-un-a göre* ]  
 Hasan-GEN news-ACC hear-NMZ-Agr-DAT according to  
*herkes duy-acak-mış.*  
 everybody hear-FUT-REP  
 \*‘‘According to what Hasan heard the news, everybody will hear (it).’’

Such a gap that must not be filled, is expected for relative clauses. (171a) is a free relative with a null head noun, whereas (170a) already has an overt head, *zaman* ‘‘time’’, and did therefore not pass test 1. Another well-suited test, which Aygen (2007) does not mention, is to replace *zaman* in (170) with the synonym *vakit*. This replacement is possible for (170a), where the noun is used in its meaning *time*, but is impossible for (170b), where *zaman* is a complementizer.

For declarative subordinate clauses, Aygen observes that test 1 applies and test 2 doesn’t apply. Interestingly, the head noun receives additional Agr-marking, which seems to indicate a compound relationship between the head noun and the subordinate clause.



- (174) a. *Ben* [ *Hasan-ın* *Jale-yi* *gör-düğ-ün* ]-*ü*  
 I Hasan-GEN Jale-ACC see-NMZ-Agr -ACC  
*bil-iyor-um.*  
 know-PROG-1SG  
 “I know that Hasan saw Jale.”
- b. *Ben* [[ *Hasan-ın* *Jale-yi* *gör-düğ-ü* ] *gerçeğ-in* ]-*i*  
 I Hasan-GEN Jale-ACC see-NMZ-Agr fact-Agr -ACC  
*bil-iyor-um.*  
 know-PROG-1SG  
 “I know the fact that Hasan saw Jale.”

From these three types of clauses, Aygen (2007: 12) observes that genitive and head noun correlate, whereas genitive and Agr do not correlate, cf. (175). She proposes that the subject of types (175a–d) raises to the specifier position of the head noun to receive genitive case via ECM — a strategy that is not possible for a CP as in (175e).

- (175) a. [[ subject-GEN ...  $t_i$  ... verb-DIG-Agr ] NP<sub>*i*</sub> ] *RC*  
 b. [[ subject-GEN ...  $t_i$  ... verb-DIG-Agr ]  $\emptyset_i$  ] *RC*  
 c. [[ subject-GEN ... verb-DIG-Agr ] NP-Agr ] *compound*  
 d. [[ subject-GEN ... verb-DIG-Agr ]  $\emptyset$  ] *compound*  
 e. [ subject-NOM ... verb-DIG-Agr C<sup>0</sup> ] *CP*

(175a) and (175b) exhibit relative clauses (RC) like (170a) resp. indirect questions like (171a). (175c) and (175d) are complex NPs or declarative subordinate clauses like in (174); of which (175d) is the much more common form. Finally, (175e) is a schema for (170b) and (171b).

(175e) is where we encounter the first problem with Aygen’s (2007) analysis. She ignores the fact that in (171b) *göre* assigns dative to the clause, a property that is uncommon for complementizers, and draws a clear distinction between this *göre* “since” and the one in (170a), which is a postposition “according to” assigning dative to an NP as in (175b). The argument of the complementizer *göre* “since”, which is dative-marked in (171b), is in her analysis a TP. This makes case-marking astonishing. Note that it is not possible to assume an intervening NP with a null head because of test 2.

Furthermore, Aygen presents similar data from related languages that only differs in the position of Agr, which is attached to the head noun instead of the verb. I repeat her example of Kazakh (2007: 13, ex. (2K), my emphasis) in (176).

- (176) *Men-∅ [ Ali-nin aynek-ti sindir-gan ] waqit-in ]-in*  
 I-NOM -GEN glass-ACC break-PERF time-Agr -ACC  
*bil-ip-jatre-di-m.* *Kazakh*  
 know-CONV-AUX-PAST-1SG  
 “I knew when Ali broke the glass.”

In (176) and a parallel example from Tuvan, Agr is outside of the clause, and Aygen argues that therefore Agr is not what licenses genitive in Turkish either. Rather, genitive is licensed by ECM in all these languages. If I understand her correctly, she intends for Agr to raise out of the clause overtly in Kazakh and Tuvan, and covertly in Turkish. This however poses the following question: If Agr raises out of the subordinate clause and attaches to the head noun, what stops it from licensing genitive clause-internally before it raises?

Aygen (2007: 13f, ftn. 23) also presents data from Dagur, a more distantly related Altaic language, to demonstrate the appearance of Agr clause-externally. When looking at these data more closely, however, one can use them to argue against her approach of Agr-independent genitive licensing. Cf. (177), from Aygen (2007: ftn. 23), and (178), from Aygen (2007: 13); my emphasis, her brackets.

- (177) [ *tere yau-sen-ii* ] *fii uji-sen-fii yee?*  
 3SG.NOM go-PERF-ACC 2SG.NOM see-PERF-2SG Q  
 “Did you see him leave?”
- (178) [ [ *mini au-sen* ] *biteg-min<sup>y</sup>* ] *adig sain*  
 1SG.GEN buy-PERF book-1SG very good  
 “The book I bought is very good.”

I assume that the translation of (177), “Did you see him leave?”, is not meant to indicate that the construction in (177) is a small clause (Aygen

(2007: ftn. 13) calls it a “subordinate clause”), but should more precisely be “Did you see that he left?”. When looking at (177), two things catch one’s eye: 1. The case on the subject is nominative instead of genitive; 2. there is no Agr in the subordinate verb. Following Aygen’s analysis, the presence of nominative should indicate that there is no empty N above the relative clause, although she assumes one for the corresponding Turkish construction in (175d). This means that *a.* the languages are not that closely related and one should be careful with drawing conclusions from one to the other; or *b.* it is after all not the head noun that licenses genitive. The presence or absence of empty N should be testable, but I have neither the data nor the reason to do so in this thesis. In (178), with an overt N, genitive is available.

#### 4.3.4 Summary

In Turkish, morphosyntactic criteria for the presence or absence of case outweigh semantic criteria. There are three main reasons how such “neutralization of DO/SM” (Kornfilt 2008) can happen. For objects as well as for subjects, case-marking is obligatory 1. in non-base position and 2. on the head-noun of a partitive construction if Agr is realized. Kornfilt (2008: ftn. 14) suggests that for the latter instances, case-marking may be due to a [+specific] on Agr, which is pronominal in nature. However, partitive examples with Agr can still have a non-specific reading, which would make the distinction between syntactic and semantic features necessary.

Furthermore, for subjects case-marking can be prohibited in certain contexts; this is not possible for objects at all. As sections 3.3.1.2 (data) and 4.3.3 (analyses) have shown, genitive-marking is ungrammatical in adverbial/adjunctive subordinate clauses unless *a.* the verb carries *-mA* and Agr, or *b.* it is not an adverb clause but a noun clause headed by an adverbial adposition. This justifies the instances in Aygen (2007) which she has called adverb clauses with genitive.

An overview of the possible occurrences of genitive and Agr with various  $n^0$  and  $\text{Mod}^0$  heads is given in (179). The question mark in the row of *-mA* refers to the possibility that the morpheme occurring in the few constructions of *-mA* without Agr be negation rather than the nominalizer

under discussion. Further, it is easy to observe that genitive never appears without Agr.

(179)

	noun clause		adverb clause	
	Agr	GEN	Agr	GEN
<i>-DIG</i>	✓	✓	✓	✗
	✓	✗	✗	✗
<i>-mA</i>	✓	✓	✓	✓
	✓	✗	✗?	✗
<i>-(y)AcAG</i>	✓	✓	✓	✗
	✓	✗		
<i>-(y)IncA</i>			✗	✗
<i>-(y)ken</i>			✗	✗
<i>-(y)ArAk</i>			✗	✗

## 4.4 Conclusions

This chapter has shown Differential Object Marking (DOM) and Differential Subject Marking (DSM) to be broad phenomena that can be understood in a variety of ways. Given that it was first described as ‘differential’ (Bossong 1985), the question as to the nature of the difference is bound to arise. It has been argued that DO/SM serves to help distinguish the subject from the object by applying distinctive case-marking when they could be confused. This requires a theory to determine when confusion is likely. It can easily be argued that objects have an inherent tendency to be indefinite, inanimate, and in focus position, while subjects tend to be definite, animate, and topics. From this it follows that ‘untypical’ objects whose properties are similar to those of subjects may require disambiguation, and vice-versa for subjects. This approach was suggested by Silverstein (1976) and formalized in the OT framework by Aissen (2003).

We have seen that the underlying principle beneath both Turkish objects and subjects is to receive case-marking when they are definite or specific (or both). The functional approach to DO/SM can account for Turkish objects

perfectly, but since it predicts the opposite behaviour for subjects — that is, to be case-marked when *non*-specific, *indefinite*, etc. —, Turkish data falsify it as a general account for DO/SM.

The alternative to a functional approach is to argue for the occurrence of DO/SM in every language separately. This may seem overly costly, but since there is a lot of variation in the shape of DO/SM, it may well be necessary.

In Turkish, there are morphosyntactic criteria than can neutralize DO/SM by definiteness/specificity. Neutralization works in both ways: case-marking can be forced where it shouldn't appear, and case-marking can be blocked where it should be. Crucially, the morphosyntactic overrides only influence the sentences surface form, but not the interpretation. Case-marking is enforced for objects and subjects, . . .

1. . . . when they scramble out of their base position. Interestingly, subjects and objects seem to share the immediate preverbal position as base-position. This explains Kornfilt's (2008: 107, ftn. 26) observation that in subordinate clauses, either subject or object *must* bear case: one of them cannot be immediately adjacent to the verb.
2. . . . when Agr as substitutional nominal head is present. This is the case for numerals and sometimes adjectives when the head noun is contextually elided. The possessive suffix of the 3<sup>rd</sup> person singular is inserted, and on possessive suffixes case is obligatory<sup>34</sup>.

Furthermore, case-marking for subjects, but not for objects, can be prohibited by syntax. In adverb clauses (subordinate clauses of nominal nature that are adjuncts to the matrix clause), subjects do not receive genitive marking except when a certain nominalizer *-mA* is present — this lack of marking does not influence the subject's specificity. I have presented and discussed two approaches that deal with the source of genitive-licensing and lack thereof. The first one by Kornfilt (2008) identifies Agr as licensor, and the second one by Aygen (2007) analyzes genitive as ECM by an often null head noun similar to relative clauses. I have argued why assuming Agr as licensor is preferable.

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<sup>34</sup>But see example (111) on page 57 and the brief discussion on page 85.

To sum up, the following aspects are involved in Turkish DO/SM (partly following Kornfilt 2008: 79f):

(180)	ACC/GEN	<i>vs.</i>	NOM
	object		subject
	specific object		non-specific object
	specific subject		non-specific subject
	subject of noun clause		subject of adverb clause
	subject of fully nominal clause		subject of fully verbal clause



# Chapter 5

## Conclusions and open questions

This chapter gives an overview over the content and findings of this thesis and summarizes open questions that were discussed throughout the chapters.

### 5.1 Summary and conclusions

In this thesis I have discussed two phenomena known as *Differential Object Marking* (DOM) and *Differential Subject Marking* (DSM) in Turkish. The term ‘differential’ refers to the grammatical property of case not being assigned in the same manner to all objects or subjects. For Turkish, DSM refers only to the genitive marking of subjects in subordinate clauses, while DOM applies to the accusative marking of all direct objects. I have reviewed the relevant literature that discusses possible reasons for marking or non-marking, and I have also provided some own examples, critical comments, and observations.

In Turkish, case marking seems to often correlate with definiteness and specificity, of which especially the latter is a complex notion by itself as I have argued in chapter 2. Definite as well as specific nouns are marked while indefinite or non-specific nouns do not generally bear marking. However, these causes for DOM and DSM can be neutralized in three ways: First, case is forced on objects as well as subjects if the object/subject is scrambled away from the immediate preverbal position. Second, case is forced on objects as well as subjects if they carry a possessive suffix that is either expressing a real



possession relation between discourse referents or symbolizing an otherwise null nominal head, but not solely the marker of a compound. Third, genitive marking on subjects can be suppressed depending on the clause type. I have discussed two syntactic analyses that try to determine the nature of this genitive licensing or non-licensing.

When examining DO/SM, so-called *functional* approaches investigate the role of DO/SM as a universal phenomenon. It seems that cross-linguistically many languages employ DO/SM to augment the contrast between subject and object. That is, case marking is left out when the contrast is big enough by itself but becomes necessary when an ambiguity would arise. Possible criteria that can influence the contrast are animacy, definiteness, topicality, etc. For Turkish, this view of DO/SM is *not* applicable. Case marking does not pay attention to the contrast between subject and object, as can for instance be seen on examples where both subject and object are case marked.

Rather, Turkish employs case marking to *identify* features on the object or subject, namely (mostly) definiteness and specificity. This means that what is ‘differentiated’ by Turkish DO/SM are specific objects from non-specific objects, and specific subjects from non-specific subjects.

What is specificity? I have argued that specificity does not correspond to definiteness; neither are there two distinct articles [ $\pm$ specific] nor is the relation between a specific noun and the environment clearly defined. When specificity is combined with indefiniteness, the latter conveys the requirement that the discourse referent must not have been established previously, but some other form of connection to a single element in the world is implied. This connection must thus be graspable, but I have also shown that it is not necessary that the speaker herself know the referent of a specific noun. It suffices that any other discourse referent can pinpoint the specific noun’s referent or that it is at least known that the referent exists at all. Schwarzschild (2002) offers the Privacy Principle, which states that the hearer does not need any more information about the referent than she can parse from the utterance itself. Hintikka (1986) has argued that the function connecting the pinpointer to the specific noun has to be salient, but this claim may also be too much.

## 5.2 Further research

Several unsolved problems have been stumbled upon in this thesis. The first problem concerns the nature of the possessive suffix, which is also used as a substitute nominal head and on the head of a compound. It has been observed that in its possessive function and as substitute nominal head, case marking is obligatory on the noun to which the suffix is attached. However, as compound marker this behaviour is not enforced. A theory of the syntactic reasons for case marking in Turkish needs to account for the nature of the possessive suffix, and it might be necessary to stipulate a two-fold character.

On a possibly related note, case marking of scrambled incorporated constituents requires further insight. On the one hand, the exact syntactic position of incorporated constituents has to be determined. I have discussed Aydemir's (2004) approach which assumes a head inside  $V^0$  but need elaboration on the scrambling mechanism. On the other hand, one has to account for the fact that incorporated objects can bear lexical case like dative, ablative, or locative, but not accusative. However, accusative assignment is possible when the object scrambles away from  $V^0$ . Assuming that an incorporated object does not have a DP above it, Kornfilt (2008) argues that lexical case resides on the  $N^0$  head, but this means that she has to assume the same for accusative on scrambled incorporated objects, which would differ from her other analyses of accusative.

Next, it seems striking that both subjects of subordinate clauses and objects only exhibit case marking by semantic parameters if they occur in immediately preverbal position (often called base position). It is, however, not possible for the subject *and* the object to be unmarked in a subordinate clause probably because only one of them can be immediately preverbal. It seems thus that the statement that case is 'optional' in base position does not hold — unless they share their base position and one of them has to scramble away; a highly unlikely claim.

Further, there seems to be a fundamental difference between adverb clauses (ModP) with Agr(eement) and those without Agr, as Kornfilt (2008: 101–103) notes but does not go into. It seems that in both kinds the subject can be left out, but in a clause with Agr, the missing subject will be free

to refer to any contextually relevant discourse referent (small *pro*), while in clauses without *Agr*, the subordinate clause's subject is co-referent with the subject of the matrix clause (big *PRO*). This difference may point to a disparate architecture instead of merely the presence or absence of *Agr*.

Another problem is the construction *V-mA-DAn* “without *V*”, consisting of the nominalizer *-mA* and ablative case *-DAn*. Kornfilt (1997) suggests that this *-mA* is not the nominalizer but negation, which looks identical but forces stress on the preceding instead of the final syllable. If *-mA* here is the nominalizer, it would be the only occurrence without *Agr* and (thereby) without genitive on the subject. This could be due to *-mA* being ambiguous between the head  $\text{Mod}^0$  of a modifier phrase, where *Agr* doesn't license genitive, and the head  $n^0$  of a small-*n* phrase, where it does (Kornfilt 2008). Kornfilt assumes that *-mA* always projects an *nP* so that she can account for the fact that it licenses genitive even in adverb clauses which are usually headed by  $\text{Mod}^0$ . If one wants to postulate an ambiguity, i.e.  $[\text{ModP } mA]-DAn$ , it remains to explain why some adverb clauses are headed by  $[\text{nP } mA]$ . Alternatively this construction could simply be the only occurrence of  $[\text{nP } mA]$  without *Agr*. If *-mA* is indeed negation, some justification is necessary why case should be able to attach directly to the verb stem. A null nominal head can only be considered apt if a mechanism is included that prohibits *Agr* from being generated.

Similar to this is the more general question of when *Agr* appears in subordinate clauses and when it doesn't. Some  $\text{Mod}^0$ -heads never occur with it, but others (like potentially *-mA*) seem to have both options. For *-DIG*, another nominalizer, the phrase *V-DIG-DAn sonra* “after *V*-(ing)” is the only instance when it appears without *Agr*. *-(y)AcAG* (a future nominalizer) must always be accompanied by *Agr* as far as I could see.<sup>35</sup>

Finally, I want to suggest that an approach taking multiple reasons for marking and non-marking into account simultaneously may be on the right track. Example (181) has a reading where all children painted the same stone, but the stone is non-specific (an existential operator with wide scope

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<sup>35</sup>Relative clauses with raised subject are a counter-example, but relative clauses may well have a different structure or different heads from adverb and noun clauses.

that is not a topic). Accusative-marking is optional.

- (181) *Tüm çocuk-lar bir kaya-(yı) boya-di.*  
 all child-PL a stone-(ACC) paint-PAST  
 “All children painted a stone.”

The presence of accusative can be explained by *bir kaya* “a stone” taking wide scope. A reason for accusative to be left out may be because the object’s identity is not important (it is indefinite and non-specific).

Similarly, in (182) accusative is also optional. The indefinite has narrow scope and is specific but dependent on the universal quantifier.

- (182) *Her koca bir tarih-(i) unut-uyor.*  
 every husband a date-(ACC) forget-PROG  
 “Every husband forgets a date.”

The object in (182) may be accusative marked because it is specific. It may be unmarked because it has narrow scope with respect to *her* “every”.

Further data is required here to collect all instances of such optional marking and to make sure that there is no semantic difference between the marked and the unmarked version. Differences in focus are expected to a certain extent because the speaker has to decide which semantic aspect becomes relevant for case marking.



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# Appendix A

## Abstract (English)

This thesis investigates the role of specificity in Turkish case marking. Turkish exhibits two phenomena known as Differential Object Marking (DOM) and Differential Subject Marking (DSM), i.e., ‘regular’ case marking on direct objects (accusative) and on subjects of subordinate clauses (genitive) alternates with zero/nominative marking. There can be two reasons for structural case marking in Turkish. The first reason is semantic: Objects and subjects in base position receive marking (mostly) by the criteria specificity and definiteness. I discuss the semantic aspects of specificity independently of Turkish and show that many case observations can indeed be explained by different types of specificity. The second reason is syntactic: In any other syntactic position or in the presence of an agreement head, case marking is forced and can therefore not indicate semantic criteria. In some subordinate clauses, case marking is suppressed, which yields the same neutralization effect. Syntactic case marking thus overrides semantic case marking.

Cross-linguistically speaking, it is common to adopt a view on DO/SM that case marks objects or subjects when they become too alike. Turkish, however, refutes this approach as it uses case marking to convey semantic information on the constituent irrespective of other constituents. Crucially, Turkish DSM provides counterexamples against Aissen (2003), who claims that case marking is expected on definite objects and indefinite subjects, but Turkish clearly marks definite objects and definite subjects. I agree with most of the literature on Turkish that Turkish is a strong example contra functional DO/SM and pro language-individual accounts.



# Appendix B

## Abstract (German)

Diese Arbeit untersucht die Rolle von Spezifität im türkischen Kasussystem. Im Türkischen werden zwei Phänomene, die als differentielle Objektmarkierung (DOM) und differentielle Subjektmarkierung (DSM) bekannt sind, deutlich. Das bedeutet, dass die Kasusmarkierung an direkten Objekten (Akkusativ) und diejenige an Subjekten von Nebensätzen (Genitiv) mit Null-Markierung/Nominativ alterniert. Im Türkischen gibt es zwei Gründe für strukturelle Kasusmarkierung: 1. Semantische Gründe: Für Objekte und Subjekte in Basisposition sind (hauptsächlich) die Kriterien Spezifität und Definitheit ausschlaggebend. Ich diskutiere die semantischen Aspekte von Spezifität unabhängig vom Türkischen und zeige, dass in vielen Fällen Kasus durch verschiedene Typen von Spezifität erklärt werden kann. 2. Syntaktische Gründe: In anderen syntaktischen Positionen oder in der Gegenwart eines Kongruenzmorphems wird Kasusmarkierung erzwungen und kann daher nicht semantische Kriterien aufzeigen. Außerdem wird in manchen Nebensätzen Kasus unterdrückt, was zum selben Neutralisationseffekt führt. Syntaktische Kasusmarkierung hat daher Vorrang gegenüber semantischer Kasusmarkierung.

Sprachübergreifend wird oft die Sichtweise von DO/SM angenommen, Objekte und Subjekte zu markieren, wenn sie einander zu ähnlich werden. Türkisch widerlegt diesen Ansatz, da Kasusmarkierung semantische Informationen an der Konstituente unabhängig von derjenigen an anderen Konstituenten anzeigt. Entscheidend ist, dass Türkisch Gegenbeispiele gegen Aissen (2003) vorbringt, die Kasusmarkierung an definiten Objekten und

indefiniten Subjekten erwartet, im Türkischen aber werden definite Objekte und definite Subjekte markiert. Ich schließe mich dem Großteil der Literatur über Türkisch dahingehend an, dass diese Sprache starke Evidenz gegen funktionale DO/SM und für einzelsprachliche Erklärungen liefert.

# Appendix C

## Curriculum Vitae

Pronunciation note: Laszakovits [la'sakɔvɪʃ]

### Education

- 10/2007 – current **Diploma in General Linguistics**  
University of Vienna
- 03/2008 – 02/2013 **Bachelor of Science in Computer Science**  
*with distinction*, Vienna University of Technology
- February 2012 Winter School on Verification, Vienna, Austria
- Summer 2011 EGG summer school, České Budějovice, Czech Rep.
- Summer 2010 EGG summer school, Constanța, Romania
- Summer 2009 EGG summer school, Poznań, Poland
- 06/2007 School leaving examination ('Matura')  
*with distinction*

### Teaching experience

- Springs 2011, 2010 TA for theoretical computer science and logic  
Prof. Fermüller, Vienna UT
- Fall 2010 TA for object-oriented programming  
Prof. Puntigam, Vienna UT



## Academic experience

- 07/2013 – current Graduate research assistant (‘wissenschaftliche Hilfskraft’) for ‘Syntax hessischer Dialekte’ project  
Prof. Lenz, University of Vienna
- 09/2011 – 05/2013 Undergraduate research assistant (‘studentische Hilfskraft’) for ‘Syntax hessischer Dialekte’ project  
Prof. Lenz, University of Vienna

## Languages

- Native German
- Excellent English
- Fluent French, Turkish
- Basic Chinese, Croatian, Persian, Spanish
- Good structural knowledge Klingon, Latin