

Subject Agreement-Dependency of Accusative Case in Turkish

or Jump-starting Grammatical Machinery

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Subject Agreement Dependency of Accusative Case in Turkish or Jump-starting Grammatical Machinery

Subject Congruentie-Afhankelijkheid van Accusatief Casus in het Turks
(met een samenvatting in het Nederlands)

Proefschrift

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door

Cem Keskin

geboren op 17 december 1971
te Izmir, Turkije

Promotoren: Prof. dr. N.F.M. Corver
Prof. dr. M.B.H. Everaert

To the beloved memory of my father Abdullah Keskin (1946-2008)

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Abbreviations

-3	non-third first order suffix
0	epenthetic sound
1	first person
10S	class 10 subject
1A	inflection of verb class 1A
1Inf	first infinitive
1InPl	first person inclusive plural
1pl	first person plural
1plneg	first person plural negative
1sg	first person singular
1sgneg	first person singular negative
1sstats	first person singular stative subject
2	second person
2	class 2 noun (Zulu)
2A	inflection of verb class 2A
2Inf	second infinitive
2S	class 2 subject
2sg	second person singular
2sgneg	second person singular negative
2sobj	second person singular object
2sstatobj	second person singular stative object
3	third first order suffix (Mangarayi)
3	third person (Cuzco Quechua)
3A	inflection of verb class 3A
3B	inflection of verb class 3B
3dat	third person dative object
3Inf	third infinitive
3neg	third person negative
3sg	third person singular
3sg/1sg	third person singular subject/first person singular object
3sg/3pl	third person singular subject/third person plural object
3sg/3sg	third person singular subject/third person singular object
4Inf	fourth infinitive
8	class 8 noun

Abe	abessive
Abil	abilitative
Abl	ablative
Acc	accusative
Ade	adessive
Aff	affirmative
AIC	Accusative Plus Infinitive Construction
All	allative case
ALVH	Abstract Light Verb Hypothesis
Ana	anaphoric
ANom	action nominalization
Aor	aorist
Appl	applicative
Aux	auxiliary
Caus	causative
Cis	cislocative
Cl	classifier
CmpM	compound marker
Cond	conditional
Conn	connective
Cop	copula
Dat	dative
DefArt	definite article
Dim	diminutive
Disj	disjunctive
Distr	distributive
DO	direct object
Ela	elative
EpCop	epistemic copula
Evid	evidential
FAcc	feminine accusative
Fem	feminine
FNom	factive nominalization
Foc	focus
Fut	future
FV	final vowel
Gen	genitive
Ger	gerund
Hgrade	internal change called the h-grade
Habit	habitual
IIIIPast	third past tense suffix
Ill	illative
Imp	imperative
Ind	indicative
Ine	inessive
Inf	infinitive

Infr	inferential
IO	indirect object
Ipfv	imperfective
Irr	irrealis
Iter	iterative
JuSH	Jump-start Hypothesis
Loc	locative
LVC	light verb construction
Masc	masculine
MNom	manner nominalization
NAbs	neuter absolutive
Nec	necessitative
Neg	negative
NegC	negative complement
NegExist	negative existential
NLoc	neuter locative
Nmnl	nominalization
Nmnl	nominalizer (Mangarayi)
Nom	nominative
NSR	non-subject relative clause
Obj	object
Opt	optative
OVS	Object–Verb–Subject
P	passive personal ending
Part	participle
Pass	passive
Past	past
PC	past continuous
Perf	perfect
Pfv	perfective
Phrterm	phrase terminal marker
pl	plural
Poss	possessive
PP	past punctual (Mangarayi)
Pres	present
Prog	progressive
Purp	purposive
Q	question
Recip	reciprocal
Rel	relative clitic
RepPast	reported past
sg	singular
SOV	Subject–Object–Verb
SRel	subject relative clause
SS	same subject switch reference
Sub	subordinate (Mangarayi)

Sub	adverbial subordination (different subject)(Quechua)
Subj	subject
SubjP	subject participle
SVO	Subject–Verb–Object
SW	different subject switch reference
Tr	transitive
Tra	translative
VN	Verbal Noun
VNC	Verbal Noun Construction

It is fitting for us not to be ashamed of acknowledging truth and to assimilate it regardless of which source it comes to us from. There is nothing of higher value than truth itself. It never cheapens, nor does it abase those who seek.

Al-Kindī (c. 801-873 CE)

Introduction

1.1 Case and agreement: Universals and theories

1.1.1 The case–agreement connection

“Structural case is a reflex of agreement” (Chomsky 2001). This assertion reflects the state of the art in case theory in generative linguistics. This research tradition seems to have taken as its launching pad for its conception of how case is licensed on a noun phrase the traditional understanding of finiteness—an understanding ultimately grounded in the study of European languages of Indo-European stock.

Finiteness is traditionally defined as being inflected for person (and number) and tense. In early generative linguistics, the latter ingredient of this notion, namely tense, had been assumed to set the bounds within which many syntactic processes operate. Take for instance (1) which illustrates the limits of noun phrase displacement.

- (1) a. Cem believes [(that) Koma Rewshen is a good rock band].
b. *Koma Rewshen is believed [(that) *e* is a good rock band].
c. It is believed [(that) Koma Rewshen is a good rock band].
d. Koma Rewshen is believed [*e* to be a good rock band].

These examples demonstrate the Tensed-S condition of Chomsky (1973). In (1a), we have a complex sentence with a finite complement clause and an active matrix verb. When the matrix verb is passivized, as in (1b), *Koma Rewshen* cannot be displaced out of the tensed complement clause—from the position indicated by *e*—to the subject position of the matrix clause. Only a pleonastic *it* may fill the subject position of the matrix clause ((1c)). The complement clause has to be non-tensed, for *Koma Rewshen* to be able move to the subject position of the matrix clause, as in (1d).

Case assignment, a phenomenon that has been the center of attention in generative theory, is one process that was, in the earlier days of generative grammar, taken to be parasitic on ‘tensedness’. For instance, Chomsky (1981: 48 ff.) proposes that

nominative case is assigned to the subject of a tensed sentence. Consider the examples in (2).

- (2) a. Cem believes (that) they are a good rock band.
 b. *Cem believed they to be a good rock band.
 c. Cem believed them to be a good rock band.

In a tensed clause, the subject receives nominative case, like *they* in (2a). This is disallowed in a non-tensed clause ((2b)). In these contexts, the only option is for the matrix verb to assign accusative case to the logical subject of the embedded verb, giving rise to an accusative plus infinitive construction, as in (2c).

With George and Kornfilt (1978) (later published as George and Kornfilt 1981), this conception of finiteness began to change however. In this work, George and Kornfilt contest the tense-based notion of finiteness. On the basis of Turkish data, they redefine finiteness as the presence of (subject) agreement. They do this by showing that, in Turkish, it is the presence of agreement, rather than tense, which induces the effects associated with tensed clauses in English. Consider (3) as an illustrative example ((3b) and (3d) modified from George and Kornfilt 1981).

- (3) a. Cem [biz viski-yi iç-ti-k] san-ıyor.
 Cem [we whisky-Acc drink-Past-1pl] believe-Prog.3sg
 ‘Cem believes that we have drunk the whisky.’
 b. *(Biz) [e viski-yi iç-ti-k] san-ıl-ıyor-uz.
 (We) [e whisky-Acc drink-Past-1pl] believe-Pass-Prog.3sg
 Lit. ‘We are believed that have drunk the whisky.’
 c. [Biz viski-yi iç-ti-k] san-ıl-ıyor.
 [We whisky-Acc drink-Past-1pl] believe-Pass-Prog.3sg
 ‘It is believed that we have drunk the whisky.’
 d. (Biz) [e viski-yi iç-ti] san-ıl-ıyor-uz.
 (We) [e whisky-Acc drink-Past] believe-Pass-Prog.3sg
 ‘We are believed to have drunk the whisky.’

In (3a), we have a complex sentence with a finite complement clause and an active matrix verb, analogous to the English sentence in (1a). When the matrix verb is passivized, as in (3b), *biz* ‘we’ cannot be displaced out of the finite complement clause—from the position indicated by *e*—to the subject position of the matrix clause (cf. (1b)). In these instances, the embedded subject must remain in situ and the passive matrix verb bears third person singular pleonastic agreement ((3c), cf. (1c)). For *biz* to be able move to the subject position of the matrix clause, the complement clause has to lack agreement, as in (3d) (cf. (1d)). (Note that, in this example, the embedded verb *iç* ‘drink’ is tensed.)

The effects of agreement seem to extend to case: Clauses without agreement cannot have nominative subjects. Consider (4a).

- (4) a. Cem [biz viski-yi iç-ti-k] san-ıyor.
 Cem [we whisky-Acc drink-Past-1pl] believe-Prog.3sg
 ‘Cem believes that we have drunk the whisky.’

- b. *Cem [biz viski-yi iç-ti] san-iyor.
 Cem [we whisky-Acc drink-Past] believe-Prog.3sg
 Lit. ‘Cem believes we to have drunk the whisky.’
- c. Cem [biz-i viski-yi iç-ti] san-iyor.
 Cem [we-Acc whisky-Acc drink-Past] believe-Prog.3sg
 ‘Cem believes us to have drunk the whisky.’

In a clause with agreement, the subject receives nominative case, like *biz* in (4a) (cf. (2a)). As shown in (4b), this is disallowed in a clause that lacks agreement (cf. (2b)). In this environment, the only option is an accusative plus infinitive construction where *biz* receives accusative case from the matrix verb, as in (4c) (cf. (2c)).

Indeed, Chomsky (1981) had already suspected the role of agreement in case assignment. He conjectures that the role of tense in English may be a special case and that ‘the general property is that nominative is assigned as a concomitant of agreement’ (Chomsky 1981: 172).

Later, in Baker (1985a: 140 ff.) (printed as Baker 1988), we see a more radical approach to the case-agreement connection: There is a functional identity between the two. Baker first notes that case serves to recover from surface forms semantic relationships between a predicate and the arguments and the adjuncts dependent on it. He goes on to point out other systems of overtly representing argument relations. He cites languages where, there is no morphological case marking on noun phrases, and the semantic information as to which noun phrase performs which semantic role is encoded in the agreement morphology on the verb. He writes the following:

Thus, verbal agreement morphology seems to perform the same function for Tuscarora which nominal case morphology performs for Latin and Estonian. In fact, there is a kind of symmetry here: in the one case the relation between the argument and the predicate is represented by morphology determined by the lexical properties of the predicate appearing on the argument (morphological case); in the other it is represented by morphology determined by lexical properties of the argument appearing on the predicate (agreement). . . both [case and agreement] are particular instances of morphological indexing, because both are morphological spell outs of a grammatical relation. (Baker 1985a: 154-155)

By the 1990s, it had become mainstream to view case and agreement in the same light. For instance, Chomsky and Lasnik (1995:119) refer to the above comments of Baker (1985a), incorporate the idea that in some languages agreement plays the same role as case, and subsume agreement and case phenomena under the same heading. Furthermore, Chomsky (1993) and Chomsky (1995: 219 ff.), which set the research agenda for the few years to come, take agreement to be a central process in licensing case, particularly nominative and accusative cases. Within the generative paradigm, agreement continues to have the same level of importance in the latest theoretical accounts of how nominative and accusative cases are assigned (cf. Chomsky 2000, et seq., i.a.).

As these developments took place in generative theory, Nichols (1986)—working in a rather different research tradition—had also noted the link between case and agree-

ment. Her observations are essentially the same as Baker's (1985a). Nichols points out that syntactic relations can be morphologically marked either on the head of a construction or on the dependent of that construction, or on both ((5)).

- (5) a. the man-'s house
 b. az ember ház-a
 the man house-3sg
 'the man's house'
 c. ev-in kapı-sı
 house-Gen door-3sg
 'the door of the house'

In English, the relation of possession is marked on the possessor—the dependent—with genitive case, as in (5a). By contrast, in Hungarian, this relation is marked on the possessee—the head—with a pronominal suffix, as in (5b). Turkish is a mixed case, so to speak, allowing both the head and the dependent to be marked ((5c)). “[T]he syntactic relation is one and the same—possessor noun dependent on possessed noun—but the principles for marking that relation morphologically are diametrically opposed” writes Nichols.

She goes on to show that, in a 60 language sample, languages cluster at the extreme types. In other words, languages tend to be either exclusively head-marking or exclusively dependent-marking, with languages tending to abstain from using mixed marking.

The predicate-argument relation in a clause is among the relations that Nichols (1986) studies. In this instance, there tends to be no morphological case marking on the subject, when there is agreement with the subject. This is typically the case in the well known languages of the Indo-European family, where verbs manifest subject agreement and there is no morphological case marking for subjects. The inverse of this pattern also holds: Languages like Chechen and Japanese which have a morphological marking for subject case lack subject agreement. Similarly for accusative case, direct objects tend not to be morphologically marked for accusative case, when object agreement is manifested on a verbal element in a language, and the inverse also holds.

When placed in the theoretical context within which Nichols proposes her analysis, these findings have important implications for the link between case and agreement:

I assume that the syntax of a sentence is an abstract network of relations which are not configurationally defined, but are best viewed as labelled. They are binary, directed relations between a head and a dependent. Most important, syntactic relations are absolutely independent of the morphology (or other means) that signals them.

Thus, case and agreement are the two sides of a coin. They constitute the two (largely mutually exclusive) means of marking the same relation.

To sum up, there is clearly a correlation between case and agreement. Theoretical accounts of how to handle this correlation range from assuming a quasi-identity between case and agreement to proposing that case assignment relies on the agreement between a grammatical element and a noun phrase.

1.1.2 The multiplicity of case–agreement links

There is another set of observations, and implications that derive from these, that criss-cross the case–agreement domain, and bind case and agreement together in a rather unexpected way. These have not been taken up in generative theory.

First, object agreement seems to be dependent on subject agreement. by I. F. Var-dul' (1969) proposes the implicational universal below (from Plank et al. 2002):

(6) *Universal #293*

In all languages, if the verb agrees with the direct object, it agrees with the subject as well.

In other words, object agreement occurs in a language only if subject agreement also occurs in that language. Several more authors make similar observations, some of which claim that this 'hierarchy' goes further down, comprising indirect object, oblique object and attributive agreement (see for instance Croft 1988).

Indeed, Siewierska (2008) reports that out of 296 languages that show agreement in a sample of 378, only 24 (8%) show agreement exclusively with the object. A vast majority of languages, 266 (90%) to be more specific, either have both subject and object agreement or subject agreement only. 6 (2%) allow either subject or object agreement in a clause, but not both. One would make some headway in explaining these observations, if one assumed that object agreement is somehow dependent on subject agreement.

Second, restricting ourselves to subject and direct object agreement, we derive an important implication from the foregoing: Suppose that direct object agreement is dependent on subject agreement, as the observations above suggest. Furthermore, suppose that accusative case is dependent on direct object agreement, as the theoretical accounts within the generative framework mentioned in section 1.1.1 maintain. Then, it follows that (at least in some languages of the world) accusative case is dependent on subject agreement. I will call this the Subject Agreement–Accusative Case Conjecture ((7)):

(7) *The Subject Agreement–Accusative Case Conjecture*

In some languages of the world, accusative case is dependent on subject agreement.

The Turkish examples in (8) corroborate this idea.

- (8) a. [Timur-un Anadolu-yu mahv-ı] Moğol-lar-ı tatmin
 [Timur-Gen Anatolia-Acc devastation-3sg] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3.g
 'Timur's devastation of Anatolia did not satisfy the Mongols.'
- b. *[Anadolu-yu mahv] Moğol-lar-ı tatmin et-me-di.
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction do-Neg-Past.3.g
 Lit. 'The devastation Anatolia did not satisfy the Mongols.'

The constituents inside brackets in these examples are what I call the verbal noun

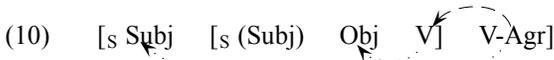
construction. In (8a), the construction has an overt subject marked in genitive case, *Timur*, and a direct object in the accusative, *Anadolu* ‘Anatolia’. The predicate *mahv* ‘devastation’ agrees with *Timur*. In (8b), two things correlate. *Mahv* does not show agreement—and in connection to that there is no overt subject—and accusative case is no longer licit.¹

Thus, accusative case is dependent on subject agreement. This is where there is a theoretical lacuna and this is the connection I aim to demonstrate in this book. There may be more such implications derivable from the agreement hierarchy mentioned above which hold true, but I will restrict myself to this particular one.² In order to explain this dependency, I propose the following hypothesis ((9)):

(9) *The Jump-start Hypothesis (JuSH) (non-technical version)*

In a finite construction, case assignment to each argument is activated by a single source of agreement.

This can be schematized as follows:



This diagram represents a complex sentence with a non-finite complement clause, both clauses labelled ‘S’. The agreement in the main clause activates the embedded verb, as shown by the dashed line. The embedded verb, then, can assign case to the embedded object, as shown by the dotted line. The case of the subject is licensed by the main clause agreement.³

An important issue that I should address is the extent of the applicability of the JuSH within a given language and from a cross-linguistic perspective. In other words, is what could be called the centralized government of case a universal property of human language? In short, I do not claim that to be the case. The preliminary indication that this is the correct stance can be gleaned from the following.

¹Note that a ‘semantic’ case, such as the dative, is not affected by the lack of subject agreement on the predicate in the verbal noun construction ((i)).

- (i) a. [Göçmen-ler-in altın-a hücum-u] tüm Batı-yı kasıp kavur-du.
 [migrant-pl-Gen gold-Dat attack-3sg] all West-Acc ravage-Past.3sg
 ‘The migrants’ rush to gold ravaged the whole West.’
 b. [Altın-a hücum] tüm Batı-yı kasıp kavur-du.
 [gold-Dat attack] all West-Acc ravage-Past.3sg
 ‘The Gold Rush ravaged the whole West.’

The verbal noun construction in (ia) is comparable to that in (8a): It has an overt subject, a direct object, and displays subject agreement. (As shown in section 1.2.4 plural agreement is optional with third person plural animate subjects in Turkish.) Example (ib) contrasts with (8b) however: Lack of agreement morphology does not affect grammaticality. I attribute this to the fact the assignment of dative case in Turkish does not depend on agreement, but the assignment of semantic roles in a clause (see chapter 2 section 2.2.5).

²I will undertake one additional task: In generative theoretical syntax, understood subjects of non-finite clauses are also held to require case. So, I will also show that the kind of dependency that holds for accusative case obtains in licensing case to these elements as well. That discussion, however, takes much less space than the discussion of accusative case assignment.

³“(Subj)” refers to the understood subject of a non-finite sentence which is standardly assumed in generative theory to be syntactically represented. In (10), I ignore the detail of case assignment to this subject.

First, the JuSH is an implementation of the Subject Agreement–Accusative Case Conjecture; and this conjecture is not an assertion that I claim to hold for all languages. When we return to the agreement hierarchy that constitutes the empirical foundation of the Subject Agreement–Accusative Case Conjecture, we see that by I. F. Vardul’s (1969) universal in (6) is stronger than what the observations of Siewierska (2008) would warrant. Not all languages fall under the generalization that object agreement is present in a language only if subject agreement is also present. There is a small number of languages where object agreement is present without there being subject agreement. So, the subject agreement–accusative case dependency cannot cover languages where object agreement seems to be independent of subject agreement.

Furthermore, I do not intend the Subject Agreement–Accusative Case Conjecture as the full explanation of the agreement hierarchy in question. This hierarchy is most likely to have been produced by an interaction of various factors, only one of which is the subject agreement–accusative case dependency. An indication of this is the following: Even though 90% (266) of the languages in Siewierska’s (2008) study conform to my proposal that object agreement is dependent on subject agreement, 27% (73) of these spell out subject agreement without spelling out object agreement, while 73% (193) of these spell out both subject and object agreement. This suggests that other factors must also be involved in producing the cross-linguistic pattern of the distribution of kinds of agreement.

Second, even if the JuSH holds for a given language, the extent to and the way in which the subject agreement–accusative case dependency manifests itself in that language might be highly variable cross-linguistically. In the following chapters, I show that the JuSH has a wide range of application in Turkish, where the effects attributable to the subject agreement–accusative case dependency cover a wide range of construction types. In some other languages, such as German, however, the phenomena that can be explained by recourse to the JuSH seem to be far less pervasive, constrained to well-defined syntactic contexts.

In my opinion, the distribution of phenomena relevant for the JuSH in a given language is determined by the properties of lexical items in that language. Imagine, as an illustrative example, a language where a subset of transitive verbs select direct objects but are, by themselves, unable to assign accusative case to those objects. These verbs have to be activated by another element for accusative case assignment. This is likely to give rise to an empirical pattern explainable by the JuSH. And the extent of the empirical pattern will depend on the distribution of these defective verbs in that language. From this perspective, the variation that one finds in this empirical domain would be entirely in line with an influential proposal about language variation found in Borer (1984) and Chomsky (1995): All syntactic variation can be traced down to the properties of lexical items.

On another note about the extent of the JuSH, the phenomena covered by this hypothesis may be theoretically unexplored, but they do not seem to stand in isolation. In fact, they may well be a member of a larger family of phenomena some of which have been addressed in the generative literature.

One phenomenon that is clearly related is what has been analysed as a dependency between complementizers and agreement (and by extension case assignment). Chomsky (to appear, 2005) proposes that subject agreement in a given finite clause—which

one sees on the auxiliary or the main verb—is actually derived from a (covert or overt) complementizer in that clause. There are two arguments in support of this proposal:

First, there is data suggesting that complementizers have agreement features. In a number of West Germanic languages, the complementizer in a complex sentence shows agreement with the embedded subject. In (11), I give data from West Flemish.

- (11) a. Kpeinzen dan-k (ik) morgen goan.
I-think that-1sg (I) tomorrow go
'I think that I will go tomorrow.'
- b. Kpeinzen da-j (gie) morgen goat.
I-think that-2sg (you) tomorrow go
'I think that you will go tomorrow.'
- c. Kvinden dan die boeken te diere zyn.
I-find that.pl the books too expensive are
'I find those books too expensive.'
- (Haegeman 1992)

Second, when a clause lacks a complementizer (either an overt or a covert one), that clause lacks agreement and, hence, cannot license nominative case on its subject.⁴ This conclusion is based on the behaviour of non-finite clauses that cannot license nominative case on their subjects. Note, first, that neither a raising infinitival ((12)) nor a bare finite sentence (stranding its complementizer) ((13)) are phonetically isolable by clefting.

- (12) a. John seems [*e* to go home].
b. *It is [*e* to go home] that John seems.
- (13) a. John wondered [whether [Mary loves him]].
b. *It is [Mary loves him] that John wondered whether.

The accusative plus infinitive construction, which also lacks subject agreement and disallows nominative case, falls together with the raising construction—as would be expected—in disallowing clefting ((14)).

- (14) a. John heard [her leave].
b. *It is [her leave] that John heard.

Next, note that, in contrast to this, argument control infinitivals ((15)) and finite sentences with complementizers ((16)) can be grouped together on the basis of the same criterion: They are phonetically isolable by means of clefting.⁵

- (15) a. John prefers [to go home].
b. It is [to go home] that John prefers.
- (16) It is [whether Mary loves him] that John wondered.

⁴This argument comes from Chomsky (2001) which advances a preliminary version of the 'agreement feature inheritance' idea.

⁵This does not imply that it should be possible to cleft all finite clauses with complementizers. For instance, the following is bad: *It is that John goes home that it seems. The claim is that only finite clauses with complementizers can be clefted.

Thus, bare finite embedded clauses (i.e. finite embedded clauses without their complementizers) and embedded clauses that cannot license nominative case on their subjects behave alike (see e.g. Rizzi 1982). (Likewise, non-finite clauses which involve argument control and finite embedded clauses with complementizers behave the same.) This suggests that embedded clauses that cannot license nominative case do not have complementizers. This, in turn, suggests that a clause can show agreement and license nominative case only if a (covert or overt) complementizer—which seems to have agreement features (((11)))—is also present. Clearly, not all complementizers are associated with clauses where nominative case is assigned, the complementizer *for* being one example. That is why the generalization is not cast as a biconditional. In other words, the presence of a complementizer does not guarantee nominative case assignment, but there better be a complementizer if nominative case is to be assigned in a clause. Chomsky's (to appear; 2005) proposal is an elegant way of capturing these observations.

Another phenomenon that appears to be related—at least at an intuitive level—is that covered by Burzio's Generalization (see Burzio 1986 for discussion).

(17) *Burzio's Generalization*

A verb assigns accusative case if and only if it assigns an external thematic role.

In other words, in the most typical cases, a verb that does not select an agent subject does not assign accusative case to an object, and conversely. Passive verbs are canonical examples.

It is possible to connect Burzio's Generalization to the JuSH via what has been called the visibility condition (Chomsky 1986b)—a fundamental assumption in generative theorizing. It is given in (18).

(18) *The Visibility Condition*

A chain is visible for theta-marking if it contains a Case position (necessarily, its head).

In other words, an argument must be assigned case, in order for it to be associated with a thematic role. In particular, for an argument to assume the agent role, it needs to be assigned case. In an active sentence, this is done by assigning subject case to the agent. And the assignment of subject case is inextricably linked to subject agreement, as mentioned in section 1.1.1. Thus, Burzio's Generalization indirectly links subject agreement and accusative case assignment. The nature of the implication in Burzio's Generalization is different from the nature of the implication that the JuSH is based on, but the affinity is clear.

Another phenomenon involves what looks like the legitimization of the subject case–subject agreement link via argumenthood in Turkish, discussed in Kornfilt (2006).⁶ Consider (19).

⁶This similarity was pointed out to me by Jaklin Kornfilt.

- (19) a. [Sen-in dün ev-de yemek pişir-diğ-in]-i
 [you-Gen yesterday home-Loc food cook-FNom-2sg]-Acc
 duy-du-m / san-dı-m.
 hear-Past-1sg / believe-Past-1sg
 ‘I heard/believed that you had been/were cooking/cooked/had cooked
 food at home yesterday morning.’
- b. [[Sen(*-in) yemek pişir-diğ-in] için] ben konser-e
 [[2sg(*-Gen) food cook-FNom-2sg] because] I concert-Dat
 gid-ebil-di-m.
 go-Abil-Past-1sg
 ‘Because you cooked, I was able to go to the concert.’

In (19a), subject agreement licenses genitive case on the subject in the complement clause. In (19b), however, genitive case cannot be assigned to the subject of the embedded clause despite the presence of subject–verb agreement. This correlates with the embedded clause in (19a) being an argument and the embedded clause in (19b) an adjunct.

Skipping the technicalities of the account, Kornfilt (2006) proposes the following: In (19b), subject agreement cannot license genitive case, because subject agreement itself has to be licensed. This is not possible in this environment due to the fact that the embedded clause is not an argument. Consequently, nominative case has been assigned to the subject by default. Even though the nature of this licensing relation here seems rather different from that involved in the JuSH, the common feature is that in both accounts the ‘lower’ agreement/case assignment needs to be activated somehow.

In sum, the subject agreement-dependency of accusative case in some languages of the world is the central theme of this book and its theoretical contribution. As an explanation of this dependency, I propose the Jump-start Hypothesis that postulates a unidirectional activation operation between two grammatical elements. These ideas may be about an unexplored phenomenon, but they are by no means unique; similar proposals may be found in the literature concerning other grammatical phenomena.

The data that the bulk of the book focuses on comes from Turkish. It is for this reason that I see it fit to start the book with a chapter that provides the reader with some relevant basic information on Turkish. I undertake this task in section 1.2. Readers who are familiar with this language can safely skip this section. Some of the highlights of the section include the marking of case and agreement in Turkish; because nominalizations constitute the main strategy of embedding clauses in Turkish, I also give basic information about the various kinds of nominalization Turkish has. The contents of the chapter are not restricted to this. Section 1.3, introduces some key concepts used in the book. I will introduce the others as I go along. Readers well-versed in generative syntactic theory can ignore this section. Section 1.4 provides an outline of the book.

1.2 Turkish

Turkish is a member of the proposed Altaic family of languages. The status of the Altaic family is debated. Some linguists believe it exists, encompassing the Turkic, Mongolic, Tungusic, and possibly Japonic languages and Korean. Others believe that the similarities that the member languages share may be attributed to a sprachbund that spans the regions where the member languages are—or their ancestors were—spoken (Johanson 2006).

What is not contested is that Turkish is a Turkic language. The Turkic family is divided up into the Oghuz, Kypchak, Chagatai, Siberian, Oghur and Arghu groups. Turkish is a member of the Oghuz group. The group spans a geographical area that extends from Turkmenistan till the Balkans, and from the northern shores of the Black Sea to the Persian Gulf. It includes Balkan Gagauz Turkish, Gagauz, Turkish, Iraqi Turkmen, North and South Azerbaijani, Salchuq, Aynallu, Qashqay, Khurasan Turkic, Turkmen, Oghuz Uzbek, Afshar, and possibly Crimean Tatar (especially the Yalıboylu variety), Urum and Salar.⁷

1.2.1 Some relevant formal properties

1.2.1.1 Morphology

Turkish is an agglutinating language that exclusively employs suffixation as a means of word formation. Because it has vowel harmony and significant consonant assimilation, each suffix has several allomorphs conditioned by these factors. I exemplify this in (20) with the factive nominal and the first person singular possessive suffixes.

- (20) at-tiğ-im / git-tiğ-im / tut-tuğ-um / ört-tüğ-üm /
 throw-FNom-1sg / go-FNom-1sg / catch-FNom-1sg / cover-FNom-1sg /
 al-diğ-im / gel-diğ-im / duy-duğ-um / gör-düğ-üm
 take-FNom-1sg / come-FNom-1sg / hear-FNom-1sg / see-FNom-1sg
 ‘that I threw/that I went/that I caught/that I covered/that I took/that I came/that
 I heard/that I saw’

In the Turcological tradition, the variable sounds in a suffix are indicated by means of capital letters. So, for instance, the factive nominal suffix is cited as *-DIK*, because all three sounds are variable. Sounds that only appear in certain phonological environments are shown in parentheses. Thus, the first person singular possessive suffix is indicated as *-(I)m* because the suffix vowel only appears after stems ending in a consonant.⁸ This is the convention I will adopt in this book.

⁷Oghuz varieties are very closely related to each other. A comparison of their core vocabulary using a 200-word Swadesh list provides a rough indication of this close affinity: Around 86% of the core vocabularies of Azerbaijani and Turkish are *identical*. In Turkmen, the member of the group which is arguably the most different from Turkish, around 70% of the core vocabulary is identical to Turkish. As a comparison, between Dutch and Afrikaans (two closely related West Germanic languages) around 80% of the core vocabulary is identical. This identity decreases to around 26% between Dutch and German, which are less closely related in the West Germanic group.

⁸(20) does not illustrate variations of the final consonant and vowel elision.

Turkish uses morphological means—as opposed to syntactic constructions as English does—to express verbal categories such as voice, tense and aspect. Compare the Turkish verb form in (21) with its English translation.

- (21) Elçi-ler gör-üş-tür-ül-müş-tü-ler.
 envoy-pl see-Recip-Caus-Pass-Perf-Past-3pl
 ‘The envoys had been made to see each other (i.e. meet).’

While reciprocity, causation and passive are expressed by voice suffixes in Turkish, English uses anaphoric expressions such as *each other* and auxiliaries to encode these.

1.2.1.2 Constituent order

Turkish allows all permutations of sentence constituents, with constituent order seemingly determined by information structure rather than by ‘pure’ syntactic processes. However, SOV is generally accepted to be the basic constituent order. The same head-final order is the unmarked order in non-sentential domains as well.

These properties of Turkish syntax make it difficult and sometimes impossible to use constituent order as a syntactic test. Take for instance a problem brought about by the SOV order. Consider the English sentences in (22).

- (22) a. The cat ate the rat.
 b. The rat was eaten.
 c. *Was eaten the rat.

One clearly sees in these examples that *the rat* changes position with respect to the verb in the passive sentence ((22b)), when compared to the active sentence ((22a)). In a passive, *the rat* cannot occupy the object position ((22c)). This, in conjunction with some auxiliary assumptions, leads some syntacticians to argue that the sole argument of a passive starts off in the object position and moves to the subject position in passives. Now, consider the Turkish equivalents of these sentences ((23)).

- (23) a. Kedi sıçan-ı ye-di.
 cat rat-Acc eat-Past.3sg
 ‘The cat ate the rat.’
 b. Sıçan ye-n-di.
 rat eat-Pass-Past.3sg
 ‘The rat was eaten.’

Here, there is no visible change between the passive and the active sentence in the position that *sıçan* ‘rat’ occupies. This is due to the lack of a reference point in these examples, analogous to the verb in the English examples. One could try departing from the generally held belief and claim SVO is the basic word order in Turkish—putting aside all problems associated with that position, such as the intuitive markedness of SVO—as in (24a), so that one can conclude that *sıçan* is displaced in (23b). But one would fail to make much headway, because (24b) is also possible.

- (24) a. Kedi ye-di sıçan-ı.
 cat eat-Past.3sg rat-Acc
 'The cat ate the rat.'
 b. Ye-n-di sıçan.
 eat-Pass-Past.3sg rat
 'The rat was eaten.'

Despite all this, there are some restrictions imposed on when a given order is grammatical. One can use the configurations these restrictions bring about to reach some theoretical conclusions. Take for instance the issue of specific versus non-specific objects. First note that, in Turkish, bare adverbs have to be left-adjacent to the verb ((25)).⁹

- (25) {*Hızlı} Cem {hızlı} yüz-e-me-z {??hızlı}.
 {*fast} Cem {fast} swim-Abil-Neg-Aor.3sg {??fast}
 'Cem cannot swim fast.'

Now, in the light of this, consider (26).

- (26) a. Cem hızlı yemek ye-di.
 Cem quickly meal eat-Past.3sg
 'Cem quickly had a meal.'
 b. *Cem yemek hızlı ye-di.
 Cem meal quickly eat-Past.3sg
 'Cem quickly had a meal.'
 c. *Cem hızlı yemeğ-i ye-di.
 Cem quickly meal-Acc eat-Past.3sg
 'Cem ate the meal quickly.'
 d. Cem yemeğ-i hızlı ye-di.
 Cem meal-Acc quickly eat-Past.3sg
 'Cem ate the meal quickly.'

In Turkish, non-specific direct objects do not bear any case marking. Furthermore, these have to remain to the right of a bare adverb, left-adjacent to the verb (see *yemek* 'meal' in (26a) versus (26b)). Specific direct objects, by contrast, bear accusative marking and have to remain to the left of a bare adverb (see *yemek* in (26c) versus (26d)). Some syntacticians see the workings of a syntactic displacement process in this: Assuming that the bare adverb demarcates the domain of the verb, a non-specific object, such as *yemek* in (26a), is argued to be in the verbal domain. A specific object, such as *yemek* in (26d) is held to leave the verbal domain.

1.2.2 Marking of case

Turkish grammarians have recognized six cases in Turkish (see for example Kornfilt 1997): nominative, accusative, dative, locative, ablative and genitive. The suffixes used for these cases are as follows ((27)):

⁹Here I use the term 'bare adverb' to refer to adverbs that are indistinguishable from adjectives. For instance, *hızlı* (speed-DerMor) can be used both as an adjective meaning 'fast', or as the adverb 'fast'.

(27)

Nominative	– \emptyset ¹⁰
Accusative	–(y)I
Dative	–(y)A
Locative	–DA
Ablative	–DAn
Genitive	–(n)In

The nominative is reserved for subjects of sentences ((28)-(29)). This is the only case that subjects allow in addition to the genitive, which is assigned to subjects in the nominal domain. The accusative is canonically used to express the function of direct object ((29a)). The dative is typically used with indirect objects, benefactives and goals ((29b)). The locative and the ablative are used for locational arguments and source arguments, respectively ((29c)-(29d)). Finally, the genitive is the case of the subjects of nominalized clauses ((30a)-(30c)) as well as possessors ((30d)). Thus, it is a case exclusively of the nominal domain.

- (28) a. Cem gel-di.
Cem.Nom come-Past.3sg
'Cem came.'
- b. Cem koş-tu.
Cem.Nom run-Past.3sg
'Cem ran.'
- (29) a. Polis siz-i yakala-dı.
police.Nom 2pl-Acc catch-Past.3sg
'The police caught you.'
- b. Bir adam siz-e saldır-dı.
a man.Nom 2pl-Dat attack-Past.3sg
'A man attacked you.'
- c. Kimse bu ev-ler-de otur-ma-dı.
nobody.Nom this house-pl-Loc inhabit-Neg-Past.3sg
'Nobody has inhabited these houses.'
- d. Cem kitab-ı Deniz-den al-dı.
Cem.Nom book-Acc Deniz-Abl take-Past.3sg.
'Cem took the book from Deniz.'
- (30) a. Cem-in gel-me-si
Cem-Gen come-ANom-3sg
'Cem's coming'
- b. Cem-in koş-ma-sı
Cem-Gen run-ANom-3sg
'Cem's running'

¹⁰In the examples, I will indicate 'zero marking' in this manner when I intend to foreground a contrast. Otherwise, I will simply give the relevant forms without using "– \emptyset ".

- c. Polis-in siz-i yakala-ma-sı
 police-Gen 2pl-Acc catch-ANom-3sg
 ‘The police’s catching you’
- d. Cem-in ev-i
 Cem-Gen house-3sg
 ‘Cem’s house’

These examples involve verbs as assigners of object cases. That is only part of the picture. Adjectives, nouns and postpositions also take case-marked complements in Turkish. Adjectives and nouns assign dative, locative and ablative, whereas postpositions are restricted to the dative and ablative.¹¹ In (31)-(33) are illustrative examples.

- (31) a. [övgü-ye layık] bir kişi
 [praise-Dat worthy] a person
 ‘a person worthy of praise’
- b. [ev-im-de gizli] belge-ler
 [house-1sg-Loc hidden] document-pl
 ‘documents hidden in my house’
- c. [iş-in-den memnun] bir kişi
 [work-3sg-Abl pleased] a person
 ‘a person pleased with his/her work’
- (32) a. altın-a hücum
 gold-Dat attack
 ‘the gold rush’
- b. hata-lar-ın-da ısrar
 mistake-pl-2sg-Loc insistence
 ‘insistence on your mistakes’
- c. parti-den istifa-lar
 party-Abl resignation-pl
 ‘resignations from the party’
- (33) a. ev-e doğru
 house-Dat towards
 ‘towards the house’
- b. dün-den beri
 yesterday-Abl since
 ‘since yesterday’

In addition to these, there are some adjectives and postpositions that take bare complements ((34)).¹² These postpositions take genitive pronominal objects.

¹¹Here, I ignore constructions which are functionally adpositional but structurally nominal, such as that in (i).

(i) ev-in arka-sın-da
 house-Gen back-3sg-Loc
 ‘behind the house’ (Lit. ‘at the back of the house’)

¹²I do not believe that these bare complements have nominative case. I will discuss this issue, along with the issue of genitive pronominal objects of postpositions in chapter 2 section 2.3.2.2.

- (34) a. gaz dolu
gas full
'full of gas'
b. bilim için
science for
'for science'
c. sen-in için
2sg-Gen for
'for you'

1.2.3 Nominalizations

A nominalization can be defined as a nominal expression derived from another category which is not a projection of a noun, particularly from a verb phrase (see e.g. Chomsky 1970). In (35) are some examples from English, where nominalizations are in square brackets:

- (35) a. [Cem's leaving] upset us.
b. [Noah's building a spaceship] saved millions.

This 'mixed' derivation has the consequence that, externally, nominalizations have nominal properties, and internally, they are sentential. I will exemplify these properties below.

1.2.3.1 The canonical repertoire

Turkish employs nominalization as the most common embedding strategy. It has several different types of nominalization with different morphological, syntactic and semantic properties. I give some examples in (36), with rough translations when possible.

- (36) a. [Siz-in gitar-ı çal-dığ-ınız]-ı duy-du-k.
[2pl-Gen guitar-Acc play-FNom-2pl]-Acc hear-Past-1pl
'We heard your playing the guitar.' (Factive Nominalization)
b. [Siz-in gitar-ı çal-ma-nız]-ı ist-iyor-uz.
[2pl-Gen guitar-Acc play-ANom-2pl]-Acc want-Prog-1pl
Lit. 'We want your playing the guitar.'
'We want you to play the guitar.' (Action Nominalization)
c. [Siz-in gitar-ı çal-ış-ınız]-ı beğen-di-k.
[2pl-Gen guitar-Acc play-MNom-2pl]-Acc like-Past-1pl
'We liked Cem's (way of) playing the guitar.' (Manner Nominalization)
d. Cem [bu gitar-ı çal-mağ]-ı ist-i-yor.
Cem [this guitar-Acc play-Inf]-Acc want-Prog.3sg
'Cem wants to play this guitar.' (Infinitive)

Let us now study briefly some properties of these nominalizations. The first noteworthy feature of these examples is the nominalization morphemes: *-DIK* (Factive Nominalization), *-mA* (Action Nominalization), *-(y)Iş* (Manner Nominalization) and *-mAK* (Infinitive). Pre-theoretically speaking, these morphemes attach to verbs and

change them into nouns. This is why nominalizations typically have case-marked objects (as a reflex of their verbal properties), like the accusative-marked *gitar* ‘guitar’ in (36), and are also themselves case-marked, in the accusative, dative or ablative if they are objects, in the nominative or genitive if they are subjects (as a reflex of their nominal properties).¹³ One can see another sign of this verb to noun transformation in the next set of properties of nominalizations: Note that in examples (36a)-(36c), all of the subjects of the nominalizations are in the genitive. This is the standard case that subjects/possessors of nouns are assigned. (37) exemplifies a possessor.

- (37) Cem-in kitab-ı
 Cem-Gen book-3sg
 ‘Cem’s book’

Next, note that the noun in (37) agrees with its possessor. Likewise, all of the subjects of the nominalizations in (36) agree with the nominalized predicate in person and number. This is called nominal agreement. Each of the nominalizations in (36a)-(36c) has two variants: one with agreement features (and an overt subject), and another without. As an illustrative example, compare the action nominalization in (36b), with that in (38).

- (38) Cem [kitab-ı oku-ma]-yı düşün-üyor.
 Cem [book-Acc read-ANom]-Acc think-Prog.3sg
 ‘Cem is thinking of reading the book.’

The infinitive is exceptional in this respect, in that it is never inflected for person and number and never has an overt subject. As finiteness is defined in Turkish with respect to subject agreement (see chapter 2 section 2.1.2 and 2.2.2), I will refer to a nominalization with agreement (cf. (36b)) as a finite nominal and a nominalization without agreement (cf. (38)) as a non-finite nominal.

I will now turn to some of the semantic properties of Turkish nominalizations. As one might suspect from this abundance of nominalization forms, not all nominalizations express the same thing. Vendler (1967, 1970) classifies English nominalizations into propositions, facts and events. Events can last, be observed or occur, for example, whereas facts can surprise, be known or mentioned, and propositions can be unlikely, asserted or be believed. He also shows that the meaning category of a nominalization is at least partly determined by its form. Turkish nominalizations also fall into different classes where the meaning and the form are linked, albeit loosely. Events may be denoted by action and manner nominals ((39)), whereas facts and propositions are denoted by action and factive nominals ((40)-(41)).

¹³From the perspective of European languages of the Indo-European family, the possibility of having accusative-marked objects in a nominalization may be surprising. For instance in English, nominalizations typically have prepositional phrase objects, as in *the destruction of the city*. In that sense, Turkish nominalizations seem more like English gerunds (rather than English nominalizations) which also combine verbal and nominal properties. From a cross-linguistic perspective, nominalizations present a very heterogeneous picture, however, where one sees different ways of combining sentential and nominal features, with different degrees of ‘verbiness’ and ‘nouniness’ that can be attested. From this perspective, the presence of accusative case in a nominalization is by no means exceptional. I refer the reader to Koptjevskaja-Tamm (1993) for an extensive survey of nominalizations across the world’s languages.

- (39) a. Ehliyet al-ma-m ay-lar sür-dü.
driver's license get-ANom-1sg month-pl last-Past.3sg
'It took me months to get a driver's license.'
- b. Gitar çal-ış-ın-ı seyret-ti-k.
guitar play-MNom-2sg-Acc watch-Past-1pl
'We watched the way you played the guitar.'
- (40) a. Ehliyet al-ma-n ben-i şaşır-t-ti.
driver's license get-ANom-2sg 1sg-Acc surprise-Caus-Past.3sg
'It surprised me that you got an driver's license.'
- b. Ehliyet al-diğ-in-ı bil-iyor-um.
driver's license get-FNom-2sg-Acc know-Prog-1sg
'I know that you got a driver's license.'
- (41) a. Ehliyet al-ma-n pek olası değil.
driver's license get-ANom-2sg very probable not.3sg
'It is not very probable that you will get a driver's license.'
- b. Ehliyet al-diğ-in-a inan-m-iyor-um.
driver's license get-FNom-2sg-Dat believe-Neg-Prog-1sg
'I do not believe that you got a driver's license.'

1.2.3.2 The verbal noun construction

There is another kind of nominal construction in Turkish which plays an important role in this book. It constitutes the centerpiece of chapter 3, and will be taken up in greater detail there. I call it the verbal noun construction (VNC). In (42), the nominals in brackets are examples of this construction.

- (42) a. [Siz-in Rohan-ı istila-nız] biz-i korkut-tu.
[2pl-Gen Rohan-Acc invasion-2pl] we-Acc scare-Past.3sg
'Your invasion of Rohan scared us.'
- b. [Ok-un hedef-e isabet-i] bir mucize-ydi.
[arrow-Gen target-Dat hit-3sg] a miracle-Past.3sg
'The arrow's hitting the target was a miracle.'
- c. [Hata-lar-ın-da ısrar-ın] sen-i mahv ed-ecek.
[mistake-pl-2sg-Loc insistence-2sg] 2sg-Acc devastation do-Fut.3sg
'Your insistence on your mistakes will devastate you.'
- d. [Muhafazakâr kanad-ın parti-den istifa-sı] üye
[conservative wing-Gen party-Abl resignation-3sg] member
sayı-sın-ı iyice azalt-tı.
number-CmpM-Acc really decrease-Past.3sg
'The resignation of the conservative wing from the party really decreased the number of members.'

The VNC is the black sheep in the flock in that it is a nominalization that is actually not a nominalization in the sense defined above: It is a noun phrase that appears to be the 'pure' projection of the lexical category noun with no sign of being derived from a verb root, like the nominalizations introduced above. For instance, the VNC predicate,

the verbal noun (VN), does not bear a nominalizing affix comparable to the *-tion* suffix that the English counterparts of the VNs in (42) bear. In fact, in the VNC, a VN may bear no other suffix than the agreement marker. There are also no verbal bases that VNs are derived from, such as *istila* ‘invade’ for *istila* ‘invasion’ ((43)).

- (43) *Siz Rohan-ı istila-dı-nız.
 2pl Rohan-Acc invade-Past-2pl
 ‘You invaded Rohan.’

Other properties that characterize the VNC as nominal are readily visible in the sentences in (42): The subject is genitive-marked; the VNC itself is functioning as a subject; and the predicates *istila* ‘invasion’ and *isabet* ‘hit’ bear nominal agreement morphology.

Note, though, that the VNC does have one very conspicuous feature that is usually associated with verbal structures: accusative-marked objects. Furthermore, there is another construction with sentential character that the VNC is clearly akin to and that is what I call the Turkish light verb construction (LVC). Compare (42a) with (44).

- (44) Siz Rohan-ı istila et-ti-niz.
 2pl.Nom Rohan-Acc invasion do-Past-2pl
 ‘You invaded the country.’

An LVC is a structure with a verb with little or no semantic content of its own which only in combination with a (usually indefinite) direct object noun or noun phrase, which itself expresses a verbal meaning (i.e. a predicative complement), qualifies as a predicate (cf. Catell 1984). Note that this definition is not ‘derivational’: It implies nothing as to whether either one of the VNC or the LVC is derived from the other. Impressionistically speaking, the LVC predicate looks to me as if it has been derived by compounding a VN and the light verb *et* ‘do’ and the VNC predicate is simply underived, as mentioned above. I will take up this issue in considerable detail in chapter 3.

1.2.4 Marking of agreement

Agreement in Turkish takes the form of predicate–subject and possessee–possessor agreement. Other kinds of agreement (or additionally, concord, depending on one’s theoretical outlook), such as noun–attributive adjective, object–adposition, object–predicate agreement, etc. do not exist. Predicates agree in person and number with their nominative or genitive subjects, depending on whether the domain is a sentence or a nominalization. Possesseees agree with their genitive possessors again in person and number.

There are several different agreement paradigms, the main distinction being between sentential versus nominal agreement. Sentential agreement paradigms come in three varieties: the indicative mood paradigm, the optative mood paradigm and the imperative mood paradigm. I will only focus on the indicative mood here.

The indicative paradigm has two sub-paradigms ((45)). They are commonly referred to as the Z-paradigm and the K-paradigm, after the consonants of the first per-

son plural markers, this being perceived as the most conspicuous difference between the two sub-paradigms.

(45)

	The Z-paradigm	The K-paradigm
1sg	-Im	-m
2sg	-sIn	-n
3sg	-∅	-∅
1pl	-Iz	-k
2pl	-sInIz	-nIz
3pl	-lAr	-lAr

The Z-paradigm has the widest distribution, occurring with all tensed verb forms except in the simple past (Kornfilt 1997: 382-384). It is also found on copular forms. The K-paradigm is restricted to simple past tense and the conditional mood.

The nominal agreement paradigm, on the other hand, is found on possessives or predicates of nominalizations. It is given in (46):

(46)

1sg	-(I)m
2sg	-(I)n
3sg	-(s)I(n)
1pl	-(I)mIz
2pl	-(I)nIz
3pl	-lArI(n)

In (47) are some illustrative examples of this paradigm which involve nominalizations.

- (47)
- Kazan-dığ-ım-ı söyle-di.
win-FNom-1sg-Acc say-Past.3sg
Lit. 'She said my winning.',
'She said that I won.'
 - Delir-diğ-in-i düşün-üyor-um.
go mad-FNom-2sg-Acc think-Prog-1sg
Lit. 'I think your going mad.',
'I think that you have gone mad.'
 - Kaybol-ma-sın-a üzül-dü-m.
get lost-ANom-3sg-Dat be sorry-Past-1sg
'I am sorry about his getting lost.'
 - Gel-iş-imiz muhteşem-di.
come-MNom-1pl magnificent-Past.3sg
Lit. 'Our coming was magnificent',
'It was magnificent the way we came.'

- e. Düşün-me-niz-i ist-iyor-um.
 think-ANom-2pl-Acc want-Prog-1sg
 Lit. ‘I want your thinking.’,
 ‘I want you to think.’
- f. Dön-me-lerin-e sevin-di-m.
 return-ANom-3pl-Dat rejoice-Past-1sg
 Lit. ‘I am happy about their returning.’,
 ‘I am happy that they returned.’

There is an interesting detail concerning third person plural agreement. Consider (48).

- (48) a. Elçi-ler gel-di{-Ø/-ler}.
 envoy-pl come-Past{-3sg/-3pl}
 ‘The envoys have come.’
- b. Belge-ler gel-di{-Ø/*-ler}.
 document-pl come-Past{-3sg/*-3pl}
 ‘The documents have come.’

When the subject is third person plural animate (and especially human), number agreement is optional. In other words, third person singular, as well as third person plural agreement may obtain in these instances ((48a)). When the subject is third person plural inanimate, on the other hand, third person singular agreement is the preferred option ((48b)). When the sentence has a third person plural ‘understood’ subject, third person plural marking is obligatory. These rules hold for nominal agreement as well.

1.3 Terms and definitions

In this section, I will present some of the terms and assumptions that are central to this book. I adopt the generative linguistic framework (Chomsky 1957, 1981, 1995, 2000, i.a.). Hence, I define the terminology that I use and cast my analyses using the network of assumptions adopted by that approach.

1.3.1 Syntactic categories

One of the central tenets of the generative tradition is that there is a tight link between morphology and syntax (see e.g. Baker 1985b). Each morpheme in a Turkish verb form, like *gör-ül-dü-m* (see-Pass-Past-1sg) ‘I was seen’, for instance, is matched by a syntactic element—say, V(erb), Voice, T(ense), Agr(eement). There may be different ways of conceiving of each of these syntactic objects and notational variants of referring to each in a syntactic representation. For instance, ‘I’ (for ‘Inflection’) may be preferred over T, when referring to the syntactic element that represents tense. In (49), I indicate the most important syntactic categories I will make use of in this work, with the morphological and lexical elements they correspond to.

(49)

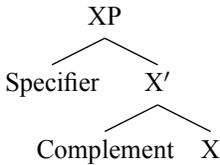
C	: Complementizers
T	: Tense affixes or auxiliaries
v	: Voice markers
D	: Determiners or nominal agreement markers
Nmnl	: Nominalization markers
V	: Lexical verbs
N	: Nouns
A	: Adjectives
P	: Adpositions

Syntactic categories fall into various classes defined on the basis of the various properties these syntactic categories have. One relevant distinction is between lexical versus functional categories. In (49), C, T, v, D and Nmnl are functional, V and N are lexical categories. The most important difference between these two categories from the perspective of this work is that functional categories may agree whereas lexical categories may not. This implies, for instance, that, in the case of subject-verb agreement, it is not a lexical verb that agrees with the subject, but rather a functional head associated with the verb, such as T.

1.3.2 Syntactic structure and syntactic relations

The most conspicuous feature of syntactic organization and its central unit is what is called a phrase. A phrase typically consists of a head, a specifier and a complement arranged in an X-bar schema. I give this schema in (50), with the head indicated by 'X'.¹⁴

(50)



A phrase is said to be a projection of its head, and is built up of various levels of projection: the zero (X or X^0), the intermediate (X') and the maximal (XP) projections, organized in a hierarchical fashion. Various kinds of elements, phrases as well as single items, may function as specifier and complement to a given phrase.

Various relations hold between elements in a syntactic representation. In (50), for instance, the specifier and X' are sisters. In fact, a specifier is defined as the sister of X' . The complement, in its turn, is the sister of X^0 . XP is the mother of the specifier and X' , and X' is the mother of the complement and X^0 . The mother node dominates the sisters. One very important relation on a syntactic representation is c-command (Reinhart 1976), given in (51).

¹⁴This diagram represents the head-final order of phrasal constituents in Turkish (see section 1.2.1.2). The head-initial constituent order of English would be represented in such a diagram by placing the head to the left of the complement.

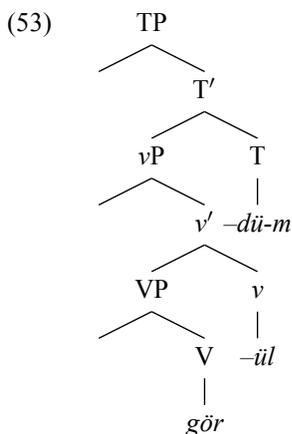
- (51) Node x c-commands node y if and only if,
- $x \neq y$,
 - x does not dominate y and y does not dominate x , and
 - every z that dominates x also dominates y .

To simplify, a given element c-commands its sister and what lies under its sister. In (50), X c-commands the complement and, if the complement is another phrase, what lies inside the complement.

The understanding of the hierarchical organization in syntax has been heavily influenced by a very popular proposal by Baker (1985b). Since that work, suffixes are assumed to occupy positions in syntactic representation in line with the Mirror Principle proposed there, given in (52).

- (52) *The Mirror Principle*
Morphological derivations must directly reflect syntactic derivations (and vice versa).

Thus, the Turkish verb form given above will correspond to a syntactic representation along the lines of (53), called a tree diagram.

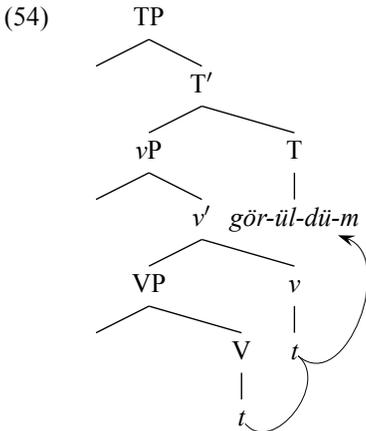


Notice that one element is missing in this representation: the syntactic element that I claimed the agreement marker corresponds to (i.e. Agr). This is because it seems to require special treatment. Let me explain: Cinque (1999) is another major work that explores the link between sequence of morphological markers and syntactic structure. In this work, Cinque takes the Mirror Principle as a reference point and compares the sequences of suffixes (and adverbs) in several languages. He finds striking cross-linguistic parallels in the sequence of verbal suffixes. On the basis of this, he proposes an order of syntactic projections that he claims to be universal. But, despite the parallels, there are two kinds of suffixes which do not follow the pattern. These are agreement and negation markers, which can be found in various different morphological slots. Cinque does not believe that this seeming glitch constitutes a counter-argument for his proposal, however. He claims that these problematic morphemes do not cor-

respond to any specific syntactic heads and proposes that they may attach to various different functional heads. Agreement and negation markers are then different from, say, tense suffixes which occupy only the T head in syntax.

1.3.3 Movement, case and θ -marking

A very important idea in the generative framework is that elements in a syntactic structure can be displaced. On the tree in (53), for example, the morphemes that constitute the verb form are assumed to move to adjoin to each other, as in (54). As they do so they leave behind what is called a trace (*t*).¹⁵



This type of movement is referred to as head movement and believed to be a central process in syntax. It is at work not only in the construction of verb forms as in (54), but also in constructions like *yes-no* questions which involve subject-auxiliary inversion ((55)).

- (55) a. Al-Bīrūnī was a polymath.
 b. Was Al-Bīrūnī *t* a polymath?

Head movement is typically not readily observable in head-final languages like Turkish, but are quite easy to see in languages such as English.

Another very important movement operation is the movement of arguments. Take for instance the case of the subject. Consider the nominalizations in (56).

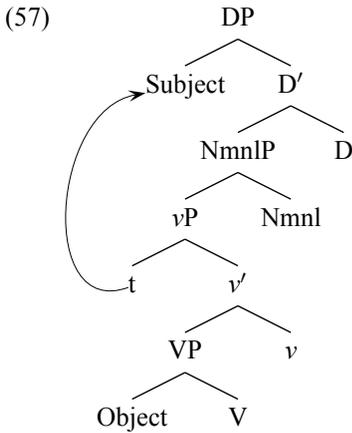
¹⁵An alternative to the trace theory of movement is the copy theory of movement. This latter approach proposes that what is left behind by the displaced element is an invisible copy of itself. Under this approach, the movement in (54) would be roughly as in (i).

- (i) [TP ... [vP ... [VP ... ~~gör~~] ~~gör-ül~~] gör-ül-dü-m]

I do not think the choice of either theory has important implications for this work. I will simply use trace theory here.

- (56) a. Cem-i arı sok-ma-sı
 Cem-Acc bee sting-ANom-3sg
 ‘a bee’s stinging Cem’
 b. arı-nın Cem-i sok-ma-sı
 bee-Gen Cem-Acc sting-ANom-3sg
 ‘the bee’s stinging Cem’

Under the assumption that the syntactic structure of these constructions are hierarchically organized, it seem as though *arı* ‘bee’ may occupy a lower ((56a)) and a higher ((56b)) position in syntax. In fact, it is commonly held that the subject enters the derivation in the specifier position of the *v*P and raises or moves to the specifier of the TP. (Incidentally, note that the object is in the complement position of the VP.) This movement operation is represented as follows on a tree ((57)).¹⁶



Movement operations are a trademark of the generative tradition and are believed to be extremely pervasive. They are classified into various categories on the basis of what moves and where it moves to, etc. (I will address these different kinds of movement in due course.)

Another thing that one notices when one compares (56a) and (56b) is that the subject bears no case marking when it is in the lower position but bears genitive marking in the higher. It has been widely observed in generative linguistics that displacement of noun phrases is often related to case assignment. There have been various different theoretical implementations of this observation, but the common denominator of these has been the following: An argument noun phrase enters the derivation in an argument position, such as specifier of the *v*P. It receives what is called a θ -role in that position. Subsequently, the noun phrase raises for case reasons. (I will return to the details of this story in chapter 2.)

Θ -roles themselves are assumed to express the semantic relationship of argument to its predicate. Various different θ -roles are postulated. The most prominent ones being agent and theme or patient. An argument that has the agent role is one that designates

¹⁶There are some details that I leave unexplained here, notably, the movement of the object and the structure of the nominalization. I will return to these in the coming chapters.

an entity which is the cause of and has control over the action denoted by the predicate. An argument has the theme role, by contrast, if the action expressed by the verb is directed at or affects the referent of the argument (see e.g. Jackendoff 1990).

1.4 The outline of the book

The remainder of the book is organized as follows.

In chapter 2, I aim to demonstrate the empirical foundations of the central thesis of George and Kornfilt (1981) using Turkish data. I show that there are two classes of case, namely structural and inherent. The former is licensed through an agreement relation that holds between a functional head and a noun phrase being assigned case. The latter is dependent on θ -role assignment, rather than agreement. I also present a brief account of how these licensing dependencies are formalized in generative grammar.

In chapter 3, I argue that a ‘generalized’ version of the George and Kornfilt Thesis must hold. I do this through a discussion of the verbal noun construction (VNC) presented above in (8)-(i). I first discuss at great length and eventually rule out a possible explanation of the availability of accusative case in this nominal environment that I call the Abstract Light Verb Hypothesis. This hypothesis involves postulating a verbal projection in the VNC that can agree with the object and assign it accusative case. Next, I show that in the VNC the functional head that hosts the subject agreement features is responsible for both genitive case and accusative case. I do this by observing that accusative case is illicit in VNCs without subject agreement. I call this the non-finiteness effect. This observation is the empirical foundation of the Jump-start Hypothesis (JuSH) that I have briefly discussed above ((9)). I propose the Jump-start operation as an implementation of the JuSH. This operation produces a duplicate of the unvalued agreement features found on a functional head and places that duplicate on another functional head. These two distinct feature sets are then used to license structural case on two arguments through agreement. I also introduce some constraints that regulate the functioning of Jump-start. I end this chapter with a discussion of case assignment in English gerunds. I show that these constructions also constitute a venue of application for the JuSH.

Chapter 4 aims to show that the JuSH is not suited to just explaining the case assignment patterns in the VNC, but can also be invoked to explain several other phenomena in Turkish grammar. I first demonstrate the dependence of the accusative case assignment capability of the verb in embedded clauses on the local subject agreement or subject agreement in the matrix clause. The data that I analyse come from various offshoots of nominalization, restructuring infinitival complements, and the distribution of non-finite subject clauses in Turkmen. The offshoots of nominalization present a pattern that can be subsumed under the non-finiteness effect. Restructuring infinitival complements disallow accusative case assignment when the matrix verb is passivized—the passivization effect. This suggests that accusative case assignment in the embedded clause is dependent on a functional category in the matrix clause. I show that that functional category is ultimately the source of subject agreement features in that syntactic domain. As for the distribution of non-finite subject clauses in Turkmen, this pattern is directly affected by accusative case assignment in the subject clause.

This points to an inter-clausal case dependency. I term the restricted distribution of non-finite subject clauses sensitivity effects. Next, I focus on case assignment to the subject and show that the functional category that is responsible for subject case in a particular syntactic domain is also dependent on a higher functional category for case assignment. The constructions I discuss are non-finite subject clauses in Turkish and non-restructuring infinitival complements. Non-finite subject clauses in Turkish have a distribution which is comparable to the distribution of non-finite subject clauses in Turkmen, and consequently, which can be subsumed under sensitivity effects. So, I claim that this pattern in Turkish is linked to case assignment as in Turkmen. The difference is that in Turkish what determines the distribution of subject clauses is case assignment to the subject rather than the object. Non-restructuring infinitival complements show a variant of the passivization effect that restructuring infinitives show, with the difference being again the involvement of case assignment to the subject rather than the object. In the course of the discussion, I implement my observations as additional constraints on the Jump-start operation.

In chapter 5, I take a look at the languages of the world to try to show that the phenomena that could be subsumed under the JuSH are not an exotic selection reserved for Turkish and the closely related languages of the Turkic family, but are far more widespread than one might think. For this purpose, I focus mostly on syntactic structures where I believe the effects of Jump-start are readily observable—if Jump-start is at work in the given language—such as clauses without subject agreement morphology that contain direct objects, transitive infinitives being a prime example. Because of the fact that morphology constitutes a reference point in this analysis, I study languages that morphologically mark agreement with the subject and/or have morphological accusative marking. These are German, Japanese, Finnish, Kolyma Yukaghir, Cuzco Quechua, Mangarayi and Koasati.

The George and Kornfilt Thesis

A noun phrase is assigned the structural case it bears through agreement with a functional head. This thesis, adopted in its essence from George and Kornfilt (1981) and referred to as the George and Kornfilt Thesis, has been assumed as a basic premise in the framework formulated in the recent works of Chomsky (Chomsky 2000, 2001, 2004, to appear, 2005) to provide an account of structural case assignment, particularly nominative and accusative cases. In this chapter, I aim to demonstrate the empirical foundations of this thesis using Turkish data. In section 2.1, using various syntactic tests, I clarify the term structural case and distinguish it from inherent case. These tests include passivization, the accusative plus infinitive construction, the raising construction, specificity contrasts and case assignment by adjectives. In section 2.2, I turn to the link between agreement and structural case. After I have introduced George and Kornfilt (1981) in section 2.2.1, I show in sections 2.2.2-2.2.4 that structural case is licensed through an agreement relation that holds between a functional head and a noun phrase being assigned case: Nominative is licensed through agreement with a T head. Genitive case relies on agreement with a D head, and accusative with a *v* head.¹ In section 2.2.5, I turn to the licensing of inherent case and point out that it is dependent on θ -role assignment, rather than agreement. Section 2.3 gives a brief account of how these licensing dependencies are formalized in generative grammar. Section 2.3.1 presents the standard theory, and in section 2.3.2, I introduce ideas from Baker (2008) which revises this account. It is in this section that I address the question of which case arguments morphologically unmarked for case bear.

2.1 Structural versus inherent cases

Not all cases are created the same. Generative linguistic literature on case makes a distinction between structural case and inherent case (see Chomsky 1981, 1986b, i.a.).

¹Most of the technical terms used in this chapter have been defined in chapter 2.

As the term suggests, structural cases depend on structural configurations and relations for their licensing. Inherent cases, by contrast, are linked to the semantic role, or θ -role, of the arguments bearing those cases and not to structural configurations and relations.

Before I enter the details of this issue, let me give a short demonstration of this distinction. Take, for instance, accusative case, which is classified as a structural case in Turkish ((1)).

- (1) a. Halk Mao-yu çok sev-iyor.
 people Mao-Acc much love-Prog.3sg
 ‘The people love Mao very much.’
 b. Mao (halk tarafından) çok sev-il-iyor.
 Mao (people by) much love-Pass-Prog.3sg
 ‘Mao is loved very much (by the people).’

The object *Mao* in (1a) is a theme argument, and it bears accusative case. In (1b), it becomes the subject of the passive sentence, and the case it bears changes to nominative. The θ -role that it bears is still theme. Thus, the change of the object relation to the subject relation for this argument, results in a change in the case it bears.

Compare this to the behaviour of dative case, which is classified as an inherent case ((2)).

- (2) a. Bir adam siz-e saldır-dı.
 a man 2pl-Dat attack-Past.3sg
 ‘A man attacked you.’
 b. Siz-e (bir adam tarafından) saldır-il-dı.
 2pl-Dat (a man by) attack-Pass-Past.3sg
 ‘Your were attacked (by a man).’

In (2a), the goal argument *siz* ‘you’ bears dative case. In (2b), the same argument still bears dative despite the fact that it is the sole argument of a passive sentence. The θ -role that it bears is still goal. Thus, there is a strict link between the case of this argument and its θ -role. This does not go to say that there is a one-to-one correspondence between inherent cases and θ -roles (see e.g. Maling 2001). For instance, one can observe dative on causees, which are not goals in any discernible way. Or, for instance, one can also see ablative case, which all source arguments bear, on the standard of comparison in adjectival comparison. The point here is that the association between the inherent case that a noun phrase bears and the θ -role that that noun phrase bears is constant throughout a given derivation.

Then, the distinction between inherent and structural cases is based on the different behavior, with respect to certain syntactic phenomena, of arguments marked with different cases. These phenomena are used as diagnostic tests to categorize a given case. I illustrate this in sections 2.1.1-2.1.5.

2.1.1 Passivization

One very commonly used test to distinguish between structural and inherent cases is passivization (see e.g. Haider 1985, Woolford 2006, i.a.). It can be used directly to

tease apart different types of object case and can be indirectly employed to that end for subject cases. Arguments marked with certain cases preserve their case marking under passivization. These are said to have inherent case. By contrast, whereas arguments marked with certain other cases receive a different case when the sentence they are found in is passivized. These are said to have structural case.

Among the object cases in Turkish, arguments marked with dative, locative and ablative cases preserve their case marking in passivization, whereas arguments marked with accusative do not (see also Uzun 2000: 196-199 and Sezer 1991: 46-49, for discussion to the effect that the Turkish dative, locative and ablative are inherent). Below, I demonstrate this with dative and accusative cases. Compare (3) with (4) and (5).

- (3) a. Bir adam siz {-e/*-Ø} saldır-dı.
A man 2pl{-Dat/*-Nom} attack-Past.3sg
'A man attacked you.'
- b. Siz {-e/*-Ø} (bir adam tarafından) saldır-ıl-dı{-Ø/*-nız}.
2pl{-Dat/*-Nom} (a man by) attack-Pass-Past{-3sg/*-2pl}
'You were attacked (by a man).'
- (4) a. Polis siz {-i/*-Ø} yakala-dı.
police 2pl{-Acc/*-Nom} catch-Past.3sg
'The police caught you.'
- b. Siz {-Ø/*-i} (polis tarafından) yakala-n-dı-nız
2pl{-Nom/*-Acc} (police by) catch-Pass-Past-2pl
'You were caught (by the police).'
- (5) a. Polis-in siz {-i/*-in} yakala-ma-sı
police-Gen 2pl{-Acc/*-Gen} catch-ANom-3sg
'The police's catching you'
- b. Siz {-in/*-i} (polis tarafından) yakala-n-ma-nız
2pl{-Gen/*-Acc} (police by) catch-Pass-ANom-2pl
'Your being caught (by the police)'

In (3b), we have a passive sentence. This can be evidenced by the passive suffix on the verb and the fact that the agent may only be expressed in an optional *by*-phrase. Crucially, the sole argument of the verb, *siz* 'you', cannot receive nominative case. It bears the same case marking it would have, were the sentences active, as in (3a). By contrast, the theme arguments in the passive structures in (4b) and (5b) are marked in nominative and genitive cases, respectively; these arguments would have been marked in accusative were these sentences transitive, as in (4a) and (5a).

Now, note two important observations in these examples. First, the object arguments have the same θ -roles across active-passive clause pairs, i.e. goal for *siz* in (3), theme for again *siz* in (4) and (5). In (3), there is a strict correspondence between this θ -role and the case that the argument bears. This correspondence is the fundamental property of inherent cases. Second, note that this correspondence breaks down in (4) and (5). Thus, the change of the object relation to the subject relation for *siz*, is concomitant with a change in the case it bears. This is a trademark of structural cases.²

²Note, incidentally, that the verbs may not agree with their sole arguments in (3) but have to in (4). (This contrast will play a crucial role in our account of the licensing of these two kinds of case.) This suggests that,

As for the subject cases, the fact that the accusative changes *into* the nominative in (4) can be taken as a sign that the nominative is also a structural case. The status of the genitive is similar: The accusative changes into the genitive if the argument bearing the accusative is found in a nominalized clause ((5)), making it possible to classify it as an other structural case.

2.1.2 The accusative plus infinitive construction

An accusative plus infinitive construction (AIC) consists of a complex sentence where the embedded predicate is non-finite and the subject of the embedded clause is assigned accusative case by the matrix verb.³ This construction is alternatively referred to as the exceptional case marking or raising to object construction in generative linguistics. I provide an illustrative example in (6).

- (6) a. Biz sen-i gel-di san-dı-k.
 1pl 2sg-Acc come-Past think-Past-1pl
 ‘We thought you to have come.’
 b. Biz sen gel-di-n san-dı-k.
 1pl 2sg.Nom come-Past-2sg think-Past-1pl
 ‘We thought you came.’

syntactically, the noun phrases in (3) are not treated as subjects positioned in the specifier of TP, whereas those in (4) are. One piece of data that corroborates this is the following. As I show in chapter 4 section 4.2.1, the infinitive and the action nominal—two non-finite nominalizations Turkish has—have a complementary distribution in the subject position. Consider (i).

- (i) a. [Kitap oku-mak] hiç ihmal ed-il-me-meli-dir.
 [book read-Inf] never neglect-Pass-Neg-Neces-EpCop
 Lit. ‘To read books should never be neglected.’
 b. *[Kitap oku-ma] hiç ihmal ed-il-me-meli-dir.
 [book read-ANom] never neglect-Pass-Neg-Neces-EpCop
 ‘Reading books should never be neglected.’

Here, we have passive sentences with non-finite clauses in nominative case as subjects. The infinitive is fine as subject ((ia)), the action nominal is not ((ib)). Now, consider (ii).

- (ii) a. [İnsan-lar-a eziyet et-meğ]-e hemen son ver-il-meli-dir.
 [people-Dat torment-Inf]-Dat immediately stop-Pass-Neces-EpCop
 Lit. ‘To torment people must immediately be stopped.’
 b. [İnsan-lar-a eziyet et-me]-ye hemen son ver-il-meli-dir.
 [people-Dat torment-ANom]-Dat immediately stop-Pass-Neces-EpCop
 ‘Tormenting people must immediately be stopped.’

The non-finite nominals marked in dative case in these examples are, as above, the sole arguments of the passive verbs. But unlike in (ib), the action nominal is fine as the sole argument ((iib)). This suggests that it is not a subject.

Here, I will assume that the inherently case-marked sole arguments of passives are not subjects. The specifier of TP is, then, filled by a silent expletive (i.e. the silent counterpart of English *it*, as in *It seems that he is a linguist*).

³Finiteness is defined in Turkish as the presence of subject agreement morphology on the predicate (George and Kornfilt 1981). I discuss this in section 2.2.1. I refer the reader to chapter 1 section 1.2.4 for basic information on Turkish agreement.

Example (6a) is an AIC structure. Note the lack of agreement on the embedded verb *gel* ‘come’ and the accusative marking on its subject *sen* ‘you’. The accusative could not have been assigned by *gel*, which is intransitive. In (6b), on the other hand, *gel* agrees with *sen* and nominative is assigned to *sen*. Due to the lack of agreement morphology in the embedded clause, this argument cannot receive the nominative case it would normally have been assigned there and receives accusative case from the matrix verb (see Zidani-Eroğlu 1993, 1997).

Let us embed the passives in (3b) and (4b) in AIC configurations. Under normal conditions, as mentioned above, this should yield an outcome where the sole argument of the embedded verb is assigned accusative case by the matrix AIC verb. We obtain the pattern in (7).

- (7) a. Biz [siz {-e/*-i} saldır-ıl-dı] san-dı-k
 1pl.Nom [2pl {-Dat/*-Acc} attack-Pass-Past] think-Past-1pl
 ‘We thought that you were attacked.’
- b. Biz [bu ev-ler {-de/*-i} otur-ul-ma-dı]
 1pl.Nom [this house-pl {-Loc/*-Acc} inhabit-Pass-Neg-Past]
 san-dı-k
 think-Past-1pl
 ‘We thought that these houses were not inhabited.’
- c. Biz [siz {-den/*-i} kork-ul-ur-du] san-dı-k
 1pl.Nom [2pl {-Abl/*-Acc} fear-Pass-Aor-Past] think-Past-1pl
 ‘We thought that you were feared.’
- d. Biz [siz {-i/*-∅} yakala-n-dı] san-dı-k
 1pl.Nom [2pl {-Acc/*-Nom} catch-Pass-Past] think-Past-1pl
 ‘We thought that you were caught.’

None of the embedded verbs here agree with their sole arguments, but only the theme argument in (7d) is accusative-marked. The dative, locative and ablative arguments in (7a)-(7c) do not receive accusative case.

This is a result similar to the outcome of the passivization test: Arguments marked with dative, locative and ablative preserve their cases. For these cases, there is a strict correspondence between θ -roles and cases as before. This diagnoses the cases they bear as inherent case.

There is a second correspondence that holds for these cases. Note the generalization given in (8), formulated by Chomsky (1986b: 194).

- (8) *Inherent Case Condition*
 If A is an inherent case assigner, then A assigns case to an NP if and only if A θ -marks the NP.

In compliance (8), the dative, locative and ablative-marked arguments in (7) are θ -marked by the embedded verb and are case-marked by that verb. They cannot receive accusative case from the matrix verb.

For the theme argument in (7d) the situation is different: As is normal in an AIC configuration, this argument is case-marked by the matrix verb. When the embedded environment cannot provide the case that the arguments requires, a different structural

relation is required. This dependence on structural relations diagnoses the case it bears as structural case. Furthermore, this implies that the θ -marker and the case assigner are not identical for this argument, another indication, by the inherent case condition in (8), that it cannot be inherently case-marked.

2.1.3 Raising

Another diagnostic test that can be used to distinguish between structural and inherent cases is the raising construction. As with the AIC configuration, finiteness of the embedded clause is crucial in a raising structure: When the embedded clause is non-finite, the embedded subject raises to the matrix clause to receive case there. Take (9).

- (9) a. *biz-e* [*sen gel-miş-sin*] *gibi görün-me-si*
 1pl-Dat [2sg.Nom come-Evid-2sg] like seem-ANom-3sg
 Lit. ‘its seeming to us like you have come’
- b. *sen_i-in biz-e* [*t_i gel-miş*] *gibi görün-me-n*
 2sg_i-Gen 1pl-Dat [*t_i come-Evid*] like seem-ANom-2sg
 Lit. ‘your seeming to us to have come’

Example (9a) is not a raising configuration. The embedded verb *gel* ‘come’ agrees with its subject *sen* ‘you’, and *sen* is assigned nominative in the embedded clause. (9b), on the other hand, is a raising configuration. The verb *gel* does not bear any agreement, so *sen* raises to the matrix, agrees with the matrix verb *görün* ‘seem’, and receives genitive case (because *görün* is nominalized). Thus, the lack of agreement morphology results in a change in the structural configurations and relations *sen* enters into. This change, in turn, has an impact on the case *sen* receives, nominative in one instance and genitive in the other. This means, then, that genitive and nominative must be structural cases.⁴

Let me now turn object cases. It is impossible to replicate tests like (9) and (i) for accusative case. This is for the simple reason that accusative case-marked arguments are never subjects. The tests are applicable to dative, locative and ablative cases, though. To see the effects of raising on these cases, I need to use, as embedded clause, a passive structure which has, as its sole argument, a noun phrase marked in one of these cases. This yields (10).

- (10) a. [*Siz*{-e/*-Ø} *saldır-ıl-mış*] *gibi görün-üyor*{*-sunuz).
 [2pl}{-Dat/*-Nom} attack-Pass-Evid] like seem-Prog(*-2pl)
 ‘You seem to have been attacked.’

⁴When the matrix environment is a sentence, raising occurs triggered by the different agreement relations *sen* enters into. But there is no visible effect on the case of the raising argument ((i)).

- (i) a. *Biz-e* [*sen gel-miş-sin*] *gibi görün-üyor*.
 1pl-Dat [2sg.Nom come-Evid-2sg] like seem-Prog.3sg
 ‘It seems to us like you have come.’
- b. *Sen_i biz-e* [*t_i gel-miş*] *gibi görün-üyor-sun*.
 2sg.Nom_i 1pl-Dat [*t_i come-Evid*] like seem-Prog-2sg
 ‘You seem to us to have come.’

- b. [Siz{-de/*- \emptyset } kal-ın-ma-mış] gibi görün-üyor(*-sunuz).
 [2pl{-Loc/*-Nom} stay-Pass-Neg-Evid] like seem-Prog(*-2pl)
 Lit. ‘It seems like you have not been stayed at.’
 ‘It seems like people have not stayed at your place.’
- c. [Sen{-den/*- \emptyset } kork-ul-ur-muş] gibi görün-üyor(*-sun).
 [2sg{-Abl/*-Nom} fear-Pass-Aor-Evid] like seem-Prog(*-2sg)
 ‘You seem to have been feared.’

Here, it is slightly more difficult to make the point. This is due to the fact that arguments marked in dative, locative and ablative never agree. Consequently, the verbs they may be associated with have third person singular marking, which is zero marked in clauses. Thus, it is virtually impossible to distinguish an embedded verb without any agreement, which would be an ingredient in a raising configuration, from an embedded verb with phonologically null agreement (i.e. with ‘covert’ agreement), an ingredient in a non-raising configuration.⁵ However, note two things. First, regardless of what the real situation is, this has no bearing on the identity of the element that assigns case to the arguments in (10). In all three cases, it is the embedded verb. There is no way of obtaining another case (or agreement) pattern. Thus, the cases that these arguments bear (i.e. dative, locative and ablative) are exempt from the structural conditions that affect the nominative and genitive cases. They must be inherent. Second, the embedded verb assigns θ -roles to these noun phrases, as well as case. Then, for these dative, locative and ablative bearing arguments, the inherent case condition in (8) holds. This is another sign that these arguments are inherently case-marked.

2.1.4 Specificity contrasts

Arguments can be specific or non-specific. Specific arguments are referential. An expression is referential if it has a reference, hence designates an individual in some domain of interpretation (Kerstens et al. 2001). I show this in (11).

- (11) a. Cem kitab_i-1 oku-du. Konu-su_i çok güzel-di.
 Cem book_i-Acc read-Past.3sg subject-3sg.Poss_i very nice-Past.3sg
 ‘Cem read the book. Its subject was very nice.’
- b. Cem kitap oku-du. #Reng-i_i kırmızı-ydı.
 Cem book read-Past.3sg #color-3sg.Poss_i red-Past.3sg
 ‘Cem read a book. Its color was red.’

In (11a), the object *kitap* ‘book’ is referential. This is evidenced by the fact that in the second sentence of this example the third person singular possessive marker on *konu* ‘subject’ can refer back to it. Co-indexation is the notational convention I use to show this. In (11b) on the other hand, it is not possible to refer back to the object *kitap*. The third person singular possessive marker on *renk* ‘color’ does not (and cannot) refer back to *kitap*. The object in this example, then, is not referential (see also Öztürk 2005). In other words, the object is specific in the first sentence, but non-specific in the second.

⁵Then, there emerges a distinction that I have implicitly adopted: phonologically null agreement marking versus no marking.

As to case, for arguments bearing the cases previously diagnosed as structural, specificity of that arguments correlates with presence of morphological case marking it bears.⁶ Thus, in (12) we see that when subject *arı* ‘bee’ bears genitive case, it is interpreted as specific ((12a)). When *arı* has no morphological case marking, on the other hand, it is interpreted as non-specific ((12b)).

- (12) a. *arı-nın Cem-i sok-ma-sı*
 bee-Gen Cem-Acc sting-ANom-3sg
 ‘the bee’s stinging Cem’
 b. *Cem-i arı sok-ma-sı*
 Cem-Acc bee sting-ANom-3sg
 ‘a bee’s stinging Cem’

The same observations hold for accusative-marked arguments ((13)).

- (13) a. *Cem-in kitab-ı oku-ma-sı*
 Cem-Gen book-Acc read-ANom-3sg
 ‘Cem’s reading the book’
 b. *Cem-in kitap oku-ma-sı*
 Cem-Gen book read-ANom-3sg
 ‘Cem’s reading read a book’

Now note that the positions of arguments differ according to whether they bear case or not ((14)).⁷

- (14) a. *arı-nın Cem-i feci sok-ma-sı*
 bee-Gen Cem-Acc terribly sting-ANom-3sg
 ‘the bee’s stinging Cem terribly’
 b. *Cem-i feci arı sok-ma-sı*
 Cem-Acc terribly bee sting-ANom-3sg
 ‘a bee’s stinging Cem terribly’

In (14a), *arı* has to occur to the left of the VP adverb *feci* ‘terribly’ when it is genitive-marked. In (14b), on the other hand, *arı* may only be positioned to the right of the VP adverb. This suggests that the subject occupies a different syntactic position in each example. (I assume that it has not moved from its base position (i.e. specifier of the vP) in (14b), and is in the subject position of the nominalization in (14a).) In other words, the case of *arı* is linked to the structural configuration of this argument. This suggests that *arı* is structurally case-marked.

The same observation holds for the accusative-marked object *kitab* in (15). This argument has to occur to the left of the VP adverb when it bears accusative marking, and to the right of the VP adverb when it is bare. As above for *arı*, this is a sign that *kitab* is structurally case-marked.

⁶I cannot demonstrate this for nominative case because its marking is phonologically null.

⁷I will address the question of whether bare arguments, such as the direct object in (13b), have an abstract case or not, in section 2.3.2.2. The conclusion that I will reach there is that these arguments have no structural case.

- (15) a. Cem-in kitab-ı hızlı oku-ma-sı
Cem-Gen book-Acc quickly read-ANom-3sg
'Cem's reading the book quickly'
b. Cem-in hızlı kitap oku-ma-sı
Cem-Gen quickly book read-ANom-3sg
'Cem's reading read a book quickly'

None of these correlations hold for the cases that I had previously diagnosed as inherent. First, note that in the examples in (16), the objects cannot occur without case marking. They may be interpreted as either specific or non-specific (with one of these readings favored by the context). In other words, case marking and specificity are independent for these objects.

- (16) a. Haydut-lar köy*(-e) saldır-dı.
bandit-pl village*(-Dat) attack-Past.3sg
'Bandits attacked the village.'
b. Cem saray*(-da) otur-uyor.
Cem palace*(-Loc) live-Prog.3sg
'Cem is living in a/the seraglio.'
c. Cem aslan*(-dan) kork-ar.
Cem lion*(-Abl) fear-Aor.3sg
'Cem is afraid of lions.'

Second, the presence of case marking on these objects does not correlate with their structural position. As before, the interpretation of the arguments in question as specific or non-specific depends on where they are positioned. When they are positioned to the right of a VP adverb they are interpreted as non-specific ((17a)). When they are found to the left of a VP adverb, on the other hand, they receive a specific interpretation ((17b)). But the differences in positioning have no bearing on the presence or absence of case marking.⁸

- (17) a. Cem erken okul-a git-ti.
Cem early school-Dat go-Past.3sg
'Cem went to school early.'
b. Cem okul-a erken git-ti.
Cem school-Dat early go-Past.3sg
'Cem went to the school early.'

These last two sets of examples show that case marking is independent of structural configuration for noun phrases marked in dative, locative and ablative. Again it illustrates that these cases cannot be structural. They have to be inherent.⁹

⁸Some works in the Turkish linguistic literature claim that these arguments always have a specific reading (see Kornfilt 2003a and Öztürk 2005, i.a.). I disagree.

⁹These conclusions may also be reached from the perspective of θ -marking: An argument does not seem to change its θ -role depending on whether it is specific or not (i.e. has morphological case marking or not). This means that for genitive and accusative-marked arguments, their case marking can change without their θ -roles being affected by this change. This, in turn, means, after the inherent case condition ((8)), that the cases they bear cannot be inherent. The case marking on dative-, locative- and ablative-marked arguments,

2.1.5 Case assignment by adjectives

One can derive an argument of a more general nature from the cases that adjectives assign to their objects. As I show in (18), Turkish adjectives can also license case.

- (18) a. [*övgü-ye layık*] bir kişi
 [praise-Dat worthy] a person
 ‘a person worthy of praise’
 b. [*ev-im-de gizli*] belge-ler
 [house-1sg-Loc hidden] document-pl
 ‘documents hidden in my house’
 c. [*iş-in-den memnun*] bir kişi
 [work-3sg-Abl pleased] a person
 ‘a person pleased with his/her work’

However, the cases that adjectives can license are restricted to the dative, locative and the ablative, in other words cases that I have argued above to be inherent.¹⁰ Adjectives cannot license accusative case. We could expect the adjective *kıskanç* ‘envious’, for instance, to be able to license the accusative, on the basis of the fact that the related verb *kıskan* ‘envy’ can. This would, however, be contrary to fact, as demonstrated in (19) (adapted from Kornfilt 1997: 94).

- (19) a. *Cem Deniz-i kıskanç
 Cem.Nom Deniz-Acc envious
 ‘Cem is envious of Deniz.’
 b. Cem Deniz-i kıskan-ıyor.
 Cem.Nom Deniz-Acc envy-Prog.3sg
 ‘Cem envies Deniz.’

If accusative case were inherent in Turkish, we would expect adjectives to be able to license it (see also Sezer 1991: 48-49 and Uzun 2000: 210-211).

2.1.6 Conclusion

I have argued using tests such as passivization, the AIC, raising, specificity contrasts and case assignment by adjectives that nominative, accusative and genitive cases are structural in Turkish, whereas the dative, locative and ablative are inherent. Now that I have established this distinction, I can go into detail about how these two types of case are licensed.

in contrast, does not show this sort of variation. The link between their θ -role and case is stable. Then, the cases they bear must be inherent.

¹⁰Adjectives also select bare arguments. These look on the surface like nominative noun phrases but differ from them in syntactic behaviour. I refer the reader to section 2.3.2.2 for further discussion.

2.2 The George and Kornfilt Thesis

“Structural case is a reflex of agreement” (Chomsky 2001). This thesis, due to George and Kornfilt (1981), is central to the account of nominative and accusative case assignment formulated in the recent works of Chomsky (Chomsky 2000, 2001, 2004, 2005, to appear). I will lay out the particular implementation of this thesis found in these works in section 2.3. At this point, suffice it to say that an argument is assigned the structural case it bears through agreement with a functional head. In section 2.2.1, I will present the gist of George and Kornfilt (1981) and how it led to the current understanding that case and agreement are connected. In section 2.2.2-2.2.4, I will demonstrate the empirical link between the various structural cases and agreement, and identifying the elements that arguments agree with so that they can receive case.

An important and interesting generalization will emerge from the discussion: Only the functional categories, namely C, T, D and ν , agree. Substantive/lexical categories N, P and A, do not show agreement. This seems to corroborate an assertion by Baker (2008) given in (20).

(20) *Agreement is a property of functional categories.*

Any lexical category can be immediately dominated by the projection of a functional head that matches it in gross categorial features. Functional heads, unlike lexical heads, can manifest agreement.

2.2.1 George and Kornfilt (1981)

Finiteness is traditionally defined as being inflected for person (and number) and tense. In early generative linguistics, the latter ingredient of this notion, namely tense, had been assumed to set the bounds within which many syntactic processes operate. Tense makes finite clauses ‘opaque’. Take for instance (21).

- (21) a. Cem believes [(that) Koma Rewshen is a good rock band].
 b. *Koma Rewshen is believed [(that) t is a good rock band].
 c. It is believed [(that) Koma Rewshen is a good rock band].
 d. Koma Rewshen is believed [t to be a good rock band].

These examples demonstrate the Tensed-S condition of Chomsky (1973). In (21a), we have a complex sentence with a finite complement clause and an active matrix verb. When the matrix verb is passivized, as in (21b), *Koma Rewshen* cannot be moved out of the tensed complement clause—from the position indicated by t —to the subject position of the matrix clause. Only a pleonastic *it* may fill the subject position of the matrix clause in this context ((21c)). The complement clause has to be non-tensed, for *Koma Rewshen* to be able move to the subject position of the matrix clause, as in (21d), essentially a raising construction.

In their 1981 paper, George and Kornfilt contest this tense-based notion of finiteness. On the basis of Turkish data, they redefine finiteness as the presence of agreement. They do this by showing that, in Turkish, it is the presence of agreement, rather than tense, which induces the effects associated with tensed clauses in English. Con-

sider (22) as an illustrative example ((22b) and (22d) modified from George and Kornfilt 1981).

- (22) a. Cem [biz viski-yi iç-ti-k] san-ıyör.
 Cem [1pl whisky-Acc drink-Past-1pl] believe-Prog.3sg
 ‘Cem believes that we have drunk the whisky.’
- b. *(Biz) [t viski-yi iç-ti-k] san-ıl-ıyör-üz.
 (1pl) [e whisky-Acc drink-Past-1pl] believe-Pass-Prog.3sg
 Lit. ‘We are believed that have drunk the whisky.’
- c. [Biz viski-yi iç-ti-k] san-ıl-ıyör.
 [1pl whisky-Acc drink-Pastf-1pl] believe-Pass-Prog.3sg
 ‘It is believed that we have drunk the whisky.’
- d. (Biz) [t viski-yi iç-ti] san-ıl-ıyör-üz.
 (1pl) [e whisky-Acc drink-Past] believe-Pass-Prog.3sg
 ‘We are believed to have drunk the whisky.’

In (22a), we have a complex sentence with a finite complement clause and an active matrix verb, analogous to the English sentence in (21a). When the matrix verb is passivized, as in (22b), *biz* ‘we’ cannot be displaced out of the finite complement clause—from the position indicated by *t*—to the subject position of the matrix clause (cf. (21b)). In these instances, the embedded must remain in situ and the passive matrix verb bears third person singular pleonastic agreement ((22c)) (cf. (21c)). For *biz* to be able move to the subject position of the matrix clause, the complement clause has to lack agreement, as in (22d), again a raising construction (cf. (21d)). (Note that, in this example, the embedded verb *iç* ‘drink’ is tensed.)

George and Kornfilt are not primarily concerned with showing the connection between case and agreement. They only make a comment in passing which hints at the repercussions of their proposal for ideas about how structural case is licensed. The gist of the comment (and the implication of their paper) is as follows:

Finiteness (defined as ‘tensedness’) governs case assignment to the subject. For instance, Chomsky (1981: 48 ff.) proposes that nominative case is assigned to the subject of a finite clause which has a [+Tense] feature. Consider the examples in (23).

- (23) a. Cem believes (that) they are a good rock band.
 b. *Cem believed they to be a good rock band.
 c. Cem believed them to be a good rock band.

In a tensed clause, the subject receives nominative case, like *they* in (23a). This is disallowed in a non-tensed clause ((23b)). In these contexts, the only option is for the matrix verb to assign accusative case to the logical subject of the embedded verb, giving rise to an accusative plus infinitive construction, as in (23c).

Redefining finiteness as the presence of subject agreement means that what governs subject case, now, has to be subject agreement, and not tense. It is this idea that gradually became mainstream in generative syntactic theory. Chomsky (1981) had already suspected the role of agreement in case assignment. He conjectures that the role of tense in English case may be a special case and that “the general property is that nominative is assigned as a concomitant of agreement” (Chomsky 1981: 172). By

the 1990s, it had become mainstream to view case and agreement in the same light. For instance, Chomsky (1993) and Chomsky (1995: 219 ff.), which set the research agenda for the few years to come, take agreement to be a central process in licensing case, particularly nominative and accusative cases. As the reader will gather from the introductory comments in this section, agreement continues to have the same level of importance in the latest theoretical accounts within the generative paradigm of how nominative and accusative cases are assigned (cf. Chomsky 2000, et seq., i.a.).

2.2.2 Nominative case and agreement with T

The link between nominative case and subject agreement can be easily shown in Turkish. For this, we need to look at clauses that do not show any subject agreement, and how the case of the subject is affected by this. There are two constructions that involve such clauses: the AIC and the raising construction, which I have discussed in sections 2.1.2 and 2.1.3 respectively, in an other context.

2.2.2.1 Case and agreement in the accusative plus infinitive construction

Consider (24):

- (24) a. Biz siz yakala-n-dı*(-nız) san-dı-k
 1pl.Nom 2pl.Nom catch-Pass-Past*(-2pl) think-Past-1pl
 ‘We thought that you were caught.’
 b. Biz siz{-i/*-Ø} yakala-n-dı san-dı-k
 1pl.Nom 2pl{-Acc/*-Nom} catch-Pass-Past think-Past-1pl
 ‘We thought that you were caught.’

In (24a), we see that the verb *yakala* ‘catch’ agrees with its subject *siz* ‘you’ and the subject is marked in the nominative. In such a configuration, agreement with the subject is obligatory. When subject agreement does not take place, we obtain (24b). Here, nominative case is no longer available on *siz*. The only option is the accusative. Accusative case could not have been assigned by the embedded verb *yakala* simply because it is a passive verb. Passive verbs do not assign accusative case in Turkish. So, it must have been assigned by the matrix verb *san* ‘think’. (I will address the issue of how accusative case is licensed in section 2.2.4.)¹¹ The conclusion to be drawn from this is, then, that nominative case on the subject correlates with subject agreement morphology on the predicate.¹²

¹¹The reader can also refer to Zidani-Eroğlu (1993, 1997), Kornfilt (2003b) and İnce (2006), i.a., for a more detailed exposition. These works show that the accusative-marked subject is structurally part of the matrix clause. There is divergence among these authors on the issue of whether it is either a case of control or of raising.

¹²It may be possible to show the direction of the dependency, i.e. whether the nominative is dependent on agreement or vice versa, with the aid of the example in (i), which some speakers of Turkish accept.

- (i) %Biz siz-i yakala-n-dı-nız san-dı-k
 1pl 2pl-Acc catch-Pass-Past-2pl think-Past-1pl
 ‘We thought that you were caught.’

2.2.2.2 Case and agreement in the raising construction

Raising structures provide a similar demonstration. Consider (25):

- (25) a. *biz-e* [*sen yakala-n-mış*(-sın)*] *gibi*
 1pl-Dat [2sg.Nom catch-Pass-Evid*(-2sg)] like
görün-me{*-n/-si}
seem-ANom{*-2sg/-3sg}
 Lit. ‘its seeming to us like you have been caught’
- b. *sen-in biz-e* [*t yakala-n-mış*] *gibi görün-me*{-n/*-si}
 2sg-Gen 1pl-Dat [*t* catch-Pass-Evid] like *seem-ANom*{-2sg/*-3sg}
 Lit. ‘your seeming to us to have been caught’

In (25a), we see that the embedded predicate *yakala* ‘catch’ obligatorily agrees with its subject *sen*. When *yakala* lacks agreement, however, nominative is no longer available, as in (25b). Then, *sen* receives genitive case in the matrix clause. The fact that *sen* is in the matrix clause is suggested by the fact that the most natural ordering of items is one where *sen* is to the left of *biz*, the indirect object of the matrix verb *görün* ‘seem’. Then, the conclusion is, again, that nominative case correlates with subject agreement.¹³

Here, we see that the presence of agreement morphology does not result in nominative case assignment to *siz*, accusative is also possible. This suggests that nominative case is dependent on agreement rather than the other way around.

These data also suggest that the dependency between case and agreement should not be cast as a biconditional generalization. The generalization is that nominative case assignment is possible only if (and not if and only if) subject agreement is present.

Ultimately, these conclusions depend on how one analyses the AIC in Turkish. One may argue that there is a covert subject in the embedded clause. This covert subject is referentially dependent on the accusative subject in the AIC but is independent from it otherwise. Kornfilt (2003b, 2005) and İnce (2006) are examples of analyses that postulate such covert subjects. Kornfilt (2003b, 2005) postulates a covert subject that agrees with *yakala*—referred to as *pro* in the literature—and receives nominative case. The accusative-marked subject is in the matrix clause. In a competing analysis, İnce (2006) argues that the embedded covert subject is of a non-agreeing kind (called PRO in the literature). Under these accounts, the AIC in Turkish is akin to what are called object control structures, such as that in (ii).

- (ii) *Cem Deniz-i* [*dünya-yı dolaş-mağ*]-a *ikna et-ti*.
Cem Deniz-Acc [*world-Acc tour-Inf*]-Dat persuade-Past.3sg
 ‘Cem persuaded Deniz to go on a world tour.’

If these analyses are correct, this would nullify the contribution of (i).

¹³As before, it may be possible to show that it is nominative case that is dependent on agreement rather than the other way around. Note (i), which some speakers accept. (Some Turkish linguists believe this marks a dialectal difference in Turkish, possibly along with the variation in the AIC (Jaklin Kornfilt, p.c.))

- (i) %*sen-in biz-e yakala-n-mış-sın gibi görün-me-n*
 2pl-Gen 1pl-Dat catch-Pass-Evid-2sg like seem-ANom-2sg
 Lit. ‘your seeming to us have been caught’

The embedded verb bears second person singular agreement but *sen* bears genitive case which must have been assigned by the nominalized verb. In other words, no nominative case-marked noun phrase is present. It is not agreement that depends on a noun phrase in nominative case, but the other way around. This is analogous to what I have noted above for AIC structures. And as above, one can analyze these structures as having a covert subject in the embedded clause, and nullify the contribution of (i). In such an analysis, the genitive subject would be generated in the matrix clause. Although, of course, the basic observation that nominative case and subject agreement correlate is still valid.

2.2.2.3 What does the nominative subject agree with?

2.2.2.3.1 *Kornfilt (1996b) and Kornfilt (2003b)* I have shown that nominative case and subject agreement correlate. One question that could be raised at this point is what precisely the subject agrees with. This might sound like an odd question since the subject agreement suffix is on the verb, so the subject evidently agrees with the verb. Appearances may be misleading, however. Kornfilt (1996b) provides strong evidence that, except in past tense and the conditional mood, what appear to be agreement suffixes are in reality inflected copular clitic forms. In other words, it is not the verb that agrees with the subject; it is a copular form. One piece of evidence Kornfilt presents comes from the comparison of the negation of adjectival and nominal predicates with the negation of some verbal forms. Consider, first, (26).

- (26) a. *hasta-di-m
sick-Past-1sg
'I was sick.'
- b. hasta i-di-m > hasta-y-di-m
sick Cop-Past-1sg > sick-Cop-Past-1sg
'I was sick.'
- c. hasta-y-im, *hasta i-m
sick-Cop-1sg, sick Cop-1sg
'I am sick.'

Adjectival predicates do not allow the attachment of tense affixes ((26a)). For these predicates to take tense markers, a copular element has to intermediate. In (26b), this copular element is *i*. This *i* changes into *-y-* when the tensed copular form phonologically cliticizes onto a stem that ends in a vowel. (Note that the copular form takes on the vowel harmony pattern of the predicate noun under cliticization.) Copular forms without tense markers cannot appear separate from the predicate, so the copula *i* is not readily visible in those instances, but the *-y-* is present, pointing to the presence of the copula ((26c)). The negation of the copula *i* is done through a form that is different from the negation of verbs ((27a) versus (27b)).

- (27) a. hasta deđil-im
sick Neg-1sg
'I am not sick.'
- b. git-me-di-m
go-Neg-Past-1sg
'I did not go.'

This copular negation is available for some tenses other than the definite past ((28)).

- (28) a. gid-eceđ-im
go-Fut-1sg
'I will go.'
- b. gid-ecek deđil-im
go-Fut Neg-1sg
'I will not go.'

Now, note that the definite past form of a verb does not have a copular element in it ((29a)). (Because the definite past morpheme ends in a vowel the copula would surface as a *-y-* as in (26b).) It also disallows copular negation in *değil* ((29b) versus (27b)).

- (29) a. *git-ti-m*, **git-ti-y-im*
 go-Past-1sg *go-Past-Cop-1sg
 ‘I went.’
 b. **git-ti değil-im*
 go-Past Neg-1sg
 ‘I did not go.’

These data show that some verb forms, such as the verb in (28), are complex forms constituted of a tensed verb stem and an agreeing cliticized copula. This suggests that the agreement suffixes are found on a syntactic head distinct from and higher than V.

Furthermore, on the basis of works such as Baker (1985b) one may assume that the several different morphological markers one sees on the verbal complex correspond to different syntactic positions (see chapter 1 section 1.3.1). In chapter 1 section 1.3.2, I have discussed the link between syntactic and morphological representation. There, I have noted that the understanding of the hierarchical organization in syntax has been heavily influenced by a very popular proposal by Baker (1985b). Since that work, suffixes are assumed to occupy positions in syntactic representation in line with the Mirror Principle proposed there, given in (30).

- (30) *The Mirror Principle*
 Morphological derivations must directly reflect syntactic derivations (and vice versa).

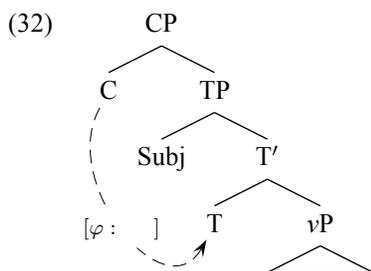
Building on the mirror principle and the fact that agreement markers are found to the right of tense markers in Turkish verbs, one can plausibly construe the subject agreement markers as being positioned higher than T^0 in the syntactic structure, presumably at C^0 , this being the only functional head above T^0 (Kornfilt 2003b).

— The CP projection serves as the target of a special class of movement operations, \bar{A} -movement (see e.g. Chomsky 1986a). These include the movement of *wh*-question words in languages like English (*wh*-movement), or relativization. Then, if an embedded clause in an AIC lacks agreement morphology, which resides at C^0 , it may be that the entire CP layer is lacking in that clause. This would predict that it should be impossible to relativize out of an embedded clause in an AIC. This would be because the embedded clause is non-finite, and consequently, would lack a CP layer, which can be used as an escape hatch from the embedded clause. This prediction is borne out ((31)) ((31a) modified from Kornfilt 2003b: (4)):

- (31) a. [t_i'' Ali_{*i*}-nin [t_i' sen t_i yaz-dı-n] san-diğ-ı] mektup_{*i*}
 [t_i'' Ali-Gen [t_i' you t_i write-Past-2sg] believe-NSR-3sg] letter_{*i*}
 ‘the letter which Ali believes you wrote’
 b.*??[Ali_{*i*}-nin [sen-i t_i yaz-dı] san-diğ-ı] mektup_{*i*}
 [Ali-Gen [you-Acc t_i write-Past] believe-NSR-3sg] letter_{*i*}
 Intended reading: ‘*the letter which Ali believes you to have written’

In (31a), we see that it is possible to relativize *mektup* ‘letter’ out of a finite complement clause. Suppose that it does this by leaving its original position in the embedded clause, headed by the verb *yaz* ‘write’. I show this position by t_i . Then, it moves to the CP level in this clause, shown by t'_i . Next, it moves to the CP of the higher clause headed by *san* ‘believe’. I indicate this by t''_i . Finally it moves out of this clause as well. In contrast, in (31b), when the relative clause is an AIC, *mektup* cannot be extracted. This is because the embedded clause, headed by the verb *yaz*, is non-finite, and lacks the CP layer that serves as an escape hatch. It is as though *mektup* has been locked in.¹⁴

2.2.2.3.2 *Feature inheritance* Kornfilt’s (2003b) interpretation of (31) might be the most natural one, but by no means the only one. The data in question is perfectly in sync with an account where agreement morphemes are located lower in the structure, in T^0 , but are *derived* from C^0 by some sort of feature inheritance.¹⁵ Indeed, this is precisely what Chomsky (to appear, 2005) proposes. I show this process in (32).



There are two arguments in support of this proposal:

First, there is data suggesting that C has φ -features. In a number of West Germanic languages, the complementizer in a complex sentence shows agreement with the embedded subject. In (33), I give data from West Flemish.

- (33)
- a. Kpeinzen dan-k (ik) morgen goan.
I-think that-1sg (I) tomorrow go
'I think that I will go tomorrow.'
 - b. Kpeinzen da-j (gie) morgen goat.
I-think that-2sg (you) tomorrow go
'I think that you will go tomorrow.'
 - c. Kvinden dan die boeken te diere zyn.
I-find that.pl the books too expensive are
'I find those books too expensive.'
- (Haegeman 1992)

¹⁴I have cast this explanation using a head raising approach to relativization (see for instance Kayne 1994). This was for ease of exposition. The more standard account of relativization proposes that what is called a covert *wh*-operator traces the steps of movement I have shown in my explanation (see for instance Chomsky 1977). The head noun itself (*mektup*) does not move.

¹⁵In this account, the embedded clause in (31b) lacks a CP layer (as can be evidenced from the impossibility of relativization), which results in T not having any agreement features due to the absence of the source of these features, i.e. C.

Second, when a clause lacks a CP projection, that clause lacks agreement, and hence, cannot license nominative case on its subject.¹⁶ Note, first, that raising constructions, which lack subject agreement and disallow nominative case in the embedded clause, seem to be bare TPs (see e.g. Rizzi 1982). This diagnosis is based on the common behavior of the two structures: Neither a raising infinitival ((34)) nor a bare finite TP (stranding its complementizer) ((35)) are phonetically isolable by clefting.

- (34) a. John seems [*t* to go home].
 b. *It is [*t* to go home] that John seems.
- (35) a. John wondered [whether [Mary loves him]].
 b. *It is [Mary loves him] that John wondered whether.

The AIC, which also lacks subject agreement and disallows nominative case, falls together with the raising construction—as would be expected—in disallowing clefting ((36)).

- (36) a. John heard [her leave].
 b. *It is [her leave] that John heard.

Next, note that, in contrast to this, control infinitivals ((37)) and full CPs ((38)) can be grouped together on the basis of the same criterion: They are phonetically isolable by means of clefting.¹⁷

- (37) a. John prefers [PRO to go home].
 b. It is [PRO to go home] that John prefers.
- (38) It is [whether Mary loves him] that John wondered.

Then, these data suggest that the two non-finite clause types that cannot license nominative case on their subjects, namely raising infinitives and AIC infinitives, are bare TPs. Thus, the theoretical generalization that can be reached is that T can show agreement and assign nominative case only if C—which seems to have agreement features—is also present. Clearly, not all complementizers are associated with clauses where nominative case is assigned, the complementizer *for* being one example. That is why the generalization is not cast as a biconditional. In other words, the presence of a complementizer does not guarantee nominative case assignment, but there better be a complementizer if nominative case is to be assigned in a clause. Chomsky's (to appear; 2005) proposal is an elegant way of capturing these observations.

To return to the question of which syntactic head hosts subject agreement, it is a standard assumption in the minimalist framework that the nominative subject agrees with T, rather than C (see the cited works of Noam Chomsky, i.a.). This formalizes the following basic observations: First, finite clauses have nominative subjects. These clauses have to be both tensed and show subject agreement at the same time in many

¹⁶This argument comes from Chomsky (2001) which advances a preliminary version of the feature inheritance idea.

¹⁷This does not imply that it should be possible to cleft all finite clauses with complementizers. For instance, the following is bad: *It is that John goes home that it seems. The claim is that only finite clauses with complementizers can be clefted.

Indo-European languages, English being by far the best-studied. Second, in contrast to finite clauses, non-finite clauses, which are not tensed and do not have subject agreement simultaneously, lack nominative subjects. Third, when there is an auxiliary in a finite clause, the subject agrees with the auxiliary, which occupies T^0 .¹⁸ In Turkish on the other hand, being tensed and having agreement can be separated. The AIC or the raising construction in Turkish, which have tense marking but no agreement morphology constitute cases in point. In fact, as I have shown in section 2.2.1, George and Kornfilt (1981) define finiteness in Turkish as the presence of subject agreement morphology on the predicate, without reference to tense. Then, one might think that there is no pre-theoretical need to link the assignment of nominative case to T^0 in Turkish. Nonetheless, this is what I will do for the following reason: In chapter 1 section 1.3.2, during the discussion of the link between syntactic and morphological representation. I have noted that, along with Baker (1985b), Cinque (1999) is another major work that explores the link between sequence of morphological markers and syntactic structure. In this work, Cinque begins by taking the Mirror Principle ((30)) as a reference point. Next, he compares the sequences of suffixes (and adverbs) in several languages and finds striking cross-linguistic parallels in the sequence of verbal suffixes. On the basis of this, he proposes an order of syntactic projections that he claims to be universal. But, despite the parallels, there are two kinds of suffixes which do not follow the pattern. These are agreement and negation markers, which can be found in various different morphological slots. Cinque does not believe that this seeming glitch constitutes a counter-argument for his proposal, however. He claims that these problematic morphemes do not correspond to any specific syntactic heads and proposes that they may attach to various functional heads. Agreement and negation markers are then different from, say, tense suffixes which occupy only the T head in syntax. In Turkish, verbal agreement suffixes are found immediately to the right of tense markers (see e.g. Kornfilt 1997: 323 ff.). Then, after Cinque (1999), I will assume that verbal agreement suffixes in Turkish are found at T^0 . This implies that agreement, and consequently the assignment of nominative case, is linked to T^0 .

2.2.3 Genitive case and agreement with D

Genitive case also being a structural case, the kind of link that exists between nominative case and subject agreement also obtains between the genitive and subject/possessor agreement, with the difference that the agreement suffixes in this instance are from the nominal agreement paradigm (see also George and Kornfilt 1981).

2.2.3.1 *Genitive case and agreement in the raising construction*

Again, the raising construction provides examples to demonstrate this link. Consider (25) again, repeated here as (39):

¹⁸I refer the reader to the ample literature on the topic for a detailed exposition (e.g. Chomsky 1981, et seq.).

- (39) a. biz-e [sen yakala-n-mış*(-sın)] gibi
 1pl-Dat [2sg.Nom catch-Pass-Evid*(-2sg)] like
 görün-me {*-n/-si}
 seem-ANom {*-2sg/-3sg}
 Lit. ‘its seeming to us like you have been caught’
- b. sen-in biz-e [t yakala-n-mış] gibi görün-me {-n/*-si}
 2sg-Gen 1pl-Dat [t catch-Pass-Evid] like seem-ANom {-2sg/*-3sg}
 Lit. ‘your seeming to us to have been caught’

In (39b), the nominalized predicate *görün* ‘seem’ has to agree with the genitive-marked subject, *senin* ‘your’. Only when *sen* is found in the lower clause and agrees with the embedded verb can this agreement relation be broken ((39a)). In that case, *görün* bears third person singular agreement, the pleonastic agreement form in Turkish.¹⁹

2.2.3.2 What does the genitive subject agree with?

As in section 2.2.2, the question of what precisely the subject agrees with also arises here. The most popular answer seems to be that nominal subject agreement instantiates D^0 . In other words, the subject agrees with D^0 .

The earliest work to have reached this conclusion is Abney (1987), whose analysis of noun phrases as DPs has since become the standard approach. In his work, Abney brings to light several parallels between sentences, noun phrases and gerunds in English, like the ones in (40).

- (40) a. John destroyed the spaceship.
 b. John’s destruction *(of) the spaceship
 c. John’s destroying the spaceship (Abney 1987:15)

He notes that in some languages “a possessed noun agrees with its subject in the same way that the verb agrees with its subject” (Abney 1987: 27). Turkish is among the languages where he observes this agreement relation. I exemplify it below ((41)):

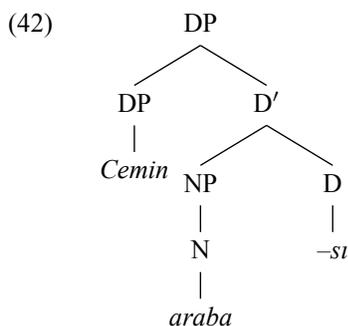
- (41) Cem-in araba-sı
 Cem-Gen car-3sg
 ‘Cem’s car’

¹⁹There is some data that weaken the relationship between genitive case and agreement. These data imply the following generalization: Genitive case assignment is possible only if (and not if and only if) nominal agreement is also present. Despite being nominal structures which bear nominal agreement, adjunct factive nominals (and only these) disallow genitive assignment and require nominative subjects ((i)).

- (i) [[Sen {-Ø}/*-in} git-tiğ-in] için] üz-ül-dü-m.
 [[2sg {-Nom}/*-Gen} go-FNom-2sg] for] sadden-Pass-Past-1sg
 ‘I was saddened because you left.’

Kornfilt (2003b) argues that the agreement bearing head has to raise to a particular syntactic projection to be able to license case. This fails to happen in (i) and genitive case cannot be assigned, which causes nominative case to be assigned by default. (Kornfilt 2003b also argues against Aygen’s 2002 alternative account of case licensing in Turkish built on these data.)

In the framework adopted by Abney, sentences are assumed to be headed by inflectional elements (i.e. I) and hence are IPs. In analogy with this, it would be natural to assume that nominal inflection (i.e. nominal agreement morphology in (41)) heads possessive noun phrases, Abney conjectures. In doing this, he seems to adopt Kornfilt's (1984) idea that nominal agreement heads the structures it is found in. Where he differs from Kornfilt is the category he assigns to this nominal inflection. Kornfilt simply calls nominal agreement I. Abney proposes that nominal inflection belongs to the category D(eterminer). This decision is determined by the DP Hypothesis that he puts forth. The DP Hypothesis holds that noun phrases are headed by nominal functional elements like determiners; thus, they are DPs. Applying the DP analysis to noun phrases with agreement morphology, Abney concludes that nominal agreement morphology belongs to the category D. This applies to both possessive noun phrases in (41) and nominalizations in Turkish (see chapter 1 section 1.2.3 for some basic information on Turkish nominalizations). Then, according to Abney, (41) has the structure in (42).²⁰



In a later work, Kennelly (2004: 64) focuses on the fact that one main function of nominal agreement is to express possession, as was shown in (41). She then concludes, in view of the idea that the possessive is a kind of determiner (Larson 1991), that nominal agreement is at D⁰ (see also Kennelly 1990, 1994, 1996).²¹ This conclusion

²⁰One alternative to Abney (1987) is Szabolcsi (1994) who adopts Abney's DP Hypothesis for noun phrases in general but decides against placing nominal agreement in D⁰. For Szabolcsi, possessor agreement must be on the possessed noun. Szabolcsi (1994: 12-17) cites two theory internal problems that she argues proposals along the lines of Abney (1987) face. I believe only one of these is really pertinent to the present discussion, which is what I will present now. Szabolcsi observes that in possessive constructions the possessor can bear various thematic roles. For instance, *my train* need not be one that I built or one that I own; it may be one that I ride to work, etc. Szabolcsi contends that such an arbitrary role can hardly be anticipated in the lexical conceptual structure of the possessed noun—especially since there is no evidence for its existence in non-possessive constructions—but that it can naturally be attributed to a functional component of the construction, namely the possessive morpheme. However, according to Szabolcsi, there are two issues at stake in θ -role assignment: First, a formal ability to assign a role, and second, an ability to specify the content of a role. She argues that it is natural to assume that only lexical categories can have the second ability; functional categories may at best have the first. Thus, if one assumes that the possessed noun and the possessive morpheme form both a morphological unit and a thematic role assigning unit, then the possessive morpheme will always license the possessor. This provides both the arbitrariness and the core semantic content that is required of the role of the possessor. However, in the light of modern syntactic theory, Szabolcsi's reservations about functional categories specifying the contents of θ -roles and assigning them are not well-founded. As I explain in section 2.2.4.3, it is standard to assume that the agent θ -role is assigned by a verbal functional category called *v*. So, I will not adopt Szabolcsi's proposal here.

²¹Larson (2008), a recent incarnation of Larson (1991), presents an analysis of *ezâfe* constructions across

applies to both the possessive structure in (41) and nominalized clauses.

Baker (2005) reaches the same conclusion on the basis of Peruvian Quechua data analysed in the light of his theory of lexical categories in Baker (2003). A fundamental claim of Baker (2003) is that a noun is a lexical category that introduces a referential index, i.e. broadly speaking, that refers. Another essential ingredient in Baker's (2003) theory is the reference–predication constraint ((43)):

- (43) *The Reference-Predication Constraint (RPC)*
 No syntactic node can have both a specifier and a referential index.

Then, the RPC implies that a noun cannot have a specifier position in syntax.

Turning to Peruvian Quechua, Baker (2005) notes that in this language agreement with the possessor appears as a suffix on the head noun, as in (44):

- (44) a. Xwan-pa wasi-n
 Juan-Gen house-3sg.Poss
 'Juan's house'
 b. puklla-na-y
 toy-?-1sg.Poss
 'my toy' (Baker 2005: (43))

He then concludes the following:

[t]he agreement in [(44)] cannot be generated on the noun directly, because the possessor is not the specifier of the noun, according to the RPC... I claim, then, that *-n/-y* here is not mere agreement, but rather an agreeing form of the possessive determiner, which is a distinct head syntactically... in Quechua the noun combines with the agreeing determiner to form a single word, just as the verb combines with the agreeing Infl to form a single word. (This can be accomplished by N to D movement, or an equivalent mechanism.)

Baker then generalizes this conclusion to nominalized structures. He notes that the agreement markers on the head nouns in (44) are identical to the agreement on nominalized verbs (which he refers to as gerunds), and different from the agreement that otherwise normally appears on verbs, as shown in (45). He extends these considerations to Turkish and other similar languages.

- (45) a. Xwan(-pa) hamu-na-n-ta yacha-ni.
 Juan-Gen come-Ger-3sg.Poss-Acc know-1sg
 'I know that Juan is to come.'
 b. Hamu-sqa-y-ta yacha-ni.
 come-Ger-1sg.Poss-Acc know-3sg
 'He knows I have come.' (Baker 2005: (42) and (44))

In keeping with this body of work, I will assume here that nominal agreement occupies D^0 and that subjects of possessives and nominalized clauses agree with D. In

Iranian languages. He proposes a layered structure for the DP projection, where agreement features are distributed over the various D heads.

chapter 4 section 4.2.1.3, I will propose a possible refinement of this position. Keeping to the essence of the DP Hypothesis, I will propose that nominalized clause are DPs and that agreement features originate in D^0 , but that later, these features percolate down to the nominalization head $Nmnl^0$. This is essentially the same process as the feature inheritance mechanism I have discussed in section 2.2.2.3.

2.2.4 Accusative case and agreement with ν

The assignment of accusative case can also be linked to agreement. However, this is more difficult to show than for nominative and genitive cases, since the data does not show any agreement between an accusative-marked noun phrase and any element in the structure ((46)).

- (46) Ben kitab-ı oku-du {-m/*-Ø}
 I book-Acc read-Past {-1sg/*-3sg}
 ‘I read the book.’

Some degree of evidence can be obtained, however, from a comparison of Turkish with languages that show direct object agreement, and second, from some properties of adjectives, nouns and postpositions.

2.2.4.1 Turkish and Chichewa

In section 2.1.4, I showed for accusative case that there is a link between the presence of case marking and syntactic position. In (47a), the accusative-marked object *kitab* ‘book’ has to occur to the left of the verb phrase adverb *hızlı* ‘quickly’, meaning that it is outside the verb phrase. By contrast, when it is bare, *kitab* has to be to the right of *hızlı*, as in (47b).

- (47) a. Cem-in {*hızlı} kitab-ı {hızlı} oku-ma-sı
 Cem-Gen {*quickly} book-Acc {quickly} read-ANom-3sg
 ‘Cem’s reading the book quickly’
 b. Cem-in {hızlı} kitap {*hızlı} oku-ma-sı
 Cem-Gen {quickly} book {*quickly} read-ANom-3sg
 ‘Cem’s reading read a book quickly’

Now, importantly, Baker (2008) notes that in Chichewa—a language which does not mark accusative case but does mark agreement with direct objects—the verb does not agree with the object if the direct object is internal to the verb phrase ((48a)). If, on the other hand, the object is dislocated to a right or left-peripheral position, the verb does agree with the object ((48b)) (see also Bresnan and Mchombo 1987).

- (48) a. Alenje [a-ku-phik-il-á anyani zí-túmbûwa].
 2.hunters [2S-Pres-cook-AppI-FV 2.baboons 8-pancakes]
 ‘The hunters are cooking the baboons pancakes.’

- b. Alenje [a-ku-wá-phik-il-á – zı-túmbûwa] anyani.
 2.hunters [2S-Pres-2O-cook-Appl-FV – 8-pancakes] 2.baboons
 ‘The hunters are cooking the baboons pancakes.’
 (Mchombo 2004: 80-81)

The data in (47)-(48) in combination suggest that bare direct objects in Turkish do not agree, whereas accusative-marked direct objects do. One reservation needs to be made here however, which is that, judging from (46), the kind of agreement involved here is one that is covert, i.e. phonologically null.

2.2.4.2 *A, P and N*

I have demonstrated in section 2.1.5 that adjectives can assign case to their objects. But crucially, the object cases that adjectives can assign is restricted to inherent cases; they cannot assign accusative case. I give the relevant examples in (49).

- (49) a. [[Övgü-ye layık] bir kişi] böyle-dir.
 [[praise-Dat worthy] a person] like this-EpCop
 ‘A person worthy of praise is like this.’
 b. [[Ev-im-de gizli] belge-ler-i] yak-tı-m.
 [[house-1sg-Loc hidden] documents-pl-Acc] burn-Past-1pl
 ‘I burned the documents hidden in my house.’
 c. [[İş-in-den memnun] bir kişi] hep mutlu-dur.
 [[work-3sg-Abl pleased] a person] always happy-EpCop
 ‘A person pleased with his/her work is always happy.’
 d. *[[Deniz-i kıskanç] kız-lar] gel-di-ler.
 [[Deniz-Acc envious] girl-pl] come-Past-3pl
 ‘Girls envious of Deniz have come.’

Essentially the same observation can be made for postpositions ((50)) and nouns ((51)).²²

- (50) a. [Ev {-den/*-i} beri] koş-uyor-um.
 [house {-Abl/*-Acc} since] run-Prog-1sg
 ‘I have been running from the house.’
 b. [Ev {-e/*-i} doğru] koş-uyor-um.
 [house {-Dat/*-Acc} towards] run-Prog-1sg
 ‘I am running towards the house.’
 c. [Bana/*ben-i rağmen] gel-di-ler.
 [1sg.Dat/*1sg-Acc despite] come-Past-3pl
 ‘They came despite me.’
 (51) a. [Altın-a hücum] tüm Batı-yı kasıp kavur-du.
 [gold-Dat attack] all West-acc ravage-Past.3sg
 ‘The Gold Rush ravaged the whole West.’

²²There are postpositions that can assign genitive case as long as their objects are pronominal. In my view, the status of this genitive is rather obscure, considering the correlation between agreement and genitive case, and the fact that it is restricted to pronominal objects. These postpositions require their objects to be bare when these objects are non-pronominal. These bare objects do not seem to have nominative case. I refer the reader to section 2.3.2.2 for further discussion.

- b. [Parti-den istifa-lar] üye sayı-sı-nı iyice
 [party-Abl resignation-pl] member number-CmpM-Acc really
 azalt-tı.
 decrease-Past.3sg
 ‘Resignations from the party really decrease the number of members.’
- c. [Hata-lar-in-da ısrar] sen-i mahv ed-ecek.
 [mistake-pl-2sg-Loc insistence] 2sg-Acc devastation do-Fut.3sg
 ‘Insistence on your mistakes will devastate you.’
- d. *[Anadolu-yu mahv] Moğol-lar-ı tatmin
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3.g
 Lit. ‘The devastation Anatolia did not satisfy the Mongols.’

In earlier stages of generative grammar, this general pattern was handled by simply stipulating that adjectives and nouns—the so-called [+N] categories—do not assign accusative case, but that verbs (and in some language adpositions)—the so-called [–N] categories—do (see for instance Chomsky 1981: 48 ff.).

An explanatory account of why the pattern should be as it is can be reached by enriching the observations. Note that in (49)-(51), concomitant to the unavailability of accusative case is the absence of agreement. This pattern would fall out if accusative case were licensed through agreement, just like the other structural cases.

I will make one final remark concerning nominal structures. The situation is considerably more complicated for nouns. When there is no nominal agreement morphology on the noun accusative case is disallowed, as I have just shown in (51d). But this is not the whole picture. In contrast to adjectives and postpositions, nominal structures do allow agreement morphology, as I have shown above (e.g. (39)). When nominal agreement morphology is present on a nominal, accusative can be licensed on the complement. Compare (51d) with (52):

- (52) [Siz-in Anadolu-yu mahv-mız] herkes-i üz-dü.
 [2pl-Gen Anatolia-Acc devastation-2pl] everyone-Acc upset-Past.3.g
 ‘Your devastation of Anatolia upset everyone.’

This would have been the definitive demonstration of the link between accusative case and agreement, were it not for the fact that the agreement on the noun is with the *subject* and not the object. I defer the discussion of examples similar to (52) and their account till chapter 3, but the important observation remains: Accusative case cannot be licensed in the absence of agreement.²³

²³In many languages, such as the Romance languages, adjectives agree with the nouns they modify without assigning case to these nouns. This is because adjectives typically do not agree in person, but may only show number and/or gender agreement (see e.g. Baker 2008). Person agreement is necessary for case assignment to take place (see section 2.3).

2.2.4.3 What does the accusative object agree with?

If both nominative and genitive, as structural cases, are licensed through agreement with functional categories, T and D respectively, it would again make sense if accusative were also licensed through agreement with a functional category. What is this functional category? A short detour is necessary to answer this question. Burzio 1986 made an observation that links the assignment of accusative case and the agent θ -role. This has been referred to as Burzio's Generalization ((53)) (Burzio 1986: 178).

(53) *Burzio's Generalization*

All and only the verbs that can assign a θ -role to the subject can assign accusative case to an object.

The simplest implementation of this generalization would be postulating a functional category that both licenses the accusative case and assigns the agent θ -role. θ -roles are assigned by predicates and in a typical clause the verb is the predicate. Consequently, it would be quite natural if the functional category that we have postulated were associated with the verb or were a verb of sorts. In minimalist parlance, this element has been labelled v and the verbal domain has been construed as consisting of two layers, a VP layer, which is the projection of the lexical verb, and the vP , the projection of v (Larson 1988, Hale and Keyser 1993, Chomsky 1995, i.a.). v is assumed to agree with the direct object and assign it accusative case, covertly in English and Turkish, overtly in other languages, such as Chichewa (see Chomsky 1995).

2.2.5 Inherent case licensing

In the framework adopted here, the distinction between “the concepts “inherent/structural Case” are understood as in Chomsky 1981, 1986b: θ -related versus structurally determined” (Chomsky 2000: fn. 31). I have introduced the basic mechanism of inherent case assignment in (8). I repeat it here as (54).

(54) *Inherent Case Condition*

If A is an inherent case assigner, then A assigns case to an NP if and only if A θ -marks the NP.

A brief review of the cited works of Chomsky reveals that the framework does not offer much more on the issue of inherent case licensing.²⁴ The gist of the matter is that substantive categories exclusively assign inherent cases and the functional categories that were subjects of discussion in the previous sections exclusively assign structural cases: “Neither T nor v assigns inherent Case; other light verbs may, as may substantive categories” (Chomsky 2000).

I have shown that adjectives as a substantive category can only assign inherent case in section 2.1.5 with examples (18), (19) and (49). I had substantiated this claim for nouns with the data in (51) in section 2.2.4. In all these examples, we have seen that

²⁴Though Woolford (2006) proposes expansions and elaborations of the framework of Chomsky (1986b), I will not use that approach here. This is because the central idea in this chapter is that structural case assignment correlates with agreement and inherent case assignment does not, and Woolford (2006) does not have a bearing on these observations.

inherently case-marked arguments do not enter into agreement relations, which are crucial to structural case licensing. Thus, inherently case-marked noun phrases seem to be exempt from the processes involved in the licensing of structural case. The data in (55) further corroborate this.

- (55) a. Biz-e saldır-ıl-dı{-Ø/*-k}.
 1pl-Dat attack-Pass-Past{-3sg/*-1pl}
 ‘We were attacked.’
 b. Biz sev-il-di*(-k).
 1pl.Nom love-Pass-Past*(-1pl)
 ‘We were loved.’

In (55a), we see that the inherently case-marked argument *biz* does not agree with its predicate *saldır* ‘attack’, even though *biz* is the sole argument of this passive predicate. However, agreement is obligatory in (55b), where the verb *sev* also has one argument *biz*. The reason for this is that *biz* is structurally case-marked.

These observations, coupled with the observations from the previous section that structural case is associated with functional categories like T, D, and *v* (see also section 2.2.6), may be used to conclude that the substantive category V is responsible for assigning inherent case.

It appears, then, that inherent case licensing is substantially different from that of structural case. I will adopt this basic line of approach in this work.

2.2.6 Conclusion

In section 2.2, I have shown that structural cases rely on agreement relations between a functional head and the noun phrase that is assigned case. The inherent cases, on the other hand, do not rely on agreement, but are assigned through θ -marking. The substantive category that assigns a θ -role to an argument may also assign that argument an inherent case.

There is an important and interesting generalization that emerges from the discussion above. Notice that in our discussion of agreement and the ensuing structural case assignment, a picture comes to light whereby only the functional categories, namely C, T, D and *v*, agree. As can be seen in the discussion of inherent case, substantive/lexical categories, N, P and A, do not show agreement.²⁵ It is true that this last remark cannot be readily generalized to all languages. French adjectives do agree, for instance. However, works such as Baker (2008) propose what on the surface looks like the agreement of a lexical category, is also a property of functional categories associated with the lexical categories in question ((56)).

- (56) *Agreement is a property of functional categories.*
 Any lexical category can be immediately dominated by the projection of a functional head that matches it in gross categorial features. Functional heads, unlike lexical heads, can manifest agreement.

²⁵Baker (2003) argues that P should be classified as a functional category. The arguments presented there do not seem to carry over to postpositions in Turkish.

The presence or lack of agreement on a given lexical category can thus be related to the presence or lack of a functional category that can be associated with it. Under this approach, it may be argued that Turkish adjectives never bear agreement because Turkish lacks the functional category associated with adjectives that could manifest agreement. I will assume it to be true that agreement is a property of functional categories.

2.3 Case as a reflex of agreement

We are now at a point where we can make explicit what it means, in the generative framework, for structural case to be “a reflex of agreement” (Chomsky 2001). I will provide the reader with two accounts. First, I will present the ‘received’ view (i.e. Chomsky 2000, 2001, i.a.). Later, I will revise this in the light of Turkish data and Baker’s (2008) theory of agreement and concord.

2.3.1 Chomsky (2000)

In an agreement relation, there is typically a grammatical element that agrees, a verb for example, and an element that it agrees with, its subject for instance. The operation Agree is the mechanism that realizes the relation of agreement (Chomsky 2000, et seq.). It establishes a relation between a probe, a functional category such as T, D or v —linked to a lexical category—and a goal, the subject or object noun phrase that these categories agree with. In many languages, a verb potentially agrees with its subject in person, number and gender. Whether the verb is inflected in say first, second or third person depends on what the subject is. A first person singular subject will trigger first person singular agreement on the verb for instance. So, imagine that the probe has a set of φ -features (i.e. person, number and gender), but that, prior to agreement, it has no values for those features. I represented this as in (57).

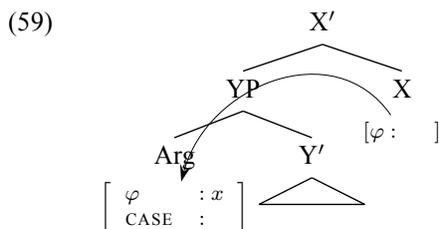
$$(57) \quad \left[\begin{array}{l} \text{PERSON} \quad : \\ \text{NUMBER} \quad : \\ \text{GENDER} \quad : \end{array} \right]$$

As for the goal, it has valued φ -features and Agree allows the unvalued φ -features of the probe to be valued by the goal. This reflects the fact that, in subject–verb agreement, the subject has intrinsic φ -features. For instance, the noun *Cem* is third person singular regardless of the verb it agrees with. In contrast to its intrinsic φ -features, a noun phrase has a case that varies with the verb that selects it. Therefore we assume that on top of the φ -features, the goal has an unvalued case feature. Then, before it has been assigned case, suppose that a noun phrase has a set a of features as in (58):

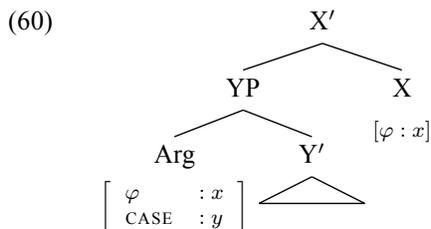
$$(58) \quad \left[\begin{array}{l} \text{PERSON} \quad : \quad 1 \\ \text{NUMBER} \quad : \quad \textit{plural} \\ \text{GENDER} \quad : \quad \textit{feminine} \\ \text{CASE} \quad : \end{array} \right]$$

So, the probe needs to value its φ -features and the goal its case feature. Suppose that for this to happen, the probe searches for an item with φ -features, the goal. The probe can

only scan the portion of the syntactic structure that it c-commands, its domain. There are two reasons for this restriction on the search space. The first is the assumption that the hierarchical structure of a sentence is derived piecemeal in bottom-up fashion. For instance, in a transitive sentence, like *You are killing me*, the verb and the object are combined to form a verb phrase. The other elements, i.e. the auxiliary and the subject are introduced into the derivation later. The operation that introduces items to the derivation of a sentence is called Merge. The second assumption is that items with unvalued features need to value their features as soon as they are merged into the derivation. These two assumptions combined yield the outcome that when a given probe is merged, there will not be any items than it can scan above it, because it will be the item that has been merged last. I schematize the foregoing as follows ((59)).²⁶



Two things happen when the probe encounters the goal. One, the probe values its φ -features with the values of the φ -features of the goal. Second, the goal is assigned case ((60)).



Strictly speaking, the goal does not receive its case from the probe. As Chomsky puts it: “Structural Case is not a feature of the probes (T, v), but it is assigned a value under agreement. . . The value assigned depends on the probe: nominative for T, accusative for v ” (Chomsky 2001). This reflects the true nature of structural case. Case is assigned to a noun phrase because it occupies a certain position, and that position is made visible through the probe–goal agreement relation.²⁷

When the features of the probe and the goal are valued, they become inactive. This means that they cannot enter into further Agree operations. In other words, only

²⁶The proposal is neutral with respect to specifier and complement positions. In this diagram I have chosen to demonstrate the agreement process with an argument in a specifier position.

²⁷There are alternatives within the same general framework which propose that case is also a feature found on the probes, such as Pesetsky and Torrego (2001). (Strictly speaking, there is no case feature according to Pesetsky and Torrego 2001 and Pesetsky and Torrego 2004. Case is a form of tense feature on nouns. But the point is that this tense feature is shared with the probes.) The evaluation of these various approaches does not appear to be central to the current discussion. In this book, I will sometimes use the term ‘assign’ loosely in expressions like “ v assigns accusative case to the direct object”, without any theoretical commitments.

elements whose features are not valued are active and take part in Agree.

This condition has implications for inherently case-marked noun phrases. Recall that an inherent case is assigned to a noun phrase by the substantive category that assigns a θ -role to that noun phrase. The case and the semantic role are assigned at the same time when the noun phrase is merged into the derivation. So for instance a dative-marked object will receive its dative case and goal θ -role at the stage of the derivation that it is merged. Because its case feature has been valued, the noun phrase will be unavailable to Agree operations for the rest of the derivation.

There is an other condition concerning the operation Agree: In order for the goal to receive case, the probe must have a complete set of φ -features, i.e. it must be φ -complete. A φ -complete probe has unvalued person, number and gender features, as opposed to just number and gender, for instance. Agreement should be in all these three features for structural case assignment to take place. A probe that is not φ -complete is defective. Agreement with a defective probe, then, will not result in case assignment.

This last condition needs to be somewhat modified. Turkish has no morphological manifestation of grammatical gender or any discernible grammatical phenomena attributable to gender effects.²⁸ Take, for instance, a category that very commonly enters into gender agreement relations, verbs. In Abkhaz, for example, the verb agrees with the subject in gender as well as person and number ((61)).

- (61) a. bə-c-weyt
2sg.Fem-go-Pres
'You go.'
- b. u-c-weyt
2sg.Masc-go-Pres
'You go.'
- (Dzhonua and Kiut 2003: 18)

In contrast, Turkish verbs show no comparable distinction with respect to gender ((62)). They agree with the subject in person and number only.

- (62) gid-er-sin
go-Aor-2sg
'You go.'

Pronouns, another category that commonly shows gender distinctions, do not display gender distinctions either in Turkish. Compare it with Japanese, that shows no agreement in gender (or any other φ -feature) but shows gender distinctions in its pronominal system ((63)):

- (63) a. o
he/she/it
'he/she/it'
- (Turkish)

²⁸Contrast this with the case of Chinese that has no morphological manifestation of case, but has phenomena the account of which relies on the assumption that Chinese does have case, even though never overtly expressed.

- b. kare / kanojo
 he / she
 'he/she' (Japanese)

Consequently, it is more natural to exclude gender from the set of φ -features to be considered in agreement in Turkish, than to assume that it is always covertly realized and has no apparent effects.

The second qualification concerns number agreement. Consider the sentence in (64a) below from Arabic (Hornstein et al. 2005). The authors assign it the simplified structure in (64b) (According to the VP-Internal Subject Hypothesis (Sportiche 1988, i.a.), the subject is generated in the lower VP). Note that in this sentence, the subject participates in agreement relations with two elements.

- (64) a. l-banaant-u kunna waaqif-aat.
 DefArt-girl.pl-Nom be.Past.3.Fem.pl stand.Part-Fem.pl
 'The girls were standing.'
 b. [_{TP} l-banaantu_i [_T T_{3.Fem.pl} [_{VP} kunna [_{TP} t_i [_T T_{Fem.pl} [_{VP} t_i waaqifaat]]]]]]]

The example shows that the case feature of *l-banaantu* 'the girls' in (64b) did not get valued after the φ -features of the participial T agreed with the φ -features of *l-banaant-u* in number and gender. If it had been assigned case, the subject would not be active for purposes of another Agree relation, i.e. with the higher T head. From this, it is possible to conclude that number and gender features are not central in the assignment of case. This leaves us with the person feature. The subject agrees with the matrix T in person, as well as number and gender, and is assigned nominative case. We may, therefore, conclude that it is person features that are crucial for case assignment through Agree.²⁹

One important output of Agree is the subsequent movement of arguments that enter into this operation. Consider (65).

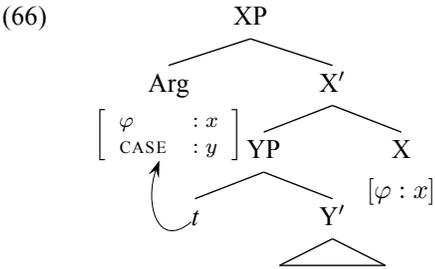
- (65) a. Cem-in {hızlı} kitap {*hızlı} oku-duğ-u
 Cem-Gen {quickly} book {*quickly} read-FNom-3sg
 'Cem's reading a book quickly'
 b. Cem-in {*hızlı} kitab-ı {hızlı} oku-duğ-u
 Cem-Gen {*quickly} book-Acc {quickly} read-FNom-3sg
 'Cem's reading the book quickly'

In (65a) the direct object *kitap* 'book' is not marked for case. Note that it is obligatorily positioned to the right of the adverb *hızlı* 'quickly'. Now, it is standardly assumed that bare adverbs mark the verb phrase boundary. This means that *kitap* is inside the verb phrase. In contrast, the accusative-marked object in (65b) is to the left of the adverb. This suggests that it has moved to the outside of the verb phrase.

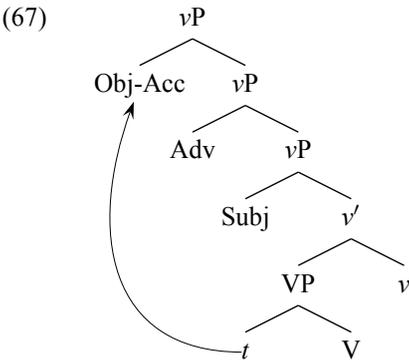
These data suggest that an argument moves from its base position due to a reason related to case. This has been formalized by assuming that the probe in an Agree relation optionally has what is called an EPP feature, which requires the goal that it

²⁹Bashir (1987) also offers arguments from Kashmiri to the effect that person features play a crucial role in determining the finiteness of a clause, but not number or gender features.

agrees with to move to its specifier. This displacement is termed the operation Move (or alternatively internal Merge). Then, (60) may be followed by (66).



I should clarify, in the light of Turkish data, one technical issue concerning the position in which the EPP feature is satisfied in the verb phrase. In Turkish, non-specific subjects are found to the right of bare adverbs (see e.g. (69b) below). In the hierarchical structure of the clause, the positions of the adverb and the subject correspond to the specifier of the vP for the subject and the position adjoined to the vP for the bare adverb. Now, crucially, a specific direct object, which would be marked in accusative case, is always found to the right of a bare adverb, as I have just shown in (65). This means, as I have pointed out above, that the object is, strictly speaking, outside the vP , quite possibly adjoined to the vP . Then, one has to assume that the position where the EPP feature of v is satisfied is the position adjoined to the vP . In Chomsky (2000) and his works after that, this EPP position is called the extra or outer specifier. In this work, I will assume this second specifier to be a position adjoined to the vP .³⁰ I show this in (67).³¹



One question that arises at this point is what the status of caseless objects (for instance such as that in (65a)) is with regard to agreement relations. I have implicitly

³⁰This problem does not arise under bare phrase structure theory (Chomsky 1995). In this theory, there are no levels of projection and all projections of a given head carry the same label as the head. This theory has been adopted in Chomsky (2000) and after. As I have abstracted away from that theory here, I have the need to address this complication that arises.

³¹In adjunction structures, the category of the node that an element adjoins to is iterated (Chomsky 1986a). Here, the adverb and the object adjoin to the vP , creating two additional vP projections.

assumed throughout this chapter that non-specific arguments without morphological case marking have no case. It is important to provide a solid footing for this assumption because this is an issue that has implications for our understanding of the agreement relations and their current implementation, the operation Agree. More importantly, any information on the case of direct objects that are not morphologically marked for case is relevant for the main thesis of this work, namely the Subject Agreement–Accusative Case Conjecture. If it turns out that caseless direct objects have an abstract accusative case, then the conjecture is weakened considerably.

One can look for an answer in two directions. These directions are provided by the link between structural case assignment and agreement. First, we can try to see whether non-specific arguments enter into agreement relations. Second, we can try to see whether non-specific arguments have a morphologically unrealized sort of structural case. If it turns out that non-specifics do not agree or that they do not have structural case, something must be making them invisible as a the goal for the probe. This means there is another constraint on Agree in addition to the ones discussed above. Below, I will demonstrate non-specific arguments do not agree. I will also provide a revised implementation of agreement relations and structural case assignment.

2.3.2 The revised account in Baker (2008)

2.3.2.1 The direction of agreement

2.3.2.1.1 *Non-specific arguments do not agree.* Whether non-specific objects enter into agreement relations or not is difficult to show because of the simple fact that object agreement is not morphologically marked in Turkish. However, whether or not non-specific arguments in general agree could be tested with subjects. Data suggests that non-specific arguments do not agree.

First let me provide some information on pleonastic agreement in Turkish. Third person singular marking is commonly observed on verbs which have inherently case-marked arguments as their sole arguments. We have seen above that inherently case-marked arguments do not agree. Third person singular marking is a pleonastic agreement marker used in these instances. (The third person singular value probably obtains through agreement with a silent expletive.) I gave several illustrative examples above. Take (3b) repeated below as (68).

- (68) Siz-e (bir adam tarafından) saldır-ıl-dı{-Ø/*-nız} .
 2pl-Dat (a man by) attack-Pass-Past{-3sg/*-2pl}
 ‘Your were attacked (by a man).’

Now, consider (69) (see also Kornfilt 1997: 385).

- (69) a. Cem {hızlı} kitap {*hızlı} oku-r.
 Cem {quickly} book {*quickly} read-Aor.3sg
 ‘Cem reads books quickly.’
 b. Adam-ı feci arı-lar sok-muş(*-lar).
 man-Acc terribly bee-pl sting-Evid(*-pl)
 ‘Bees stung the man terribly.’

- c. Arı-lar adam-ı feci sok-muş-lar.
 bee-pl man-Acc terribly sting-Evid-pl
 ‘The bees stung the man terribly.’

In (69a), we see that a non-specific object has to be positioned to the right of a VP adverb. As the VP adverb marks the VP boundary, this shows that the object is inside the VP. It bears no case marking. Similarly, in (69b), the subject *arılar* ‘bees’ occurs to the right of the VP adverb *feci* ‘terribly’. (Presumably, the subject position of the sentence is filled by a silent expletive element.) Like the object in the previous example, *arılar* is also inside the VP and is interpreted as non-specific. It is difficult to discern whether it bears case or not. The obvious handicap is that nominative case is phonologically null, so there is no way of seeing whether a non-specific subject actually has case marking or not. Ideally, it would have been possible to show this with a nominalization where a specific subject would be marked in the genitive and a non-specific subject would have no morphological case marking. Unfortunately, nominalizations do not allow non-specific plural subjects. Using a non-specific singular subject would have the consequence that we would be unable to see whether the subject agrees or not because of the fact that pleonastic agreement is also third person singular. However, using such a subject does give us a hint as to whether the non-specific subject in (69b) bears case or not. As (70) shows, the non-specific subject of a nominalization does not bear genitive case ((70b)), as opposed to a specific subject which does ((70a)). This may be generalized, *mutatis mutandis*, to (69b).

- (70) a. arı-nın Cem-i sok-ma-sı
 bee-Gen Cem-Acc sting-ANom-3sg
 ‘the bee’s stinging Cem’
 b. Cem-i arı sok-ma-sı
 Cem-Acc bee sting-ANom-3sg
 ‘a bee’s stinging Cem’

Furthermore, note that the non-specific subject in (69b) does not agree with the predicate *sok* ‘sting’. The marker on the verb is third person singular, rather than third person plural. Specific subjects, in contrast, do agree ((69c)).

These data suggest, then, that non-specific arguments, or in other words, objects and subjects that are not marked for case, are invisible to Agree in Turkish. How should this finding be incorporated in the implementation described in section 2.3.1? A revised account of Agree formulated in Baker (2008) appears to be a framework into which the Turkish data just presented fit rather naturally. I will lay out this account in the rest of this section.

2.3.2.1.2 *Variation in direction of agreement* Baker (2008) provides extensive evidence on the agreement properties of various functional categories from a wide range of languages and argues that cross-linguistic data imposes an account of Agree where direction of the probing is parametrized ((71)) (Baker 2008: 215).³²

³²In the generative linguistic framework, parameters are thought to be a part of Universal Grammar—the grammar of the human language faculty—which specify certain optional features, such as moving or not

(71) *The Direction of Agreement Parameter*

- a. F agrees with DP/NP only if DP/NP asymmetrically c-commands F, or
- b. F agrees with DP/NP only if F c-commands DP/NP, or
- c. F agrees with DP/NP only if F c-commands DP/NP or vice versa

The parameter would be set as (71a) in languages such as Turkish, the members of the Niger-Congo family, Greenlandic, Mohawk, Mapudungun, Berber, Fijian and Slave. It would be set as (71c) in English, along with dozens of languages of various families that he has surveyed, such as the other languages of Indo-European stock, Koekhoe, Hausa, Finnish, Abkhaz, Tzeltal and Hixkaryana. Finally, (71b) is attested in Burushaski (Baker 2008: 153 ff.).

Particularly interesting for our discussion on Turkish are the Zulu examples in (72) and the Chichewa examples in (73):

- (72) a. Ku-khuluma aba-khula.
10S-speak 2-elders
'There are speaking elders.'
- b. Aba-khula ba-ya-khuluma.
2-elders 2S-DISJ-speak
'(The) elders are speaking.' (Doke 1955: 13)
- (73) a. Alenje [a-ku-phik-il-á anyani zí-túmbûwa].
2.hunters [2S-Pres-cook-Appl-FV 2.baboons 8-pancakes]
'The hunters are cooking the baboons pancakes.'
- b. Alenje [a-ku-wá-phik-il-á – zí-túmbûwa] anyani.
2.hunters [2S-Pres-2O-cook-Appl-FV – 8-pancakes] 2.baboons
'The hunters are cooking the baboons pancakes.'
(Mchombo 2004: 80-81)

Baker explains that in Zulu the subject can remain in the specifier of the *v*P when it is indefinite (while the verb moves past it to T). In these instances, the verb does not agree with the subject, but shows pleonastic agreement ((72a)). In contrast, definite noun phrases do move to the specifier of the TP (and so, are to the left of the finite verb). These pre-verbal noun phrases do trigger agreement on the verb ((72b)). In the case of Chichewa, the verb does not agree with the direct object if the direct object is internal to the verb phrase ((73a)). If, on the other hand, the object is dislocated to a right or left-peripheral position, the verb does agree with the object ((73b)) (see also Bresnan and Mchombo 1987).

Contrast Zulu and Chichewa with English where probes may look downward. Illustrative examples for downward probing in English are sentences with expletive subjects. In these constructions, no argument of the verb moves to the specifier of the TP (the canonical position for subjects), that position being occupied by an expletive ((74)).

moving *wh*-question words in questions. The grammar of a specific language is the result of the specific setting of these parameters (Chomsky 1981, 1986b).

- (74) a. There is/*are a peanut on the table.
 b. There are/*is some peanuts on the table. (Baker 2008: 163)

Note that the auxiliary *be* in these sentences agrees with the nominative subject *peanut(s)* which is positioned lower than *be*.

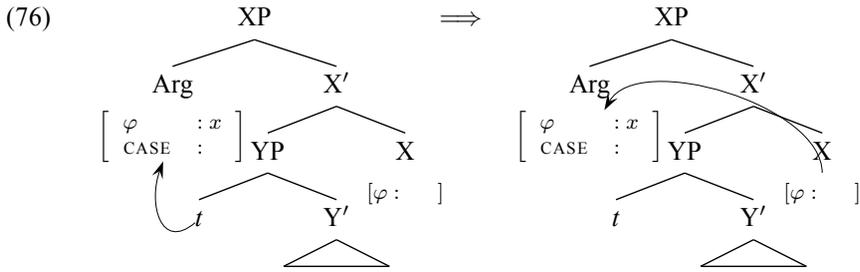
2.3.2.1.3 *Implementation* I will assume along with Baker (2008) that the probe always looks up in Turkish when searching for a goal with matching features. This configuration would minimally obtain when the goal is in the specifier of the projection of the probe. This implies that an operation other than Agree must be raising them to relevant positions before they enter into an Agree relation. This must be correct: As I show in (75), inherently case-marked objects that need not and do not enter into Agree relations may also raise out of the VP and receive specific readings.

- (75) a. Cem erken okul-a git-ti.
 Cem early school-Dat go-Past.3sg
 ‘Cem went to school early.’
 b. Cem okul-a erken git-ti.
 Cem school-Dat early go -Past.3sg
 ‘Cem went to the school early.’

Then, I will assume here that satisfying the EPP feature by raising a noun phrase to the relevant position does not have an Agree operation as a prerequisite. Arguments raise to the specifier position of the functional heads such as T, D or *v* to satisfy the EPP, thus become visible to these heads and enter into Agree relations with them.³³ The specifier position of a head *c*-commands the head by definition (see chapter 1 section 1.3.2). Consequently, under (71), arguments become visible for the functional heads they agree with in the specifiers of these functional heads, making it possible for these arguments to receive case. I represent these ideas on a tree diagram as follows ((76)):³⁴

³³Alternatively, one could assume that a semantically driven operation raises the arguments out of the VP—which is the domain where arguments receive non-specific/indefinite readings, the “domain of existential closure” (Diesing 1992: 77)—to the specifier positions in question.

³⁴The idea that agreement is strictly a specifier–head relation was fairly standard in the 1990s (see for instance Chomsky 1995). Later, this idea was scrapped in Chomsky (2000). Due to the system I have adopted here, it might look as if I am reverting back to that older idea of agreement. That is in fact not the case. Although Baker (2008) does attribute a special status to the specifier–head relation noting that “a particularly rich form of agreement becomes possible” in this case, the presence of agreement does not rely on the relation to be present. Baker (2008) assumes that predicative adjectives, for instance, agree with noun phrases that *c*-command them but are not positioned in their specifier. Adjectives and their associated functional projections do not project specifiers in Baker’s system. I will assume that a specifier–head relation is necessary for agreement because it yields an elegant formalism that maximally constrains the *c*-command relation between a probe and its goal and prevents over-generation. I have no special commitment to this idea beyond that.



Under this proposal, identifying the argument that will satisfy a given EPP feature is an issue that needs to be sorted out. Let me focus on the EPP feature of v as an illustrative example. This feature could be satisfied as soon as v has been merged by the theme argument—the only argument in the c -command domain of v . The subject will subsequently be merged into the derivation. This will yield a verb phrase structure like the following ((77)):

(77) $[_{vP} \text{Subj } [_{v'} \text{Obj } [_{vP} t V] v]]$

However, this makes the wrong prediction that it should be possible to have an accusative object in between a non-specific subject and a verb ((78a)). Non-specific subjects may only be adjacent to the verb ((78b)).³⁵

- (78) a. *arı Cem-i sok-ma-sı
 bee Cem-Acc sting-ANom-3sg
 'a bee's stinging Cem'
 b. Cem-i arı sok-ma-sı
 Cem-Acc bee sting-ANom-3sg
 'a bee's stinging Cem'

Alternatively, EPP satisfaction could be delayed until after the subject has been merged. In this order of operations, one would expect the closest argument to satisfy the EPP feature of v . As the subject is the closest argument, it would never be possible for the object to raise in this case. One way of avoiding this could be the following mechanism: According to Chomsky (1995), the raising of the lexical verb to v^0 makes the subject and the object equidistant from a given higher position outside the vP —assuming the outer specifier of vP is not contained by the vP . Suppose, then, first, that the verb does indeed raise to v^0 . The second component of the mechanism is the following: As mentioned in section 2.2.3.2, Baker (2003) proposes that nouns are categories that can refer to things. This property is reflected in syntax by the referential indices nouns bear. Then, also suppose that these indices are assigned to nouns as they enter a sentence derivation if and only if they are to be interpreted as referential. (I have shown above that non-specific noun phrases are not referential and are found inside the vP . Specific noun phrases, by contrast, are referential and are outside the vP .) It is nouns with referential indices which move to satisfy EPP features. Thus, in a derivation with two arguments bearing referential indices, either a referential subject or a referential object

³⁵Non-specific arguments in Turkish are strictly adjacent to the verb under neutral intonation. However, given the right context and intonation the scrambling of non-specific is possible.

could raise to satisfy the EPP feature of v . The raising of the subject could be ruled out on grounds of interpretation: Chomsky (2001) proposes that the EPP position of the vP is a position associated with a specific interpretation for arguments. If the subject raised to satisfy the EPP feature of v and the referential object remained in situ, this would bring about a deviant interpretation. An object in situ may only be interpreted as non-referential. Note that the fate of this solution depends on disabling the referential object from moving out of its base position, to satisfy the EPP feature of T, for instance. Then, suppose that the verb raises further into T, making anything within the TP equidistant to a position outside the TP. But let us assume that inside the TP an element x is closer to a position P that c-commands x than an element y if x c-commands y . And the closest potential element is the only candidate for satisfying the EPP. Under these assumptions, the subject is the closest element to the specifier of the TP and so is the only noun phrase that can satisfy the EPP. But suppose that the subject is frozen and cannot move after satisfying the EPP. It would bar the object from moving due to its closeness to the specifier of TP and it cannot move itself. This system seems to guarantee that the undesired derivation of raising the subject to satisfy the EPP feature of v will not succeed. I will not evaluate the validity of this network of assumptions in the light of all possible derivational scenarios here.

2.3.2.2 The case of non-specific noun phrases

2.3.2.2.1 *Case under adjacency* It follows, under this account, non-specific arguments do not receive any structural case in Turkish, because they never enter into Agree relations. Indeed, there is (to my knowledge) no substantial evidence indicating that they do. Arguably, the strongest argument to date relies on the pattern of case assignment in causative sentences. This pattern was first used in Dede (1984) and Taylan (1986) to argue that non-specific theme arguments have an abstract form of accusative case—I do not know of any treatment of the case of non-specific subjects. The pattern is as follows: When an intransitive verb such as *uyan* ‘wake up’ in (79a) is causativized as in (79b), a causer is introduced into the sentence, here *Deniz*. This argument receives nominative case. As for the argument which was the subject of the intransitive sentence, here *Cem*, it is marked in accusative case.

- (79) a. Cem uyan-dı.
Cem wake up-Past.3sg
‘Cem woke up.’
b. Deniz Cem-i uyan-dır-dı.
Deniz Cem-Acc wake up-Caus-Past.3sg
‘Deniz woke Cem up.’

Essentially the same thing is observed when a transitive verb with a dative object, such as *bak* ‘look’, is causativized: The now causee subject of the transitive sentence receives accusative case ((80)).

- (80) a. Cem adam-a bak-tı.
Cem man-Dat look-Past.3sg
‘Cem looked at the man.’

- b. Deniz Cem-i adam-a bak-tır-dı.
Deniz Cem-Acc man-Dat look-Caus-Past.3sg
'Deniz made Cem look at the man.'

When a transitive sentence with an accusative-marked object, such as *ye* 'eat' in (81a), is causativized, however, the case pattern is different: As before, the causer receives nominative case, but the causee receives dative case in this instance ((81b)), and not accusative as before.

- (81) a. Cem balıĝ-ı ye-di.
Cem fish-Acc eat-Past.3sg
'Cem ate the fish.'
- b. Deniz Cem-e balıĝ-ı ye-dir-di.
Deniz Cem-Dat fish-Acc eat-Caus-Past.3sg
'Deniz made Cem eat the fish.'

These data suggest that the selection of the case to be assigned to the causee is sensitive to the case of the object. Now, consider what happens in a sentence with a bare direct object ((82)).

- (82) a. Deniz Cem-e balık ye-dir-di.
Deniz Cem-Dat fish eat-Caus-Past.3sg
'Deniz made Cem eat fish.'
- b. *Deniz Cem-i balık ye-dir-di.
Deniz Cem-Acc fish eat-Caus-Past.3sg
'Deniz made Cem eat fish.'

The pattern is the same as that in (81): The causee receives dative case ((82a)). As shown in (82b), it cannot receive accusative case, as would be the case in a sentence where the object receives a case other than the accusative ((80)) or a sentence that does not have an object ((79)). This suggests that the bare direct object in (82), *balık* 'fish', has an abstract form of accusative case.

However, there is evidence against this conclusion, however, from the case assignment pattern in causativized light verb constructions. Consider, first, some relevant properties of the Turkish light verb construction (LVC) ((83)).³⁶

- (83) a. Cem bana küfr et-ti.
Cem 1sg.Dat cuss do-Past.3sg
'Cem cussed at me.'
- b. Benim bildiğim en ağır küfr-ü et-ti.
that I know most heavy swear-Acc et-ti
Lit. 'He did the worst cuss that I know.'
- c. [Cem-in bana e et-tiğ-i] küfür
[Cem-Gen 1sg.Dat e do-NSR-3sg] cuss
Lit. 'The cuss that Cem did to me.'

³⁶I refer the reader to chapter 1 section 1.2.3.2 for introductory information on the Turkish LVC.

In certain cases, the verbal noun (VN), which is the nominal component of the LVC, can be modified or be marked in accusative case ((83b)). It can even be extracted from the LVC ((83c)). The VN in these cases seems to be fairly independent of the light verb *et*, behaving quite like a direct object. Now consider the case assignment pattern when this LVC is causativized and the VN is bare ((84)).

- (84) a. Şimdi ben-i küfr et-tir-ecek-siniz!
 now 1sg-Acc cuss do-Caus-Fut-2pl
 ‘Now you are going to make me cuss!’
 b. Şimdi bana küfr et-tir-ecek-siniz!
 now 1sg.Dat cuss do-Caus-Fut-2pl
 ‘Now you are going to make me cuss!’

Both of the case marking patterns I have shown above are possible here: As in (84a) (uttered by the Turkish premier Recep Tayyip Erdoğan on 16-February-2008), the causee (*ben* ‘I’) may be marked in accusative case. This is comparable to the pattern in causativized intransitive clauses ((79) and (80)). Alternatively, dative case can also be assigned to the causee ((84b)), as in transitive clauses with accusative objects ((81)). According to Dede (1984) and Taylan (1986), example (84a) should have been ungrammatical, were the VN marked in an abstract form of accusative case. There are two conclusions to be drawn from this: First, assuming that bare objects have abstract accusative case leads to a paradox of sorts ((82a) versus (84a)). Consequently, this assumption should be ruled out. Second, the various case assignment patterns in causative sentences are not sensitive to the case of the objects, but something else.

The first conclusion essentially rules out a standard account. In this version of the theory of agreement and the ensuing case assignment, one has to treat non-specific (i.e. bare) arguments as follows: A given probe searches downward and agrees with the first active argument it encounters in its c-command domain. The probe does not have an EPP feature to satisfy so the argument remains in situ. Supposing that the morphological realization of case is done post-syntactically as dependent on whether the argument has moved (cf. Frampton and Gutmann 2001) a non-specific argument receives case from the probe but does not have it realized. It has an abstract version of nominative, genitive or accusative.

The conclusion that bare objects do not have abstract accusative case is potentially problematic due to what has been called the visibility condition (Chomsky 1986b), and has been widely assumed in the literature ((85)) (Chomsky 1995: 116).

- (85) *The Visibility Condition*
 A chain is visible for theta-marking if it contains a Case position (necessarily, its head)...

In other words, an argument must be assigned case in order for it to be visible for θ -role assignment. And every argument must be assigned a θ -role in compliance with the θ -criterion ((86)) (Chomsky 1981: 36).

(86) *The θ -Criterion*

Each argument bears one and only one theta-role and each theta-role is assigned to one and only one argument.

To avoid a conflict with the θ -criterion, one could assume along with others (e.g. Sezer 1991, Kornfilt 2003a) that all non-specific arguments in Turkish (bare subjects as well as bare objects) receive a morphologically unmarked general case assigned under some ‘proximity’ configuration (e.g. incorporation, adjunction, etc.) between a verb and an argument (see also Baker and Vinokurova 2008). Such configurations have been shown by Baker (1988:106-124) to satisfy the case requirement of noun phrases in many other languages. Note, however, that this “general” case is unlikely to be a structural case as Kornfilt (2003a) assumes, due to the link between structural case and agreement demonstrated in section 2.2 and the fact that non-specific arguments do not agree. As shown in example (69), only third person singular pleonastic agreement obtains with these arguments.

One question that the discussion above arises is why this kind of case assignment should be constrained to non-specific arguments (Marjo van Koppen, p.c.). My answer is along the following lines: As I have proposed in section 2.3.2.1.3, nouns with referential indices move to satisfy the EPP feature of the heads that have projected specifiers. Now, those nouns that have moved away from their predicates, will no longer have the option of receiving case through adjacency—unless, of course, we are talking about string adjacency here. Thus, these noun phrases will have to be assigned case by other means, i.e. through Agree. Because case probes look upward in Turkish, a moved noun phrase enters the search domain of a probe, either T or v (see section 2.3.2.1). Thus, ‘interpretive pressure’ brings about a chain reaction that results in Agree.

Thus, non-specific arguments comply with (86), by receiving case under adjacency to the verb. I do not have anything ‘deeper’ to say about this issue than this. It presents a theoretical lacuna in Turkish linguistics, which I will not attempt to fill. But before I close this section, I will present a brief review of what has been written in the literature on this topic.

2.3.2.2.2 The literature on the case of non-specific arguments Earlier works in Turkish linguistics, such as Dede (1984), Kornfilt (1984) and Taylan (1986), argue that bare objects have an abstract form of accusative case. This idea seems to have fallen from grace later on and we see works such as Sezer (1991) and Kornfilt (2003a) which propose that bare subjects and objects have a general weak case assigned under adjacency to the verb.

The latest work to my knowledge which addresses the issue of the case of bare arguments is Öztürk (2005). Öztürk adopts a rather radical approach and argues that bare noun phrases are not even arguments, meaning that they do not need, and hence, do not receive case. She maintains that they form complex predicates with the verb.

One of the arguments that Öztürk (2005: 17 ff.) advances is that arguments are referential (Chierchia 1998; Longobardi 1994), but that non-specific noun phrases are not. Thus, they cannot be arguments. Consider (87) (cf. (11)).

- (87) a. Ali kitab-ı oku-du. Reng-i kırmızı-ydı.
 Ali book-Acc read-Past.3sg color-3sg red-Past.3sg
 ‘Ali read the book. It was red.’
 b. Ali kitap oku-du. #Reng-i kırmızı-ydı.
 Ali book read-Past.3sg #color-3sg red-Past.3sg
 ‘Ali read a book. It was red.’

Note the direct object *kitab* ‘book’ in these examples. It may bear accusative marking or be bare. When it is bare, the third person singular possessive marker on *renk* ‘color’ cannot refer to it ((87b)), otherwise it can ((87a)). In the latter case, *kitab* must, then, be non-referential.

One seeming counter-example to this is the referential status of non-specific indefinites ((88)).

- (88) Ali bir kitap oku-du. Reng-i kırmızı-ydı.
 Ali a/one book read-Past.3sg color-3sg red-Past.3sg
 ‘Ali read a book. It was red.’

Note that, here, the third person singular possessive marker on *renk* can refer to *kitab* even though *kitab* does not have accusative marking. For examples like this, Öztürk proposes that *bir* ‘one/a’ has number information about the non-specific noun phrase, which partially meets the feature specification of the element that refers to it, the possessive marker in this particular case. Thus, coreference is possible, by means of accommodation.

Certain types of noun, such as language names, brand names, etc., seem to constitute a counter-example to this solution. They can be bare but be interpreted as referential nonetheless. I shown this in (89), where the possessive marker on *yapı* ‘structure’ refers back to *Adigece* ‘Adyghian’ which is bare.

- (89) Adigece_i öğren-mek isti-yor-um ama yapı-sı_i ben-i
 Adyghian_i learn-Inf want-Prog-1sg but structure-3sg_i 1sg-Acc
 korkut-uyor.
 scare-Prog.3sg
 ‘I want to learn Adyghian but its structure scares me.’

Another problem is posed by inherently case-marked non-specific noun phrases, such as those in (17a) repeated below as (90).

- (90) Cem erken okul-a git-ti.
 Cem early school-Dat go-Past.3sg
 ‘Cem went to school early.’

First, under the proposal that non-specific noun phrases need not and do not receive case, the presence of dative case on the non-specific object *okul* in (90) is surprising at the very least. Second, I have argued in section 2.2.5 that the assignment of inherent case relies on θ -marking. The inherent case- θ -marking link is a view that Öztürk (2005: 93 ff.) also adopts. Under this view, *okul* in (90) must be θ -marked to receive dative case. Given Öztürk’s view that non-specific noun phrases are non-referential

non-argumental components of complex predicates, and that argumenthood for noun phrases is established in θ -positions (Öztürk 2005: 93 ff.), the grammaticality of (90) presents a paradox. Öztürk solves this by claiming that examples like (90) are ungrammatical, and that inherently case-marked noun phrases are always specific, as in (91) (see Öztürk 2005: 27-28).

- (91) Cem okul-a erken git-ti.
 Cem school-Dat early go-Past.3sg
 ‘Cem went to the school early.’

In my opinion, the debate has not been resolved. Pending further research, I will keep to the assumption that bare noun phrases are arguments that receive a general case under adjacency.³⁷

2.3.2.2.3 *Complements of adjectives and postpositions* In addition to verbs, some adjectives and postpositions also take bare complements ((92)).

- (92) a. gaz dolu
 gas full
 ‘full of gas’
 b. bilim için
 science for
 ‘for science’

The above discussion could be extended to these bare complements of adjectives. These complements behave in a way comparable to the bare complements of verbs. They are non-referential, just like bare complements of verbs. The conditional clause in (93a) cannot refer to the gas, for instance.

- (93) a. [Gaz dolu] bir oda-da otur-ul-ma-z, #özellikle
 [gas full] a room-Loc sit-Pass-Neg-Aor.3sg #especially
 metan-sa.
 methane-Cond.3sg
 ‘One cannot sit in a room full of gas, especially if it is methane.’

Furthermore, they cannot be scrambled, like bare objects of verbs ((94)). They have to remain adjacent to the adjective, just as bare objects of verbs have to remain adjacent to the verb.

³⁷A distinction that was implicit throughout the chapter was that between nominative noun phrases and bare non-specific noun phrases (in particular non-specific subjects of sentences). This distinction is based on the following observations: As I have indirectly shown throughout the chapter. Both these noun phrases have no visible marking but they show different behavior. Bare non-specific noun phrases do not agree, are strictly left adjacent to the verb and mostly non-referential. Nominative noun phrases, on the other hand, agree, have more mobility and are referential. Thus, they behave like specific noun phrases that have structural case. Then, they happen to be bare because nominative case marking happens to be phonetically null, i.e. $-\emptyset$. Bare non-specific noun phrases, on the other hand, receive a general case under adjacency that has no marking, as has just been argued.

- (94) a. *[*e oku-mak*] *isti-yor-um kitap*
 [*e read-Inf*] *want-Prog-1sg book*
 ‘I want to read a book.’
 b. *[*e dolu*] *bir oda-da otur-ul-ma-z gaz.*
 [*e full*] *a room-Loc sit-Pass-Neg-Aor.3sg gas*
 ‘One cannot sit in a room full of gas.’

I will now turn to bare complements of postpositions. Few postpositions actually do take such complements. There seems to be only four (e.g. Göksel and Kerslake 2005: 215-217): *gibi* ‘like’, *kadar* ‘as...as’, *için* ‘for’ and *ile* ‘with’. These postpositions require their pronominal objects to be in genitive case ((95)).

- (95) *sen*(-in) gibi/kadar/için/ile*
 2sg*(-Gen) like/as...as/for/with
 ‘like you; as...as you; for you; with you’

It is something of a mystery how these elements should be treated. *Gibi* and *kadar* show some nominal behaviour. For instance, they can be affixed with the compound marker *-sI*, as in (96). This suggests a N+N compound analysis for these structures.³⁸

- (96) a. *Su gibi-si yok.*
 water like-CmpM NegExist
 ‘There is nothing better than water.’
 b. *Sen-in gibi-si yok.*
 2sg-Gen like-CmpM NegExist
 ‘There is none like you.’
 c. *Şu(n-un) kadar-in-ı söyle-yeyim...*
 that(-Gen) as...as-CmpM-Acc say-1sg.Opt
 ‘Let me say this much...’

As for *için* and *ile*, they are probably the strongest candidates for inclusion in the category adposition in Turkish. They are more like particles than adpositions proper however. They may phonologically cliticize onto their complements for instance. When they do, they obey rules of vowel harmony (like a suffix) but do not take stress (unlike a suffix). In these respects, they are like the question particle *mi* or the focus particle *DA*. A pronominal complement that they take need not be in genitive case in these cases ((97)).

³⁸Other Turkish postpositions also behave similarly:

- (i) a. *On-dan önce / sonra*
 3sg-Abl before / after
 ‘before/after it’
 b. *On-dan önce-si / sonrasi*
 3sg-Abl before-CmpM / after-CmpM
 ‘what is before/after it’

- (97) a. Cem ile, Cem-le; Cem için, Cem-çin (Old Anatolian Turkish)
 Cem with Cem-with Cem for Cem-for
 ‘with Cem, for Cem’
- b. sen(-in)-le; on(-un)-la
 2sg(-Gen)-with; 3sg(-Gen)-with
 ‘with you; with him/her/it’

I leave the question unanswered as to whether these two elements are adpositions or not, and whether their complements bear nominative or are bare, and whether the genitive case they bear is structural (see Asbury 2008: 43 ff. and Gehrke 2008: 20 ff. for a discussion of particles in Germanic languages). But, given the correlation between genitive and nominative cases and agreement demonstrated in this chapter and the lack of agreement in these contexts, it is unlikely that we are talking about any structural case here.

2.3.3 Conclusion

In this section, I have shown how the findings concerning case assignment laid out in section 2.2 are implemented in the literature. In this formalization, a probe, such as T, D or ν , with unvalued φ -features scans its domain for a goal with valued φ -features and an unvalued case feature. In Turkish, as well as many other languages of the world, the probe looks upwards when it scans. When the probe encounters a goal with matching features, it values its features and the goal is assigned case.

2.4 Conclusion

A noun phrase is assigned the structural case it bears through agreement with a functional head. This thesis, referred to as the George and Kornfilt Thesis, has been assumed as a basic premise in several recent works to provide an account of structural case assignment, particularly nominative and accusative cases. In this chapter, I have demonstrated the empirical foundations of this thesis using Turkish data. I have first defined structural case and distinguished it from inherent case. Next, I have shown that structural case is licensed through the agreement of a functional head and an argument being assigned case: Nominative is licensed through agreement with a T head. Genitive case relies on agreement with a D head, and accusative with a ν head. As for the licensing of inherent case, it is independent of agreement and relies on θ -role assignment. After having presented the empirical evidence in favor of the George and Kornfilt Thesis, I have shown how these observations are implemented in generative grammar by the Agree operation. This is an operation in which the φ -features of a functional head are valued by a noun phrase in the c-command domain of the functional head. I have also presented a revised version of Agree, where the direction of agreement may be upward as well as downward.

Structural case assigning nouns?

3.1 The Romans' destruction the city [sic]

In chapter 2, I have shown what it means for structural case to be a reflex of agreement. Using data from Turkish, I have demonstrated that structural case is licensed through the agreement of a functional head and an argument being assigned case: Nominative is licensed through agreement with a T head. Genitive case relies on agreement with a D head, and accusative with a ν head.¹ This dependence of structural case assignment on agreement has been referred to as the George and Kornfilt Thesis (Chomsky, 2001). Another issue I had discussed was case assignment inside nominal environments. In (1), I repeat the examples that I gave in that context:

- (1) a. [Altın-a hücum] tüm Batı-yı kasıp kavur-du.
 [gold-Dat attack] all West-Acc ravage-Past.3sg
 'The Gold Rush ravaged the whole West.'
- b. [Parti-den istifa-lar] üye sayı-sı-nı iyice
 [party-Abl resignation-pl] member number-CmpM-Acc really
 azalt-tı.
 decrease-Past.3sg
 'Resignations from the party really decrease the number of members.'
- c. [Hata-lar-ın-da ısrar] sen-i mahv ed-ecek.
 [mistake-pl-2sg-Loc insistence] 2sg-Acc devastation do-Fut.3sg
 'Insistence on your mistakes will devastate you.'
- d. *[Anadolu-yu mahv] Moğol-lar-ı tatmin et-me-di.
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction do-Neg-Past.3sg
 Lit. 'The devastation Anatolia did not satisfy the Mongols.'

¹Most of the technical terms used in this chapter have been defined in chapters 1 and 2.

I had given these examples to make two related points. The first point was that accusative case, as a structural case, relies on agreement, as opposed to the inherent cases. Note that in all the examples in (1), there is no agreement on the predicate of the subject noun phrases (i.e. *hücum* ‘attack’, *istifa* ‘resignation’, *ısrar* ‘insistence’ and *mahv* ‘devastation’), and that accusative case is barred in this context ((1d)). The second point was that substantive categories, here N, assign inherent cases, as opposed to structural cases being assigned through agreement with functional categories exclusively.

In a similar vein, note the English examples in (2), involving what are commonly called derived nominals.

- (2) a. *John’s criticism the theory
 b. John’s criticism of the theory (Chomsky and Lasnik 1995)

Chomsky and Lasnik (1995) explain the pattern in (2) as follows: Suppose that nouns are genitive case assigners. *Of* can be regarded as the realization of this genitive in English. On the basis of the distinction between structural and inherent cases, suppose that genitive case is an inherent case.² This way, the obligatoriness of *of* would follow naturally. Structural cases like the accusative, by contrast, are not realized by *of*. (2a) could then be viewed as the ‘attempt’ of *criticism* to assign structural case to *the theory*, an illicit operation.

This pattern looks rather natural when complemented by similar structures in other languages, such as Japanese and Korean, which are typologically (and for some linguists genealogically) akin to Turkish. Neither language allows accusative case assignment in nominals, as seen in (3) and (4), and the only case available for the object is the genitive, as in English.

- (3) a. *Gun-no sono machi-o hakai
 army-Gen that city-Acc destruction
 Lit. ‘the army’s destruction that city’
 b. Gun-no sono machi-no hakai
 army-Gen that city-Gen destruction
 ‘the army’s destruction of that city’
- (4) a. *John-uy yenge-lul kongpu
 John-Gen English-Acc study
 Lit. ‘John’s study English’
 b. John-uy yenge-uy kongpu
 John-Gen English-Gen study
 ‘John’s study of English’ (Choi and Wechsler 2001)

What flies in the face of this uniform picture in (1)-(4), however, is the fact that certain nouns in Turkish do seem to have the ability to assign accusative case—a structural case in Turkish as shown in the chapter 2 section 2.1—to their complements, as well as dative, locative and ablative cases. In chapter 1 section 1.2.3.2, I have called these nouns verbal nouns (VNs), and the constructions that they are the predicates of, the

²Note that this could not subsume the Turkish genitive, which is clearly structural as I have shown in chapter 2 section 2.1.

verbal noun construction (VNC). In (5) are two illustrative examples, with the VNCs headed by *istila* 'invasion' and *isabet* 'hit' in brackets.

- (5) a. [Siz-in Rohan-ı istila-nız] biz-i korkut-tu.
 [2pl-Gen Rohan-Acc invasion-2pl] 1pl-Acc scare-Past.3sg
 'Your invasion of Rohan scared us.'
- b. [Ok-un hedef-e isabet-i] bir mucize-ydi.
 [arrow-Gen target-Dat hit-3sg] a miracle-Past.3sg
 'The arrow's hitting the target was a miracle.'

Briefly, the VNC is a nominal that appears to be the 'pure' projection of the lexical category noun with no sign of being derived from a verb root. In that sense, it is rather unlike canonical Turkish nominalizations. It typically has two arguments, a subject marked in genitive case and an object marked in one of the Turkish object cases (see chapter 1 section 1.2.3).

The VNC is also attested in North and South Azerbaijani, two languages very closely related to Turkish ((6) and (7) respectively).³

- (6) a. %[Mongol-lar-ın Çin-i istila-sı] biz-i qorxut-du.
 [Mongol-pl-Gen China-Acc invasion-3sg] 1pl-Acc scare-Past.3sg
 'The Mongols' invasion of China scared us.'
- b. [Mongol-lar-ın Çin-ə hücum-u] biz-i qorxut-du.
 [Mongol-pl-Gen China-Dat attack-3sg] 1pl-Acc scare-Past.3sg
 'The Mongols' attack on China scared us.'
- (7) a. %[Cem-in su-yu israf-i] biz-i gorxut-di.
 [Cem-Gen water-Acc waste-3sg] 1pl-Acc scare-Past.3sg
 'Cem's wasting of water scared us.'
- b. %[Moğol-lar-ın Çin-ə hmlə-si] biz-i gorxut-di.
 [Mongol-pl-Gen China-Dat attack-3sg] 1pl-Acc scare-Past.3sg
 'The Mongols' attack on China scared us.'

In this chapter, I will be concerned with the question of how this accusative case can appear where it is supposed not to. I will focus exclusively on Turkish and assume that my claims are also valid for North and South Azerbaijani.

The easiest potential solution to this problem is to show that it is not a problem. One could do this by demonstrating that the accusative case being assigned in the VNC is not structural. It could be default or inherent. If one could show that the accusative is default case in Turkish, then one could claim that the theme argument of the VNC cannot be licensed case through the usual means available and is consequently assigned default case. This option is not viable. As shown in (8), Turkish assigns nominative case to noun phrases, in the lack of a case assignment relation. English uses accusative case for this purpose, as seen in the translation (see also Kornfilt 2005).

³I have observed some degree of variation among the speakers of these languages as to the grammaticality of the construction. I do not know whether this is an issue of dialectal or individual variation.

- (8) Kim o?
 who that
 ‘Who is it?’
 Ben
 1sg.Nom
 ‘Me’

Also, if one could show that accusative case is inherent in the VNC, then things would be quite ordinary in the light of the fact that nouns can assign inherent case.⁴ This enterprise does not look promising because of the pattern in (1). The nominals in these examples are all non-finite VNCs. They are examples of the VNC insofar as the definition I gave above is concerned: They are nominals headed by VNs that appear to be the ‘pure’ projection of the lexical category noun and select objects. As finiteness is defined with reference to subject agreement morphology in Turkish, they can be considered non-finite. The apparent lack of subjects is another property that goes along with that. (I will provide more evidence that these structures are indeed non-finite variants of the VNC in later sections.) Below, I give finite versions of these examples ((9)):

- (9) a. [Göçmen-ler-in altın-a hücum-u⁵] tüm Batı-yı kasıp kavur-du.
 [migrant-pl-Gen gold-Dat attack-3sg] all West-Acc ravage-Past.3sg
 ‘The migrants’ rush to gold ravaged the whole West.’
 b. [Hata-lar-ın-da ısrar-ın] sen-i mahv ed-ecek.
 [mistake-pl-2sg-Loc insistence-2sg] 2sg-Acc devastation do-Fut.3sg
 ‘Your insistence on your mistakes will devastate you.’
 c. [Muhafazakâr kanad-ın parti-den istifa-sı] üye
 [conservative wing-Gen party-Abl resignation-3sg] member
 sayı-sı-nı iyice azalt-tı.
 number-CmpM-Acc really decrease-Past.3sg
 ‘The resignation of the conservative wing from the party really decreased the number of members.’
 d. [Timur-un Anadolu-yu mahv-ı] Moğol-lar-ı tatmin
 [Timur-Gen Anatolia-Acc devastation-3sg] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3.g
 ‘Timur’s devastation of Anatolia did not satisfy the Mongols.’

Going back to the pattern in (1), one sees that inherent cases—namely, dative, locative and ablative—are all licit in a non-finite VNC, while the accusative is bad. Assuming that accusative case is inherent case in the VNC falls short of explaining this pattern.

One could also apply the passivization test to show that the accusative case is structural in the VNC. Under passivization, accusative-marked arguments change their case marking to the genitive. This is the same result that helped me diagnose the accusative

⁴This is how Siloni (1997) explains accusative case assignment in derived nominals in Hebrew.

⁵As shown in chapter 1 section 1.2.4 plural agreement is optional with third person plural animate subjects in Turkish.

as a structural case in chapter 2 section 2.1. I show this in (10).

- (10) a. siz-in Rohan-ı istıla-nız
2pl-Gen Rohan-Acc invasion-2pl
'your invasion of Rohan'
- b. Rohan-ın (sizin tarafınızdan) istıla-sı
Rohan-Gen (by you) invasion-3sg
'the invasion of Rohan (by you)'

Note that the agent can be expressed in this passive in a *by*-phrase, just like in verbal passives, and the object is promoted to subject. The reading is also that of a passive. Unlike verbal passives, however, this passive does not involve any passive suffix.

There is one glitch in this argument, however. When we attempt to get specificity contrasts in the VNC—another test I used to distinguish between structural and inherent cases—we see that accusative-marked noun phrases cannot lose their accusative marking ((11)). This is reminiscent of the behavior of inherently case-marked noun phrases with respect to specificity contrasts: Inherently case-marked arguments preserve their case marking at all times. This suggests that the accusative may well be inherent in the VNC.

- (11) a. siz-in ev-i işgal-iniz
2pl-Gen house-Acc occupation-2pl
'your occupation of the house'
- b. *siz-in ev işgal-iniz
2pl-Gen house occupation -2pl
'your occupation of a house'

If I were to leave it at that, I would opt for treating the accusative case as structural in the VNC, in view of the data in (1), the result of the passivization test in (10) and the fact that the VNC would be the only environment where the accusative would be inherent, if it were taken as inherent case. But, there is more data suggesting that the issue is clearer cut in my favor.

I showed, in chapter 2 section 2.3.2, that it is possible to assign non-specific as well as specific readings to inherently case-marked arguments. These different readings are associated with different syntactic positions for all arguments: When an argument is to the right of a bare adverb—which always demarcates the predicate domain, it is inside the predicate domain and receives a non-specific reading. By contrast, when it is to the left of a bare adverb, it is outside the predicate domain and receives a specific reading (see chapter 2 section 2.1).

When we study the VNC from this perspective, we see that no object argument is allowed to receive a non-specific reading in the VNC. Note that in (12), the object *ev* 'house' is not allowed to occur in the position where a non-specific noun phrase would occur, i.e. to the right of a bare adverb. It may only occur to the left of a bare adverb, a position where specific objects are found.

- (12) a. siz-in ev-i hızlı işgal-iniz
 2pl-Gen house-Acc quickly occupation-2pl
 ‘your quick occupation of the house’
 b. *siz-in hızlı ev(-i) işgal-iniz
 2pl-Gen quickly house(-Acc) occupation-2pl
 ‘your quick occupation of the house’

So, these data show us that the ungrammaticality of (11) is simply due to the fact that specificity contrasts are not available in the VNC, not because accusative case is inherent in the VNC. Then, I conclude, in the light of the data in (1) and the result of the passivization test in (10), that accusative case is structural in and outside the VNC.

To sum up this introductory discussion, it is clear that the accusative case in the VNC is a structural case, and neither default nor inherent. As such, it presents a problem vis-à-vis case assignment patterns in nominal constructions in languages like English, Japanese, Korean and other much studied languages. In these languages, accusative case assignment in nominals is simply not allowed. The solution that I propose to this puzzle is, in a few words, the following:

When one compares the examples in (1)-(4), where the accusative is disallowed, with those in (5) and (9), where accusative case is allowed, one sees that the predicate nouns in the VNCs in (5) and (9) bear nominal agreement morphology. Following this observation, I adopt a generalized version of the George and Kornfilt Thesis and claim that one functional head that is the source of agreement can be responsible for more than one structural case in a given domain that shows agreement. The functional head that hosts the subject agreement features (D^0 in the VNC) somehow activates the functional head with which the object agrees ($Pred^0$ in the VNC). I will express this as in (13).

(13) *The Jump-start Hypothesis (JuSH)*

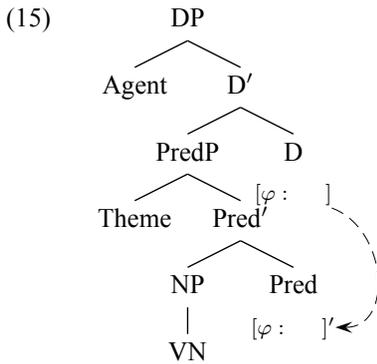
In a finite domain, the agreement capability of each agreeing functional head—and the potentially ensuing assignment of case—is activated by a single source of φ -features.

As the implementation of this idea, I propose that the φ -features found on the D head in the VNC are passed on to a functional head found in the syntactic structure of the VNC, $Pred^0$, by means of a φ -feature inheritance mechanism, before D agrees with the subject. Subsequently, D and $Pred^0$ agree with the subject and the object, respectively, this resulting in case assignment to these arguments. I call this operation Jump-start ((14)):

(14) *Jump-start*

Clone the unvalued φ -feature set of functional head x and paste it onto functional head y .

I schematize the application of Jump-start in the VNC as in (15).



The chapter is structured as follows. In section 3.2, I will discuss at great length and eventually rule out a possible explanation of the availability of accusative case in the VNC that I call the Abstract Light Verb Hypothesis (ALVH). This hypothesis involves postulating a v in the VNC that can agree with the object and assign it accusative case. In section 3.2.1, I discuss a proposal by Sezer (1991), basically claiming that the VNC is in fact a light verb construction with an empty verbal head and a nominal complement. In section 3.2.2, I discuss a different implementation of Sezer's (1991) main idea. In section 3.2.3, I turn to a Distributed Morphology-style implementation of the ALVH. In section 3.2.4, I voice my final objections to the ALVH. There I demonstrate that the ALVH faces some insurmountable problems. I advance my own proposal, which I have briefly outlined above, in sections 3.3 and 3.4. There, I first propose a syntactic structure for the VNC that involves a syntactic projection specialized in realizing the predication relation, called PredP. I show that postulating this projection helps explain many observations concerning the VNC. Next, I introduce the JuSH and the operation Jump-start as the technical implementation of this idea.

3.2 The Abstract Light Verb Hypothesis

In chapter 2, I have argued that accusative case is assigned to an argument when that argument agrees with v , the functional category heading the verbal domain. If we adopt that mechanism for accusative case assignment in the VNC, and assume that there is a (covert) verb in this environment, it may be possible to account for this problematic accusative case. Dub this the Abstract Light Verb Hypothesis (ALVH). I approach this strategy with a substantial but healthy degree of suspicion. In the sections that follow, I will discuss two ways of implementing it. The first builds on fairly standard assumptions about word structure and the architecture of grammar. It has been adopted by Sezer (1991) in Turkish linguistics. The second is based on Distributed Morphology, which is a more 'alternative' approach. I will try to show that neither option is viable.

3.2.1 Sezer (1991)

There are essentially two ways of getting a verb into the VNC if one adopts standard generative theoretical assumptions. The first is to assume that the VN is derived from

a verb root. From this perspective, the VNC predicate would be a nominalization of sorts and it would not be out of the ordinary for it to assign accusative case. The second is to assume the exact opposite and assume that the VN is in essence a verb that has somehow been derived from a noun.

I do not think that the first option is viable. This is mainly due to the nature of the VNC predicate, the verbal noun. As I had briefly pointed out in chapter 1 section 1.2.3, VNs do not appear to be derived at all. They do not bear a derivational affix similar to those found on nominalizations or various kinds of deverbal nouns. The affix in question would demarcate the point where the verb turns into a noun, so to speak. This suggests that there is no such turning point in the VNC, i.e. VNs are simple nouns. Furthermore, there are no verbal bases that VNs could be traced to. These verbal bases would be comparable to the verbal roots that the predicates of standard Turkish nominalizations are derived from, and their existence might lead us to assume that there is a *vP* in the VNC that can be instrumental in assigning accusative case to the object. Zero-derivation from verbs (similar to the derivation of the English noun *run* from the verb *run*) is within the realm of possibility, but does not look like a viable option either: If VNs were zero-derived from verb roots, those verbs would be present in the Turkish lexicon. They are not, i.e. there is no such verb as *istila* ‘to invade’, only the noun *istila* ‘invasion’.⁶

By the same token, assuming that the VN is a verb zero-derived from a noun, as in the derivation of the Turkish verb *boya* ‘to paint’ from the noun *boya* ‘paint’, does not yield a reasonable outcome either. No verb *istila* ‘to invade’ exists, only the noun *istila* ‘invasion’. The whole enterprise of inserting a verbal layer looks rather counter-intuitive from this perspective.

However, I have shown in chapter 1 section 1.2.3 that the VNC is conspicuously similar to the LVC ((16)).

- (16) a. Siz Rohan-ı istila et-ti-niz.
2sg Rohan-Acc invasion do-Past-2pl
‘You invaded Rohan.’
- b. siz-in Rohan-ı istila-nız
2pl-Gen Rohan-Acc invasion-2pl
‘your invasion of Rohan’

Given this similarity, one would be tempted to assume that a VNC predicate is derived from an LVC predicate, if one had been looking for a verb, even though there is no apparent indication of that derivation. The derivation could proceed as follows: First, the LVC predicate is formed by compounding a VN, a simple noun, with a light verb. Next, the light verb is replaced by an abstract light verb of sorts, similar to the one that heads verb phrases, i.e. *v*, yielding a VNC predicate. Thus, under this analysis, the predicate of a VNC is not just a simple noun. It is a simple noun plus an abstract light verb, as in (17a). This gives us a verbal structure, analogous to the structure of an LVC predicate, e.g. *istila et* ‘invade’ as in (17b). We could label the resulting predicate as V.

⁶I will not entertain the possibility that there is a ‘cranberry’ verbal root that constitutes the base that a VN is derived from, but does not appear as a verb itself. I have personally counted 202 VNs that can take part in the VNC. That would mean postulating some 202 cranberry morphemes for each of the 202 VNs that can take part in the VNC.

- (17) a. $[_V [_{N} \textit{istila}] [_V \emptyset]]$
 b. $[_V [_{N} \textit{istila}] [_V \textit{et}]]$

Sezer (1991) follows exactly this line of reasoning. Assuming a link between the VNC and the LVC, he writes the following (Sezer 1991: 54):

In order to capture the verbal nature of the derived nominals we will propose the following derivation:

- (64) a. $(x (y)) [[\textit{istila}]_N \textit{et}]_V + \textit{Acc}$
 $(x (y)) [[\textit{istila}]_N \emptyset]_V + \textit{Acc}$
 b. $(x (y)) [[\textit{muayene}]_N \textit{et}]_V^7 + \textit{Acc}$
 $(x (y)) [[\textit{muayene}]_N \emptyset]_V + \textit{Acc}$

Derivations in (64)... do not alter the lexical category of the compound verb. Notice that since the derived nominal retains the lexical category of the source, the preservation of the structural case assignment property of the source need not be stipulated. It will be automatically copied to the derived verbal form. We can now safely maintain the condition that nouns, by themselves may not assign ACCUSATIVE case in derived nominals; only verbs can... the derived nominals in such cases are in fact syntactically verbal.

In the next section, I will argue against this proposal from the perspective of Chomsky (1970), which it seems to be inspired by. Then, in section 3.2.1.2, I will provide additional counter-arguments.

3.2.1.1 From the perspective of Chomsky (1970)

What Sezer proposes is a lexical derivation where the predicate of the VNC is derived from that of the LVC by replacing the light verb *et* with a covert counterpart (Engin Sezer, p.c.). The rationale of delegating the derivation of VNs to the lexicon can be traced back to Chomsky (1970). In that work, Chomsky focuses on the relationship between sentences, such as that in (18a), and the nominals in (18b) and (18c) which Chomsky terms derived and gerundive nominals, respectively:

- (18) a. The enemy destroyed the city.
 b. The enemy's destruction of the city
 c. The enemy's destroying the city

Chomsky (1970) objects to a syntactic derivation of (18b) from the structure underlying (18a) motivated on semantic grounds. As an alternative, he points to a cluster of properties that distinguish the two types of nominals which would immediately fall out given the following analysis: Derived nominals are listed as such in the lexicon and enter into no syntactic relationships with their semantically related sentences at all. The gerundive nominals, on the other hand, are produced by a structural transformation

⁷*Muayene et* [inspection do] means 'inspect'.

from an underlying sentence built on the same verb. Chomsky (1972: 161) writes the following:

If... we were to suppose that each nominal, gerundive or derived, is generated from an initial phrase-marker representing its semantic interpretation, we would fail entirely to explain why the gerundive nominals, with a regular semantic relation to the associated sentence, have the formal properties of sentences, whereas the derived nominals which would have a variety of different sources, exhibit the convergence of the properties just noted (i.e. in essence, the properties of noun phrases), differing from gerundive nominals in this respect. All of this would be simply a remarkable accident from this point of view.

It is not difficult to see the resemblance between the VNC and the derived nominal in (18b) that Sezer seems to have exploited. There is more to it than this superficial resemblance. Sezer motivates his adoption of a lexical derivation analysis by presenting two arguments, which can both be traced back to Chomsky (1970).

3.2.1.1.1 Derivational gaps The first argument is as follows. As evidence for the claim that derived nominals are derived in the lexicon whereas gerundive nominals in the syntax, Chomsky notes that while the latter are fully productive, the former are not. This is shown in (19).

- (19) a. John is easy (difficult) to please.
 b. John's being easy (difficult) to please (gerund)
 c. *John's easiness (difficulty) to please (derived nominal)
 (modified from Chomsky 1970: (6)-(8))

Gaps in productivity are typical of lexical operations. Gaps in derivational morphological paradigms are well-known. So, the explanation of the pattern in (19) would fall out naturally if one assumed derived nominals are derived in the lexicon.

Likewise, while Turkish nominalizations are fully productive, the VNC is not.⁸ I show this in (20).

- (20) a. Sekreter yazı-yı daktilo et-ti.
 secretary writing-Acc type-writer do-Past.3sg
 'The secretary typed the writing.'
 b. sekreter-in yazı-yı daktilo et-me-si
 secretary-Gen writing-Acc type-writer do-ANom-3sg
 'The secretary's typing the writing'
 c. *sekreter-in yazı-yı daktilo-su
 secretary-Gen writing-Acc type-writer-3sg
 'The secretary's type the writing' (Sezer 1991: 52, (60))

⁸Sezer claims that the VNC is "extremely limited". I consider this to be somewhat inaccurate. As I have mentioned before, I have counted 202 VNs that can take part in the VNC. 111 of these co-occur with accusative-marked objects. That is several times more productive than certain constructions that large portions of syntactic theory are built on.

It is possible to nominalize the predicate *daktilo et* ‘type’ ((20b)) in a way analogous to (19b). It is, however, not possible to use *daktilo* ‘typewriter’ as a predicate by itself in the VNC ((20c)). Just like the pattern in (19), this pattern would also fall out if it is assumed that VNC predicates are derived in the lexicon. Such gaps in productivity as the one in (20c) would then be expected. This does, then, lend credence to Sezer’s adoption of Chomsky’s (1970) view.

However, it is clear that this argument only suggests that the locus of the proposed derivation is the lexicon. It is entirely orthogonal to the issue of how VNs are actually derived. It does not tell us whether a VNC predicate is derived by process like that in (17a) or not. It is perfectly compatible with at least two more lexical derivations which are logically possible. Either of these derivations will account for the apparent link between the VNC and the LVC and the gaps in the productivity of the VNC. First, one can suppose that some VNs may and some other VNs must compound with *et*, and second, it may be that all VNs must compound with *et* and some may drop *et*.

3.2.1.1.2 *Adverbial modification* What would support Sezer’s (1991) thesis is the following—which brings us to the second argument: If the VNC predicate is essentially a verbal structure, then we would expect it to behave like a verb. It should allow all and only adverbs as modifiers, among other things. Indeed, this is the way that Sezer supports his proposal. He gives the data in (21) to argue that VNC predicates are verbal in nature, and pave the way for his account.

- (21) a. düşman-ın şehir-i hunhar-*(ca) istila-sı
 enemy-Gen city-Acc cruel-*(ly) invasion-3sg
 ‘the enemy’s cruel invasion of the city’
 b. doktor-un hasta-yı dikkatle / *dikkatli muayene-si
 doctor-Gen patient-Acc carefully / *careful examination-3sg
 ‘the doctor’s careful examination of the patient’ (Sezer 1991: 53-54)

It is possible to modify *istila* by an adverb, such as *hunharca* ‘cruelly’, but crucially not by an adjective like *hunhar* ‘cruel’. The same observation goes for the modification of *muayene*. Sezer (1991: 54) writes as follows: “What [(21)] shows is that what look like derived nominals are in fact behaving like verbs in allowing adverbial rather than adjectival modifiers”. I will show in various places below that the issue is not at all as clear-cut as Sezer makes it out to be. Note for the time being that VNs do allow adjectival modification and some non-VN nouns allow adverbial modification. This intriguing picture might be due to the properties of category P in Turkish or perhaps the actual lack of that category.

With this argument, Sezer echoes another argument from Chomsky, albeit in the exact opposite way: Chomsky notes that there is a divergence between derived nominals and gerunds in the kinds of modifiers they allow. Derived nominals allow adjectival modification, and gerunds adverbial ((22)).

- (22) a. John’s unmotivated criticism of the book
 b. *John’s unmotivated criticising the book (Chomsky 1970: 6)

Unfortunately, Sezer does not adopt most of the other arguments that Chomsky (1970) advances. I will, now, turn to these arguments.

3.2.1.1.3 *Semantic drift* The first argument relies on the observation that the relation between a derived nominal and the associated verb is rather idiosyncratic. Consider the examples in (23) from Chomsky (1970: 6):

- (23) a. revolve, revolving, revolution
 b. marry, marrying, marriage
 c. reside, residing, residence

While there is an obvious semantic drift away from the meaning of the verb in derived nominals, no such discrepancy exists between the verb and the gerundive nominal. From this perspective, the VNC is unlike derived nominal structures. Although, one could expect some semantic shift when the VN is used as a noun outside the VNC, I did not attest any semantic drift between the LVC and VNC, comparable to (23). The correspondence is more like that between a gerundive nominal and the associated sentence. This is unexpected under the view that VNs are derived in the lexicon. Although this point is relevant for a general discussion of the issue, the reader will probably notice that it is similar to the argument from productivity in that it is orthogonal to the issue of *how* VNs are actually derived, whether in the lexicon or elsewhere. But it is interesting because it contradicts Sezer's (1991) thesis.

3.2.1.1.4 *Aspectual markers* Another argument that Chomsky (1970) presents is built on the following fact: Derived nominals (just like simple nouns) cannot co-occur with aspectual markers, whereas gerundives can. I show this in (24), where the perfective auxiliary *have* cannot be used with the derived nominal *criticism*.

- (24) a. John's having criticized the book (Chomsky 1970: 6)
 b. *John's having criticism of the book

VNs cannot co-occur with aspectual markers either. As shown in (25), the perfective aspect marker *-miş*, for instance, cannot be suffixed to *istila*. This supports Sezer's (1991) lexical derivation thesis.

- (25) *Sauron-un Rohan-ı istila-mış-ı
 Sauron-Gen Rohan-Acc invasion-Perf-3sg
 Lit. 'Sauron's having invasion Rohan'

In fact, VNs cannot take any verb morphology. I will discuss this more extensively in section 3.2.1.2.4; suffice it to note here that this point is an interesting dilemma for Sezer: While it does suggest that VNs are derived in the lexicon, it is unexpected under the view that there is a covert verb in the structure of a VN and that the VN is actually a verb ((17a)).

3.2.1.1.5 *Pluralization* Another property of derived nominals that Chomsky (1970) uses is the fact that they allow plural morphology, unlike gerunds ((26)).

- (26) a. John's three proofs of the theorem (Chomsky 1970: 6)
 b. *John's three provings the theorem

The VNC is like English gerunds in this respect and unlike English derived nominals: VNs disallow the suffixation of the plural marker *-lar* ((27)).

- (27) ??siz-in Rohan-ı istila-lar-ınız
 2pl-Gen Rohan-Acc invasion-pl-2pl
 'your invasions of Rohan'

However, even though this jeopardizes the lexical derivation view that Sezer adopts, it is beneficial from a different perspective: It is normal for a VN to disallow pluralization if it is essentially a verb. What is problematic is an observation made by Grimshaw (1990: 54) that nouns like *invasion*, *destruction*, which she refers to as "complex event nominals", resist pluralization.

- (28) a. one exam, two exams
 b. the examination of the papers
 c. *the examinations of the papers

Thus even English derived nominals, which are diagnosed as nouns in the framework Sezer appears to have adopted, disallow pluralization in certain circumstances. This effectively neutralizes the positive effects of Chomsky's observation in (26a).

As things now stand, it is possible to conclude that Sezer's (1991) proposal is untenable, when viewed from the perspective of Chomsky (1970). The arguments from productivity and semantic drift do not address the question of how VNs are actually derived, and the arguments from adverbs and aspectual markers turn out to be against Sezer. The argument from pluralization seems to have no beneficial effect. Thus, the only thing that one could take as suggestive of the fact that a verb could indeed be present in the VNC is the very phenomenon that we are trying to account for: the possibility of having accusative-marked objects in the VNC. This, however, clearly makes the discussion circular.

To the further detriment of Sezer (1991), there is a whole other range of counter-arguments to be advanced. I will now present these.

3.2.1.2 Other objections

3.2.1.2.1 *Modifiers* Recall that Sezer gives the data in (21), repeated here as (29), to argue that VNC predicates are verbal:

- (29) a. düşman-ın şehir-i hunhar-*(ca) istila-sı
 enemy-Gen city-Acc cruel-*(ly) invasion-3sg
 'the enemy's cruel invasion of the city'
 b. doktor-un hasta-yı *dikkatli / dikkatle muayene-si
 doctor-Gen patient-Acc *careful / carefully examination-3sg
 'the doctor's careful examination of the patient'

However, my judgments about (29) and the other Turkish data I present here suggest that the state-of-affairs is not as neat as Sezer would make them out to be. This also goes for the judgments of Turkish speakers with whom I have consulted. Take, for instance, the examples in (30).

- (30) a. *siz-in Rohan-ı beklenmeyen / ansızın istila-nız*
 2pl-Gen Rohan-Acc unexpected / suddenly invasion-2pl
 ‘your unexpected/sudden invasion of Rohan’
 b. *Siz Rohan-ı ansızın / *beklenmeyen istila et-ti-niz.*
 2pl Rohan-Acc suddenly / *unexpected invasion do-Past-2pl
 ‘You suddenly/*unexpected invaded Rohan.’

In (30a), it is possible to modify the predicate by two types of modifiers, both an adjective like *beklenmeyen* ‘unexpected’ and an adverb like *ansızın* ‘suddenly’. The predicate of an LVC, by contrast, may only be modified by an adverb ((30b)).

If the structure of *istila* in (30a) were indeed as proposed by Sezer, i.e. [_V[_N*istila*]_V ∅]], we would expect it to be modified only by verbal modifiers, just as the verb *istila et* is in (30b). I schematize this falsified prediction in (31).

- (31) a. Adv/*Adj [_V[_N*istila*]_V ∅]]
 b. Adv/*Adj [_V[_N*istila*]_V *et*]]

One might try to circumvent this problem by attributing the impossibility of having adjectival modifiers in an LVC to the clausal nature of the whole construction. In other words, an adjective is not allowed to modify the VN in an LVC because the structure dominating the LVC predicate is entirely clausal (cf. Alexiadou 2001). This, of course, begs the question of why, then, the VNC allows *adverbial* modification at all. After all, apart from its intriguing predicate domain, it looks like a normal nominal structure that should only be modified by adjectives. Furthermore, this move would not prevent another problem concerning modifiers from surfacing. Note that the structure proposed by Sezer is an N topped by a V. Against the backdrop of the judgments given in (30a), this makes the prediction that both adverbial and adjectival modifiers should be allowed in the VNC simultaneously and in that order, assuming that adverbial modifiers target N and adjectival modifiers target V. This prediction is not borne out. As shown in (32), both adverbial and adjectival modifiers are allowed to modify the VN simultaneously, but some speakers allow one order and some others the other. There are also other speakers, including myself, who allow both orders:

- (32) a. %*Ork-lar-ın Rohan-ı istenmedik, ansızın istila-sı*
 ork-pl-Gen Rohan-Acc unwanted suddenly invasion-3sg
 ‘the orks’ unwanted sudden invasion of Rohan’
 b. %*Ork-lar-ın Rohan-ı ansızın, istenmedik istila-sı*
 ork-pl-Gen Rohan-Acc suddenly unwanted invasion-3sg
 ‘the orks’ sudden unwanted invasion of Rohan’

This seems to suggest that the material following the modifiers does not have an articulated internal syntactic structure similar to that which Sezer (1991) proposes. Note also that given that the complex form of Sezer (1991) is derived in the lexicon, it is

surprising that an adjective can see into it and modify the noun inside this complex form. By contrast, no adjective can modify a noun that forms the base of a denominal verb. Lexical forms are treated as a unit by syntactic processes. I will address the issue of how modifiers are licensed in the VNC in section 3.2.2.2.2.

3.2.1.2.2 *Case patterns* LVCs behave differently from each other. Thus, for example, some LVCs allow the extraction of VNs and some do not ((33)).

- (33) a. Cem Tanrı-ya dua et-ti.
Cem God-Dat prayer do-Past.3sg
'Cem prayed to God.'
- b. [Cem-in Tanrı-ya t et-tiğ-i] dua
[Cem-Gen God-Dat t do-NSR-3sg] prayer
'the prayer that Cem did to God'
- c. Siz kent-i istila et-ti-niz.
2pl city-Acc invasion do-Past-2pl
'You invaded the city.'
- d. *[siz-in kent-i t et-tiğ-iniz] istila
[2pl-Gen city-Acc t do-NSR-2pl] invasion
Lit. 'the invasion that you did to the city'

In (33b), the VN *dua* 'prayer' is relativized from inside the LVC in (33a).⁹ The result is grammatical. In contrast, extracting the VN *istila* 'invasion' in (33c) to obtain (33d) does not work. One can observe another difference along the same boundary: It is possible to mark the VN *dua* in the accusative ((34a)), but not *istila* ((34b)).

- (34) a. Cem bu dua-yı Tanrı-ya et-ti.
Cem this prayer-Acc God-Dat do-Past.3sg
'Cem did this prayer to God.'
- b. *Siz istila-yı kent(-i) et-ti-niz.
2pl invasion-Acc kent(-Acc) do-Past-2pl
'You invaded the city.'

Related to this, is the possibility of promoting *dua* to subject in a passive ((35a)), but not *istila* ((35b)).¹⁰

- (35) a. dua-nın Tanrı-ya ed-il-diğ-i
prayer-Gen God-Dat do-Pass-FNom-3sg
'that the prayer was made to God'
- b. *istila-nın kent(-in) ed-il-diğ-i
invasion-Gen city(-Gen) do-Pass-FNom-3sg
Lit. 'that the invasion was made the city'

⁹Turkish relative clauses come in two types: the so-called subject relative clause, used when subjects are being relativized, and the so-called non-subject relative clause, for other noun phrases that are relativized.

¹⁰I use a nominalized LVC here due to the fact that morphologically marked genitive case, the case of the subject of a nominal, makes it easier to show that the VN has been promoted to subject.

So, it appears that VNs in certain LVCs are sensitive to syntactic processes whereas certain others are not. The most natural way of accounting for this difference seems to be to assume that some LVC predicates are derived in the lexicon à la Sezer, while some others in the syntax (cf. Öztürk 2005: 55-56, also Balkız Öztürk p.c.).¹¹ Consequently, the lexical derivation that Sezer proposes to guarantee the preservation, in the VNC, of the case properties of its LVC counterpart cannot be applicable for each VNC-LVC pair. A syntactically derived LVC cannot be subjected to that lexical derivation. Then, for these instances where the proposed derivation cannot be applied, “the preservation of the structural case assignment property of the source” as Sezer (1991: 54) puts it—in other words, the preservation of the object case across an VNC-LVC pair—is not guaranteed. So, it would be quite a coincidence if the same case is assigned to the object in both a syntactically derived VNC, and its LVC counterpart, and this to be consistently the case for each such VNC-LVC pair without one single exception. If two unrelated elements were indeed responsible for case assignment to the object in the two constructions, we would have good reasons to expect to find at least one VNC where the object is assigned accusative case, with an LVC counterpart where the object is assigned dative case for example. This never happens. This shows that there must be an other ‘overarching’ mechanism at work than that proposed by Sezer.

The foregoing discussion implies that the LVC and the VNC are not derivationally related. What supports this conclusion is the following. Recall that in section 3.2.1.1 I have discussed the gaps in the productivity of the VNC and conceded that this lent some credence to Sezer’s lexical derivation thesis. This is due to Chomsky’s (1970) influential idea that gaps in productivity are typical of lexical processes, and that the limited productivity of derived nominals suggests they are derived in the lexicon. Gerunds, on the other hand, are held to be syntactically constructed, hence their full productivity. Now, this predicts that if there is a derivational link between the LVC and the VNC, VNCs should be derived from syntactically constructed LVCs in a fully productive manner. No gaps are expected. This prediction is not borne out ((36)).

- (36) a. Kadın arkadaş-ın-a telefon et-ti.
female friend-CmpM-Dat telephone do-Past.3sg
‘He telephoned his female friend.’
- b. [[kadın arkadaş-ın-a t et-tiğ-i] telefon] sayesinde
[[female friend-3sg-Dat t do-NSR-3sg] telephone] thanks to
yakala-n-dı.
catch-Pass-Past.3sg
‘He was caught thanks to the phone call he made to his girl friend.’
- c. *Cem-in kadın arkadaş-ın-a telefon-u
Cem-Gen female friend-3sg-Dat telephone-3sg
‘Cem’s phone to his female friend’

Note that in (36b) *telefon* ‘telephone’ can be extracted from the LVC in (36a). This implies that the LVC in question is a syntactic LVC. Contrary to what would be ex-

¹¹Unless, of course, one wants to have at least some grammatical entities bigger than single words to be put together in the lexicon. The standard view does not espouse such a conception of the lexicon and holds it to be more or less a list of words with some information about the grammatical properties of words.

pected it does not have a VNC counterpart, shown in (36c). This reinforces the idea that there is no derivational link between the LVC and VNC, which further emphasizes the oddness of the perfect match in the case patterns of the VNC and the LVC.

3.2.1.2.3 Inherent case I have shown in chapter 2 section 2.1, that dative, locative and ablative cases are inherent in Turkish. I have also shown in section 2.2.5 of that chapter that an element assigns inherent case to a noun phrase if and only if that element also θ -marks that noun phrase (Chomsky 1986b: 194). Now, the VN, as the predicate of the VNC, is the source of θ -roles. It follows from this that the inherent cases in the VNC are licensed by the VN without any need for an abstract light verb. Under Sezer (1991), this predicts a contrast between VNCs with (allegedly) lexically derived predicates and other VNCs where the object receives an inherent case. The former will be derived from the lexical entries of LVC predicates and will obligatorily have abstract light verbs, having subjected to Sezer's lexical derivation. In the case of the latter, as Sezer ascribes no other role for an abstract light verb than accusative case assignment, we can safely assume that it is not present. One specific argument for the assumption that no light verb is present when there is an inherently case-marked object in the VNC is the following: Recall the intriguing pattern of case assignment in (34a), where it is possible to mark the VN in accusative case in the LVC. Predicates of the LVCs of this type seem to be constructed in the syntax. Then, if VNCs are derived from LVCs of this type, this derivation has to be in the syntax. With this in mind, consider (37).

- (37) a. Cem Tanrı-ya dua et-ti.
Cem God-Dat prayer do-Past.3sg
'Cem prayed to God.'
b. Cem-in Tanrı-ya dua-sı
Cem-Gen God-Dat prayer-3sg
'Cem's prayer to God.'

If the VNC in (37b) is derived from (37a) (by means of a syntactic derivation analogous to Sezer's 1991 lexical derivation) and had a light verb in it—in other words, if the structure of the LVC and VNC predicates were essentially the same—we would expect accusative case assignment to the VN to be possible in the VNC as well. This prediction is not borne out ((38)):

- (38) [Cem-in Tanrı-ya dua(*-y1)-sı] biz-e ümit ver-di.
[Cem-Gen God-Dat prayer(*-Acc)-3sg] 1pl-Dat hope give-Past.3sg
'Cem's prayer to God gave us hope.'

Then, VNCs with syntactically derived predicates where the object receives an inherent case do not have a light verb in them, but under Sezer (1991), VNCs with lexically derived predicates do. Under this conclusion, we would expect the former to be modified only by noun modifiers (because, basically, it is just a noun). By contrast, the latter should allow verb modifiers as well (because it is actually of the form $[_V[_N \text{VN}] \emptyset]$), assuming that the noun inside this complex predicate form is visible to modifiers. I show this in schematic form in (39):

- (39) a. Obj_{Dat} Adj/*Adv [_Nhücum]
 b. Obj Adj/Adv [_V[_Nistila] ∅]

This prediction is not borne out. As seen in (40), the VN may be modified by both types of modifiers in both cases.¹²

- (40) a. siz-in Rohan-a beklenmeyen / aniden hücum-nuz
 2pl-Gen Rohan-Dat unexpected / suddenly attack-2pl
 ‘your unexpected/sudden attack on Rohan’
 b. siz-in Rohan-ı beklenmeyen / aniden istila-nız
 2pl-Gen Rohan-Acc unexpected / suddenly invasion-2pl
 ‘your unexpected/sudden invasion of Rohan’

Then, if some VNCs are at all derived in the syntax from LVCs, and if these do not have any verbal elements in them, then the (putatively) lexically derived VNCs do not either.

3.2.1.2.4 *Distribution and morphological issues* Due to the near identity of the VNC and the LVC under Sezer (1991), the two constructions should have the same distribution. Thus, under his proposal, it should be possible, for instance, to use the form [_V[_Nistila][_V∅]] ‘invasion’ as the main verb of a clause, just like the form [_V[_Nistila][_Vet]] ‘invade’. This never happens. Hence (41) is out:

- (41) *Ork-lar Rohan-ı istila-dı.
 ork-pl Rohan-Acc invasion-Past.3sg
 ‘The orks invaded Rohan.’

In other words, Sezer does not constrain the occurrence of the VN to the VNC. In fact, constraining the occurrence of the VN to the VNC might just be impossible in this approach: One thing that Sezer (1991) ignores is that a verbal form needs to be nominalized if it is to be placed in a nominal environment. This means that a VN form under Sezer (1991) would need to be nominalized if it is to be placed in a VNC, as in (42):

- (42) [_N [_V [_N istila] ∅] –Nmnl]

However, this would violate Myers’s Generalization (cf. Myers 1984), given in (43) (from Pesetsky 1995: 75):

¹²LVCs with *hücum* as the predicate (and, consequently, VNCs headed by it) are of the syntactic type, as attested by the possibility of extracting *hücum*:

- (i) a. Asker-ler düşman-a hücum et-ti-ler.
 soldier-pl enemy-Dat attack do-Past-3pl
 ‘The soldiers attacked the enemy.’
 b. [Asker-ler-in düşman-a t et-tik-leri] hücum
 [soldier-pl-Gen enemy-Dat t do-NSR-3pl] attack
 ‘the attack that the soldiers did to the enemy’

(43) *Myers's Generalization*

Zero-derived words do not permit the affixation of further derivational morphemes.

So, in fact, the VN should only function as the main verb of a clause. This is, of course, the exact opposite of the distribution of a VN.

Furthermore, assuming that Sezer does somehow constrain its occurrence to the VNC, the VN should allow at least some verbal morphology, just like [_V[_N*istila*] *et*] does when nominalized. However, it does not. (44) provides one example.

- (44) a. *siz-in Rohan-ı istila et-me-diğ-iniz*
 2pl-Gen Rohan-Acc invasion do-Neg-FNom-2pl
 'your not invading Rohan'
 b. **siz-in Rohan-ı istila-ma-nız*
 2pl-Gen Rohan-Acc invasion-Neg-2pl
 Lit. 'your not invasion of Rohan'

While the nominalized predicate in (44a) allows the attachment of a negative suffix, the VN does not ((44b)).

Similar problems surface when one compares zero-derived denominal verbs, such as *boya* 'to paint' from *boya* 'paint' with the VNC predicates. Under Sezer (1991), the morphological derivation of these verbs should be structurally identical to that of VNs ((45)).

- (45) a. [_V [_N *boya*] [_V ∅]]
 b. [_V [_N *istila*] [_V ∅]]

Again under Sezer (1991), VNs are verbal forms that—as I have conjectured above in (42)—need to be nominalized to be placed in the VNC. This nominalization must involve a nominalization marker with zero phonological form (supposing that Myers' Generalization has no effect), because VNs simply do not bear any visible nominalization markers. But, zero-derived verbs like *boya* disallow this zero-nominalization à la VNC (and so do all other verbs in Turkish for that matter), which would generate a nominalization like (46) without any visible nominalization marker on the verbal base. It is puzzling why the VNC should allow this kind of nominalization.

- (46) **Cem-in duvar-ı boya-sı*
 Cem-Gen wall-Acc paint-3sg
 'Cem's painting the wall.'

Furthermore, just as all other verbs in Turkish, zero-derived verbs allow the whole range of nominalizations markers Turkish possesses (except the mysterious zero-nominalization), but the VNC disallows all kinds of nominalization but the zero-nominalization. I exemplify the pattern for the action nominalization in (47).

- (47) a. *Cem-in duvar-ı boya-ma-sı*
 Cem-Gen wall-Acc paint-ANom-3sg
 'Cem's painting the wall.'

- b. *düşman-ın Rohan-ı istila-ma-sı
 enemy-Gen Rohan-Acc invade-ANom-3sg
 ‘The enemy’s invading Rohan.’

Finally, zero-derived verbs are again like any other Turkish verb in that they allow the whole range of verbal affixes. Compare (41) with (48).

- (48) Cem duvar-ı boya-dı.
 Cem wall-Acc paint-Past.3sg
 ‘Cem painted the wall.’

These distributional and morphological problems cast a serious doubt on the VN form proposed by Sezer (1991).

3.2.1.3 Conclusion

In this section, I have evaluated Sezer’s (1991) account of accusative assignment in the VNC. The fundamental assumption of this proposal is the lexical derivational link between the VNC and the LVC. LVC is a verbal structure where accusative case assignment would be normal. If the VNC is derived from the LVC, accusative case would also be normal in the VNC. I have shown several inconsistencies of this thesis. In the next section, I will turn to another possible implementation of Sezer’s basic idea that derives the VNC in the syntax rather than the lexicon.

3.2.2 A syntax-based implementation of Sezer (1991)

3.2.2.1 A unified treatment of the light verb construction

As I have pointed out time and again in the previous sections, Sezer (1991) assumes that an LVC predicate is lexically derived (and is used as input for the lexical operation that yields the corresponding VNC predicate). I have challenged this assumption by providing data that suggests that there might be two types of LVC. The predicate of the first type appears to be derived in the lexicon—if we do assume after Sezer (1991) that there is some truth to the assumption that (some) LVC predicates are derived in the lexicon. The predicate of the second type of LVC, by contrast, is derived in the syntax. In fact, there are other pieces of data that raise the question of whether there is any truth to the assumption that there are LVCs with predicates constructed in the lexicon. These suggest that it is possible to analyse all LVC predicates as syntactically constructed elements. Consider, first, (49) and (50).

- (49) a. Cem Tanrı-ya dua mı et-ti.
 Cem God-Dat prayer Q do-Past.3sg
 Lit. ‘Was it prayer that Cem did to God?’
 b. Siz kent-i istila mı et-ti-niz.
 2pl city-Acc invasion Q do-Past-2pl
 Lit. ‘Was it invasion that you did to the city?’

- (50) a. Cem Tanrı-ya dua et-ti, şeytan-a — et-me-di.
 Cem God-Dat prayer do-Past.3sg devil-Dat — do-Neg-Past.3sg
 ‘Cem prayed to God, not to the devil.’
- b. Siz kent-i istila et-ti-niz, köy-ü — et-me-di-niz.
 2pl city-Acc invasion do-Past-2pl village-Acc — do-Neg-Past-2pl
 ‘You invaded the city, not the village.’

All LVCs allow the question particle (as well as other focus particles) to intervene between the VN and the light verb ((49)). All LVCs also allow gapping: In the second sentence in each example in (50), the VN has been deleted. Note that both the LVC in (49b) and that in (50b) are of the (putative) lexical type. Thus, even LVCs that appear to be lexically derived allow the VN some degree of freedom from the light verb.

I believe it is possible to reach a unified treatment of LVCs on the basis of these facts. Now, note that in all the (b) examples in (33)-(35), as well as (49) and (50), the VN seems to behave rather like a non-specific noun phrase complement. First, compare (34b) with (51).

- (51) Cem hızlı kitap(*-ı) oku-r.
 Cem quickly book(*-Acc) read-Aor.3sg
 ‘Cem reads books quickly.’

This example shows that a non-specific object, attested by its appearing to the right of the VP adverb *hızlı*, may not bear any accusative marking.

Next, compare (35b) with (52).

- (52) a. burada rahat kitap oku-n-duğ-u
 here comfortably book read-Pass-FNom-3sg
 ‘that one reads books comfortably here’
- b. *burada kitap rahat oku-n-duğ-u
 here book comfortably read-Pass-FNom-3sg
 ‘that one reads books comfortably here’
- c. burada kitab-in rahat oku-n-duğ-u
 here book-Gen comfortably read-Pass-FNom-3sg
 ‘that the book is read comfortably here’
- d. *burada rahat kitab-in oku-n-duğ-u
 here comfortably book read-Pass-FNom-3sg
 ‘that the book is read comfortably here’

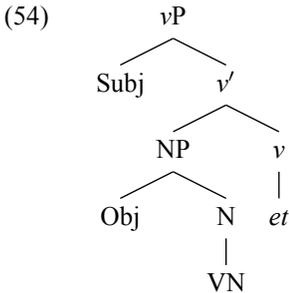
In Turkish, non-specific arguments do not move away from the object position in the verb phrase and do not bear morphological case marking. In (52a), we have the non-specific argument *kitap* in a passive structure. It is to the right of the VP adverb *rahat* ‘comfortably’ (i.e. it is inside the VP) and bears no morphological case marking. When we try to raise this non-specific argument out of the VP, this yields ungrammaticality ((52b)). Only a specific argument, i.e. an argument that bears morphological case marking, can (and must) raise out of the VP ((52c)-(52d)).

Finally, compare (49) and (50) with (53).

- (53) a. Kitap mı oku-yor-sun?
 book Q read-Prog-2sg
 ‘Are you reading a book?’
- b. Cem Deniz-e kitap ver-me-di, Cenk-e — ver-di.
 Cem Deniz-Dat book give-Neg-Past.3sg Cenk-Dat — give-Past.3sg
 ‘Cem did not give a book to Deniz, he gave it to Cenk.’

These examples show that non-specific complements may also be targeted by the question particle, and allow gapping.

One can capture the facts above quite naturally by treating the VN as a non-specific noun complement of the LVC in the (b) examples in (33)–(35), (49) and (50). Then, let us assume a structure along the line of (54) for the predicate domain of the LVC.



Here, the domain of the VN is an NP and the object enters the derivation in this projection. The light verb *et* occupies *v* and selects the maximal projection of the VN as its complement. This analysis provides only a rough characterization of the LVC, but it should suffice to construct the outline of an account of this structure—I will not attempt to give here an exhaustive survey of all VNs and their behaviour in the LVC.¹³

I believe that the differences in the two types of LVC are largely determined by the case of the object: When the VN has an inherent case to assign, the object receives that case and becomes inactive for passivization and accusative case assignment, as any inherently case-marked argument (see chapter 2 section 2.1). In this case, it will be possible for passivization and accusative case assignment to target the VN as a noun phrase. This will yield the LVC that I have tentatively referred to above as the syntactically constructed LVC. Alternatively, if the VN has no inherent case to assign, both the VN and the object are potential targets for syntactic processes like accusative case assignment and passivization. In these cases, the object seems to be the closest (consequently the best) target for these processes. So, while the object is subjected to some such syntactic process, the VN is unaffected by them. In these instances, since case assignment is required by the visibility condition which applies to nouns that require θ -roles as arguments, and the VN is a predicative element in the LVC, the VN need not receive any case. The possibility of assigning case to the VN is, then,

¹³For instance, (54) fails to account for why the LVC predicate cannot be modified by adjectives. Phrasal non-specific objects can take adjectives, so in principle adjectives should be able to target the NP projection that the VN heads. Furthermore, that the VN may be relativized out of the LVC may also be unexpected if the VN has the object generated in its maximal projection. See (175) in section 3.4.2.2.1 for a possibly more adequate structure of the LVC.

purely optional.

The conclusion of this discussion is that the predicate of an LVC is a complex element constructed in the syntax, and not in the lexicon as Sezer (1991) assumes. This implies that a syntax-based implementation of the ALVH based on standard assumptions about word structure and the architecture of grammar imposes itself as an alternative to Sezer's (1991) lexical derivation thesis for the VNC. I will not discuss this variant in great detail because I do not believe that it will work, for the reasons that I will spell out presently. What I will do is to discuss some of its main features.

3.2.2.2 *A syntax-based account of the verbal noun construction*

A syntax-based implementation of the ALVH will have to address a number of issues. These are essentially the problems pointed out above. First, it will have to ensure that it generates the same pattern of case assignment across LVC–VNC pairs. Sezer (1991) does this by proposing that the VNC is lexically derived from the LVC. Second, this implementation will have to generate the different behaviour of modifiers in the VNC versus the LVC. The VNC allows both adjectives and adverbs to modify the ‘predicate complex’, whereas the LVC allows only adverbial modification. Also, adverbs and adjectives can be scrambled in the VNC. Furthermore, VNCs with inherently case-marked objects do not differ from those with accusative-marked objects with respect to the kinds of modifiers allowed. Third, the syntax-based account will have to generate the behaviour of the VN in the VNC versus the LVC. In the LVC, the VN behaves very much like an argument noun phrase. In the VNC, the behaviour of the VN is nothing like this. A VN can be case-marked in the LVC, for instance, whereas in the VNC it cannot be. Fourth, this proposal will have to account for the morphological issues that arise in the VNC, such as the fact that VNs do not take verb morphology and the problem of placing a verbal predicate in a nominal environment without violating relevant principles and generalizations, such as Myers' Generalization. I will now address these issues from an ALVH perspective.

3.2.2.2.1 Case patterns The case patterns of the VNC and the LVC could be ‘fine-tuned’ to each other by means of some additional assumptions. First, one can assume that all the inherent cases and only these can be assigned by the VN itself. This ensures that a VNC–LVC pair has the same pattern of inherent case assignment to the object: They share the same VN as the predicative element. As for accusative case, it is assigned through agreement with *v* when the object does not receive an inherent case from the VN. This is a delicate issue for the following reason: One has to account for the fact that there is no distinction between VNCs with inherently case-marked objects and those with accusative-marked objects with respect to the kinds of modifiers allowed. The former kind of VNC does not need *v* for case assignment to the object, hence, everything else being equal, it would be more parsimonious to assume that *v* does not exist in this environment. One might choose to postulate a *v* in the VNC due to theoretical reasons independent of case assignment, such as the expression of eventivity, etc. of course, but there is some specific evidence indicating that *v* is not present in VNCs with inherently case-marked objects (see section 3.2.1.2.3). From this theoretical perspective, one would expect these VNCs to allow adjectival modification

only—but that is clearly not the case. VNCs with accusative-marked objects, on the other hand, will need a *v* to assign accusative case to the object. This structure should allow adverbial modification as well as adjectival. There are two ways to handle these two types of VNC in a unified manner. Both of these approaches would ensure that the same kinds of modifiers are allowed in all VNCs. The first is re-interpreting Sezer's (1991) proposal from a syntactic perspective: We can derive the VNC from the LVC in syntax, ensuring that we have a *v* in the VNC at all times. Second, we can attribute the possibility of adverbial modification in the VNC to the categorial properties of these adverbials and the semantic properties of the VN. If adverbials are not categorially adverbs, but actually adpositional or nominal structures, their presence in the VNC would not require the presence of a verbal element. The distribution and the nature of adverbials in Turkish gives some support to the second option, enabling us to abandon the first. This is where I turn to next.

3.2.2.2.2 *Modifiers* Even though there are no differences in modification between VNCs that are induced by case assignment, there do exist differences in the modification patterns of VNCs. Some disallow adverbial modification ((55a)), whereas some others do not ((55b)).

- (55) a. Cem-in saklambac-a çocuksu / *çocuksu bir şekilde heves-i
 Cem-Gen hide-and-seeK-Dat childish / *childishly yen-3sg
 'Cem's childish yen for hide-and-seeK'
 b. ordu-nun düşman-a sessizce / sessiz hücum-u
 army-Gen enemy-Dat silently / silent attack-3sg
 'the army's silent attack on the enemy'

The pattern seems to be influenced by the eventive reading of *hücum* 'attack' versus the non-eventive reading of *heves* 'yen'. I do not have a specific technical implementation of this intuition but the general outline of an account could be as follows: Eventive reading in nominals has been attributed to various different things in the relevant linguistic literature. Grimshaw (1990) proposes that this is due to an "event argument" which certain nouns select, by virtue of the event structure associated with them. In contrast, works like Alexiadou (2001) and Borer (2003) argue that eventive reading in nominals is the contribution of *v*.¹⁴ Thus, one may attribute the possibility of adjectival

¹⁴From the perspective of these works, it is surprising that a non-eventive noun like *heves* in (55) selects a complement. English nouns show a clear demarcation between the eventive and non-eventive types: While event nouns take objects, non-event nouns do not ((i)-(iii)):

- (i) a. the examination of the papers
 b. *the exam of the papers (Grimshaw 1990)
 (ii) a. constant defenders *(of the government's policies)
 b. frequent consumer *(of tobacco)
 (iii) a. this machine continues to be our only (*frequent) transmitter
 b. this machine continues to be our only transmitter (*to headquarters) (Alexiadou 2001: 129)

In section 3.3, I propose an analysis of the VNC where VNs exercise their predicative capacities through a projection responsible for syntactically encoding the relation of predication, PredP. It is PredP that enables

modification to either non-structural or structural factors. If non-structural factors are at work, adverbs may target the VN even if it is simply a noun. If it is structural factors that license adverbs then a verbal element will be necessary for adverbs to be licit in an environment. The fact that all VNCs with accusative objects are eventive and allow adverbial modification lends some support for the second option. Then, under this view, VNCs with accusative objects have a *v*, for assigning accusative case. This light verb will produce the event reading in the VNC. Adverbial modification is the result of the presence of this *v*. However, data from other kinds of nominals indicates that this account does not exhaustively cover the facts. Kornfilt (1997: 462 ff.) lists a number of strategies for deriving adverbs used in Turkish ((56)):

(56)

- | | | | |
|------|---|-------|--|
| i. | A –∅ | vii. | N – <i>leyin</i> |
| ii. | reduplication of N/A/V | viii. | A – <i>ane</i> |
| iii. | N – <i>An</i> (<i>Ar.</i> accusative of N) | ix. | V –(<i>y</i>) <i>ArAk</i> |
| iv. | A – <i>CA</i> | x. | A <i>halde/surette/şekilde/biçimde</i> |
| v. | A – <i>CAsInA</i> | xi. | Others (e.g. <i>aniden, ansızın, çok</i>) |
| vi. | N – <i>II</i> | | |

Adverbs from each of these classes may be used to modify deverbal (e.g., *korku* [fear-DerMor] ‘fear’, *ölüm* [die-DerMor] ‘death’) and non-deverbal nouns (e.g., *mutluluk* [happy-DerNom] ‘happiness’, *söz* ‘word’) of both event denoting and non-event denoting types ((57)).¹⁵

- (57) a. *çocuk-ça korku-lar*
child-CA fear-pl
Lit. ‘childly fears’
- b. *çocuk-çasına mutluluk-lar da var-dı elbet*
child-CAsInA happiness-pl also exist-Past.3sg of course
Lit. ‘There were also childish moments of happiness of course.’
- c. *Pavarotti-nin acı çek-erek / aniden / ansızın / sabah-leyin /*
Pavarotti-Gen suffer-ArAK / suddenly / suddenly / morning-leyin /
beklenmedik bir biçimde / yavaş yavaş ölüm¹⁶-ü
unexpectedly / slowly death-3sg
Lit. ‘Pavarotti’s suffering/suddenly/unexpectedly/slowly death in the morning’
- d. *Cem-in dost-ane / saf-iyane söz-ler-i*
Cem-Gen friend-ane / naïve-ane word-pl-3sg
Lit. ‘Cem’s friendly/naïvely words’

non-event VNs to take arguments. English seems to lack nouns like VNs that are non-derived but select arguments. Note that in the examples above, the nouns that take arguments are deverbal, i.e. *examination*, *defender* and *consumer*. One could analyse the structures they are in as having a verb phrase layer. Verbs are predicates par excellence that do not require the mediation of PredP (see Baker 2003).

¹⁵The zero-derived adverbs are essentially indistinguishable from adjectives, and the derivation with *-II* yields forms that are ambiguous between being an adverb and an adjective, so I will not include them in the discussion.

- e. ülke-nin iktisad-en yıkım-ı
 country-Gen economy-An destruction-3sg
 Lit. ‘the economically destruction of the country’

This set of data points to the influence of non-syntactic factors in determining the modifiers allowed in a given syntactic context, although it is not entirely clear what those factors are. One possibility is that Turkish does not have the category adverb per se, targeting the categories A and V. Instead, it makes use of functionally adverbial elements the distribution of which is governed, in all likelihood, by semantics.

This approach can be straightforwardly applied to complex adverbials like [A *halde/ surette/şekilde/biçimde*], which are syntactically nominal structures of the form [A N-Loc], and adverbials of the form V-(y)ArAK, which are gerundive forms (cf. Kornfilt 1997: 464-465). Among the other adverbials in (56), *-CA*, *-CAsInA* and *-leyin*, are possibly adpositional phrases, which are known to be able to modify nouns, as in the example *a room with a view*.¹⁷ One piece of evidence that supports this is the stress patterns of these elements. In Turkish, stress is word internal and falls on the final syllable of a given word. However, the stress patterns of the adverbial elements in consideration is different from this. It falls on the syllable immediately preceding the markers used to derive these adverbials ((58)).

- (58) çö'cuk-ça, çö'cuk-çasına, sa'bah-leyin, 'aniden, 'ansızın

This stress pattern is commonly observed with clitics in Turkish. Take, for instance, copular forms ((59)):

- (59) a. Aş'çı i-miş.
 cook Cop-RepPast.3sg
 ‘They say that he is a cook.’
 b. Aş'çı-y-miş.
 cook-Cop-RepPast.3sg
 ‘They say that he is a cook.’

In (59a), the copular form is separate from the predicative noun *aşçı* ‘cook’. Stress is on the last syllable of *aşçı*. Furthermore, *aşçı* and the copular form have their own vowel harmony patterns. In (59b), the copular form cliticizes onto *aşçı* and takes on the vowel harmony pattern of the predicate noun. The location of stress does not change however; stress is still on the final syllable of *aşçı* (see also Kornfilt 1996b). This suggests that the derivational morphemes that derive the adverbials under consideration are not affixes but cliticized elements. These clitics could be adpositions indicating manner, time, and so forth. There are two postpositions in Turkish that behave just like this: *ile* ‘with’ and *için* ‘for’ ((60b)).¹⁸

¹⁶Septics might claim that the possibility of modifying *ölüm* ‘death’ by adverbs is grounded in the fact that it is derived from the verb *öl* ‘die’, using the derivational suffix *-Im*. This is unlikely. The noun *yapım* ‘production’, derived from *yap* ‘make, do’ in the exact same way, for instance, cannot be modified by adverbs.

¹⁷This is how Siloni (1997) explains the occurrence of adverbials in derived nominals in Hebrew.

¹⁸These may actually be the only true adposition in Turkish. See chapter 2 section 2.3.2.2 for discussion.

- (60) a. 'Cem-le gel-di-m.
Cem-with come-Past-1sg
'I came with Cem.'
- b. Cümle gök ehl-i se'nün-çün tut-dı yas.
all sky denizen-CmpM 2sg:Gen-for hold-Past.3sg mourning
'All the denizens of the sky mourned for you.'
(Old Anatolian Turkish, Timurtaş 2005: 57)

Whatever these adverbial elements may actually be, it might be the factors that license them that are behind what makes it possible to stack and scramble adjectives and adverbials in the VNC (see for instance example (32)). The categorial features of the VN (i.e. [+N]) might be licensing adjectives, as well as the adverbials of nominal and adpositional character, and its semantic properties might be determine the adverbials that may modify it.¹⁹ The two types of modifiers would target the same syntactic node and hence it would be possible to scramble them.

Note that the preceding discussion, if it is on the right track, implies that the use of adverbials to diagnose a verb in the VNC is not reliable: A verb phrase does allow adverbial modification and it would be natural to expect the presence of adverbs in the verbal domain, but the presence of adverbials does not necessarily point to the presence of a verb phrase.

3.2.2.2.3 *Issues of morphology* Turning to issues of morphology, one can say the following.

If the VN and the light verb are two independent syntactic elements, then Myers' Generalization may be argued not to apply to this derivation. This is because what is involved is not lexical derivation, but syntactic selection and complementation. This would imply that (zero-)nominalization of the VN form (i.e. [_V[_Nistila][_V∅])) becomes a theoretical possibility—putting aside the other problems this raises pointed out to above.

The absence of verbal morphological markers in the VNC, however, remains difficult to account for. Under a syntactic approach to the VNC, the predicate domains of the VNC and the LVC are minimally different in that the light verb is covert in the former and overt in the latter. Consequently, the only way to account for the impossibility of attaching overt affixes, such as verbal affixes and overt nominalization markers, to the VNC predicate is to say that the lack of a phonological host (i.e. an overt light verb) in the VNC prevents the attachment of these morphemes.²⁰ What is a problem for this

¹⁹I do not know if this licensing mechanism can be generalized to adverbial modification in other languages. It can clearly not be generalized to English, where we see a categorial condition on the distribution of adverbs: They cannot modify nouns. Although, see section 3.2.3.4.2 for interesting *prima facie* exceptions.

²⁰As pointed out above, there are a number of verbs in Turkish that are zero-derived from nouns, such as *boya* 'to paint' from the noun *boya* 'paint'. One might object by arguing that these do not have phonological hosts either. The point here is that syntax does not 'see' the internal structure of these zero-derived verbs. In other words, syntax does not see a noun plus a null verb, but a simple verb, because the verb is constructed in the lexicon and handed over to the syntax, so to speak. In contrast, syntax does know that the VNC predicate is a noun plus a null verb, because it is constructed in the syntax. It is for this very reason that this 'phonological host' argument cannot be used for Sezer's proposal in accounting for the lack of morphological markers on the VN.

line of attack is the fact that agreement morphemes may attach to the VNC predicate. I do not think there is a comfortable answer as to why this is the case.

3.2.2.3 Conclusion

In this section, I have discussed a syntactic implementation of the ALVH. This approach has some degree of success in accounting for some of the problems that the VNC poses. It can explain why the VNC and the LVC have the same patterns of case assignment. It can also deal with some issues pertaining to the behaviour of modifiers in the VNC. However, there are some issues that cannot be accounted for with this approach. It is impossible to explain why it is possible to modify the predicate in the VNC with an adjective, but not in the LVC. It is also impossible to explain why the VN behaves like an argument noun phrase in the LVC, but not in the VNC. Some issues pertaining to morphology are also left unresolved. Implementing the ALVH using standard assumptions does not enable us to differentiate between the structure of the LVC and the VNC to a sufficient degree. Thus, it seems necessary to introduce a new set of assumptions to be able to account for the issues left open. These are the assumptions that are espoused by Distributed Morphology (Halle and Marantz 1993, i.a.). It is to this framework that I will now turn to.

3.2.3 A Distributed Morphology account

3.2.3.1 What is Distributed Morphology?

Distributed Morphology (DM) can be described, in the words of one of its foremost proponents, as follows (Harley to appear):

Distributed Morphology proposes to adopt a syntax-based approach to word structure. [It has] three foundational claims. . . :

- (1) a. DM is piece-based: Morphemes are independent entities that occupy terminal nodes of a hierarchical structure built by the syntax with normal syntactic processes.
- b. DM is realizational: The syntactic terminal nodes are fully specified for featural (and semantic) content. Each terminal node receives a pronunciation after the syntax is finished. The terminal nodes are thus realized post syntactically by morphemes (called ‘Vocabulary Items’).
- c. Vocabulary Items may be underspecified for feature content, and compete for insertion into a terminal node via the Elsewhere Principle. Hence a single VI could win competitions for nodes with quite different syntactic (and semantic) specifications.

The key point. . . is that wherever you see a morpheme, there must be a corresponding terminal node in the structural analysis of the sentence. Where you do not see a morpheme, there may well be a terminal node filled by

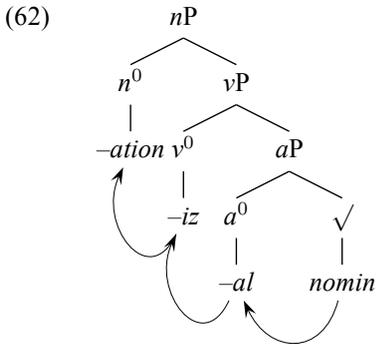
a \emptyset element; this happens all the time in English. But where you do see a morpheme, there had better be a terminal node.

There are only two broad classes of terminal nodes in DM: roots ($\sqrt{s...}$) and grammatical elements of various kinds (f-morphemes). Roots are a-categorial, acquiring a category by virtue of the f-morphemes they are merged with in the syntax. The category-creating f-morphemes are usually labeled with the lower-case version of the lexical category they correspond to: a verbalizer is a v^0 , a nominalizer is an n^0 , an adjectivalizer is an a^0 .

According to this approach, then, the noun *ship* and the verb *ship* would be derived from the same category neutral root \sqrt{ship} as follows ((61)):

- (61) a. [_{nP} n^0 \sqrt{ship}]
 b. [_{vP} v^0 \sqrt{ship}]

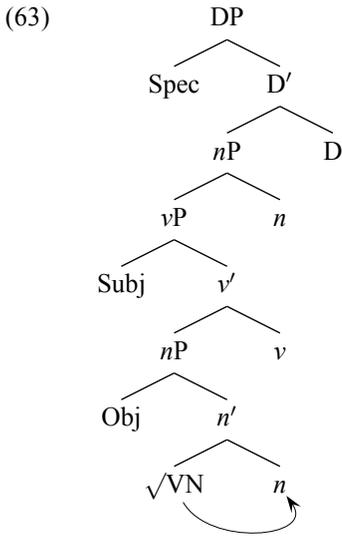
The structure of a word like *nominalization* would be as in (62) (cf. Harley to appear):



I will now turn my attention to a DM-based analysis of the VNC.

3.2.3.2 A preliminary attempt

A DM-style derivation of the VNC could proceed as in (63).



The VN starts off as a category neutral root. Next, this root is merged with the category creating f-morpheme n^0 , thus becoming a noun. The root incorporates into n^0 . Alexiadou (2001: 15), working within DM, cites adverbial modification and assignment of accusative case as among the most convincing arguments in favor of postulating a verb phrase inside derived nominals. From this perspective, then, it is very plausible that the VNC has a verb phrase layer. This is the projection headed by the light verb that is subsequently merged. If one wants to maintain the position, introduced in section 3.2.2.2.3, that verbal affixes do not attach to the VNC predicate because of the possible lack of a phonological host, one has to assume that the VN does not incorporate into the light verb. This for the simple reason that we need to distinguish the VNC predicate from zero-derived verbs which certainly do allow verb morphology. Under standard assumptions, one could argue that the difference between the VNC predicate and zero-derived verbs is that the former is derived in the syntax and the latter in the lexicon. However, the syntax-lexicon distinction does not exist in DM. Consequently, one has to address the problem by recourse to different tools. The only option seems to be to assume that the VN does not move to v . Moving the VN into v would provide the phonological host. In the subsequent stage of the derivation, a nominalizing head will be added to the structure. Finally, the VNC will be closed off by a DP layer, which is the projection that nominal agreement morphology corresponds to in syntax (see chapter 2 section 2.2.3.2).

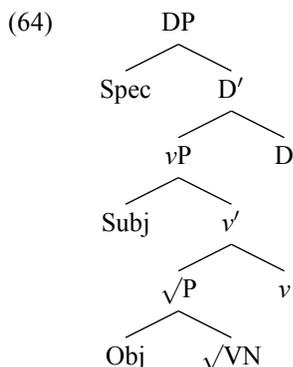
The reader will notice that in essence, this structure is not different from the LVC structure proposed above in (54). Thus, this analysis does not accomplish much by way of addressing the problems left unresolved in section 3.2.2.

3.2.3.3 Alexiadou (2001)

It is possible to make some headway by adopting an alternative approach to nominalizations within DM. Alexiadou (2001) assumes that predicates are category neutral,

and proposes that they are spelled out as verbs if inserted under clausal projections, such as T, and nouns if inserted under nominal projections, such as D. Furthermore, she proposes that there is no distinct nominalization node in the syntactic structure of a nominalization. At a separate component of grammar termed Morphological Structure, “identical or distinct nominal affixes attach to positions that differ in height” in the hierarchical structure of the construction, yielding the different kinds of nominalization.

First, let me apply these two components of this proposal to the DM analysis of the VNC in (63). First, suppose that a VN is categorially non-specified in a VNC. I had established, in section 3.2.2, that a VN behaves like a noun in the LVC. We are assuming that it is category neutral in the VNC. Next, suppose that there is no nominalization node in the structure, because the nominalization affix is inserted at Morphological Structure. Leaving the rest of the structure in (63) intact, this gives us a structure along the line of (64) (cf. Alexiadou 2001: 19, (36)).



Crucially, here, there is a *vP* layer, reflecting the eventive nature of VNCs with predicates such as *istila*. This projection is absent in nominals that are not eventive.

I will now discuss whether this last analysis accounts for the facts better than the analysis presented in the previous section. There are four issues to be addressed: First, the parallel patterns of case assignment between the VNC and the LVC; second, the kinds and behaviour of modifiers in the two constructions; third, the difference in the behaviour of the VN in the two constructions; and finally, issues pertaining to morphology.

3.2.3.3.1 Case patterns The account provided in section 3.2.2.2.1 as to why patterns of case assignment in the LVC and the VNC are the same can be quite easily incorporated into the current analysis: All the inherent cases and only these can be assigned by the VN itself. This ensures that a VNC–LVC pair has the same pattern of inherent case assignment to the object: They share the same VN as the predicative element. I will assume that the fact that the VN has no category in the VNC has no bearing on θ -role assignment and inherent case assignment that is parasitic on θ -role assignment. Accusative case, on the other hand, is assigned when the object does not receive an inherent case from the VN, through agreement with *v*.

3.2.3.3.2 *Modifiers* As to the behaviour of modifiers in the VNC, one could account for these facts by assuming, as in section 3.2.2.2.2, that adverbs are structurally post-positional phrases in Turkish. Alternatively, one can assume here that the VN, being underspecified for category, could be targeted by both adjectives and adverbs. The semantic properties of the VN license these modifiers. This immediately helps us account for why adverbs can be scrambled with adjectives in the VNC. They target the very same node. One advantage of this alternative analysis is to provide some headway towards accounting for other facts. First, the VNC predicate can be modified by adjectives, whereas the LVC predicate cannot. Something prevents adjectives from targeting the noun phrase headed by the VN in the LVC, I noted this in section 3.2.1.2.1. The categorial indeterminacy of the VNC predicate provides an opportunity for adjectives to target the VNC predicate. Assuming that this indeterminacy does not exist in the LVC gives us the desired difference between the two constructions. Second, because the VN in the VNC is not a noun, but an a categorial element, it cannot be targeted by syntactic operations that effect noun phrases. These processes can be applied to the VN in the LVC because in that environment the VN is a noun phrase.

One important reservation, here, is the following: Given Alexiadou's (2001) assumptions, the analysis of the predicate domain in (64) could be applied to the analysis of any nominalization. This would imply, among other things, that either the VN should not allow adjectives or that nominalized verbs should, both contrary to fact. Then, for these ideas to work, one has to find a way of customizing the structure in (64) for the VNC. This could be done by preserving the acategorial nature of VN. As v , and its cohorts such n , are category providing elements within the DM framework, VN would gain a category by moving into it. Then, by assuming that the VN does not move to v^0 , one could ensure that the acategorial nature of the VN is preserved.²¹

3.2.3.3.3 *Morphology* Finally, let me address issues of morphology.

The status of the VNC in the light of Myers' Generalization under this analysis is the same as the status of the VNC under the analysis presented in section 3.2.2.2.3. If the VN and the light verb are two independent syntactic elements, then Myers' Generalization may be argued not to apply to this derivation. This would imply that zero-nominalization of the VN form (i.e. [v [N istila][v ∅]) becomes a theoretical possibility.

One could partially explain the distribution of morphological markers in the following way: In DM, sets of vocabulary items that spell out functional morphemes are assumed to compete for lexical insertion. This is done following the Subset Principle (Halle 1997):

²¹A version of Harley (2005) entertains a similar idea for some Japanese causatives. She writes the following:

In the DM account of Harley (1995) and Marantz (1997), there is no constituent V^0 , and hence no VP: a verb is created in the syntax by combining a $\sqrt{\quad}$ and a v^0 head. The distinction between a 'light verb' and a 'main verb', then, comes down to whether the v^0 element has had a $\sqrt{\quad}$ element combined with it or not: main verbs are $v^0+\sqrt{\quad}$ combinations; light verbs like *-sase-* are pure v^0 . The question of whether any given verb in a language is a realization of just v^0 or of $v^0+\sqrt{\quad}$, then, is an empirical question. For instance, English *make* might be a v^0 , like *-sase-*, or a $v^0+\sqrt{\quad}$ (=V) combination, like *coerce* or *permit*.

The phonological exponent of a Vocabulary item is inserted into a morpheme . . . if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

About nominalization markers, one can suppose that a given nominalization imposes certain conditions that vocabulary items compete to satisfy for morphologically marking the given nominalization. When those conditions cannot be met by the overt markers, the zero marker is chosen. Thus, the zero marker is the default marker, the “elsewhere” condition. In the VNC, something prevents overt markers from meeting the conditions imposed by this environment—the lack of a phonological verbal host due to the acategorial character of the VN may be thought to be the relevant factor. This results in the zero marker kicking in. In other nominalizations, there is always an overt nominalization marker that satisfies the conditions of the particular nominalization structure so that the zero marker is never used.

A related issue is the differences between VNC predicates and zero derived denominal verbs (like *boya* ‘paint’ from the noun *boya* ‘paint’) (see section 3.2.1.2.4). The structures of both these elements would be the same under the approach being entertained, as shown in (65). But while VNs do not allow any verb morphology, zero-derived verbs do.

- (65) a. $[_{VP} \sqrt{istila} [_{v^0} \emptyset]]$
 b. $[_{VP} \sqrt{boya} [_{v^0} \emptyset]]$

The differences could be attributed to the raising of the acategorial root to v^0 in the case of zero-derived verbs, and not in the VNC. This raising provides the morphological markers a base to attach to.²² Part of this account, i.e. the lack of a phonological host, is essentially the same as the one I had proposed in section 3.2.2.2.3. Here, we have the added benefit of being able to account for the complementarity of markers and nominalization types. Note, though, that this does not explain how the nominal agreement affix can attach the VN, while no other affix can.

3.2.3.4 *The problems of a Distributed Morphology account*

Despite its relative success, there are some serious problems that a DM-based proposal has to address. This is what I turn to next.

3.2.3.4.1 *The verbal noun is referential.* First of all, the VN seems to be referential in the VNC. Consider (66).

²²In some Australian languages, some verbs remain uninflected at all times, not taking any verbal morphology (Mark Baker, p.c.). A VN in the VNC could be like these verbs, this property brought on by the acategorial character of VN.

- (66) Ork-lar-ın Rohan-ı istila-sı dehşet verici-y-di. Ay-lar
ork-pl-Gen Rohan-Acc invasion-3sg terrorizing-Cop-Past month-pl
sür-dü.
last-Past.3sg
'The orks' invasion of Rohan was terrorizing. It lasted months.'

Here, the VNC can be referred back to in the second sentence.²³ This property does not seem to be the product of the DP layer in the VNC—spelled out by nominal agreement, as I have shown in chapter 2 section 2.2.3.2. A factive nominalization, which also has a DP layer, cannot be referred to ((67)). This leaves the VN as the prime candidate for the source of the referentiality in (66).

- (67) Ork-lar-ın Rohan-ı yağmala-dığ-ın-ı duy-du-k. #Ay-lar
ork-pl-Gen Rohan-Acc plunder-FNom-3sg-Acc hear-Past-1pl month-pl
sür-müş.
last-Evid.3sg
'We heard that the orks plundered Rohan. It is said to have lasted months.'

The fact that the VN in the VNC appears to be referential constitutes counter-evidence to the idea that it is an acategorial root that does not combine with a category providing f-morpheme. Referentiality cannot be attributed to a root that is acategorial, it is a property of a specific category, namely nouns (Baker 2003, Chierchia 1998).²⁴ Adjectives are not referential, for instance. Then, I will conclude, with some degree of confidence, that the VN is a noun. This essentially means that the DM account proposed in this section cannot be correct.

3.2.3.4.2 *The type of v in the verbal noun construction* One of the constructions that Alexiadou (2001), as well as much of DM literature, has focused on is derived nominals. A comparison of these structures with the VNC is particularly revealing about the implications of applying a DM analysis to the VNC. Take English derived nominals as a demonstrative case ((68)).

- (68) a. The destruction *(of) the city by the army
b. The quick/total/*quickly/*totally destruction of the city by the army in an hour
c. %Kim's explanation of the problem to the tenants thoroughly (did not prevent a riot).
d. %Sue's exploration of Easter Island was impressive, then Amy's doing so was a real surprise.

It is clear that these disallow accusative case assignment ((68a)). Speakers generally accept aspectual adjectives and reject aspectual adverbs ((68b)), however, their degree

²³This is entirely expected under Baker (2003) which I adopt for my account of the VNC in section 3.3.

²⁴The influential theoretical account of referentiality in Longobardi (1994) attributes referentiality to the category D rather than N. However, this would seem to predict the factive nominal in (67) to be referential, contrary to fact.

of grammaticality with manner adverbs and the VP anaphor *do-so* is contested ((68c)-(68d)) (Kyle Johnson, p.c.); Fu et al. (2001) report that they are grammatical.

These structures have received particular attention in Alexiadou (2001). She proposes that like all nominalizations, derived nominals also be analysed as having a *v*P layer. The first batch of evidence she builds her case on comes from the classes of adverbs that are licit in derived nominals in various languages. Derived nominals allow manner, aspectual and certain temporal adverbs, such as *carefully*, *quickly* and *yesterday*, while disallowing modal adverbs, such as *probably*. She couples this observation with the work on the syntax of adverbs, such as Alexiadou (1997) and Cinque (1999), which put forth the hypothesis that adverbial phrases are related to distinct functional projections, and concludes that derived nominals contain 'low' clausal projections, such as AspP and *v*P. Supporting this is the second batch of evidence that Alexiadou uses, namely the morphological markers that are allowed in derived nominals in several languages. These include passive markers in Greek and aspectual markers in Polish.

One obvious and important question that arises at this point is the following: If we analyse both derived nominals and the VNC as having a verbal layer, how can we account for the differences in the case assignment patterns in these two constructions? In other words, how can we have Alexiadou's (2001) proposal allow accusative case assignment in the VNC, while preventing it from over-generating by allowing accusative case in derived nominals? The solution lies in Alexiadou's treatment of the properties of *v*. Following various works, such as Kratzer (1994a,b) and Chomsky (1995), Alexiadou (2001: 17) writes that *v* has four basic properties ((69)):

- (69) a. It is the locus of agentivity, i.e. it contains features relevant to the licensing and interpretation of agents.
 b. It contains features related to eventivity.
 c. It bears the case features for the object.
 d. It comes in two types: one that introduces a subject, and one that does not.

The properties (69a) and (69b) create the semantic content of *v*; (69c) and (69d) are the transitivity property of *v*. One can dissociate these properties from each other. The *v* in derived nominals has properties (69a) and (69b), but not those in (69c) and (69d). In this sense, this *v* is like a passive or unaccusative *v*, which is eventive but cannot license accusative case:

Nominalizations, in spite of their similarity to verbal clauses, crucially differ from them in that no accusative case is assigned to their DP argument, and that no agent is syntactically projected in Spec, *v*P. If both these attributes are associated with *v*, then the conclusion is that nominalizations either lack such a head or only include the type of *v* found with unaccusative predicates. Since, however, the eventive readings of these nominals are linked with *v*, I will conclude that in such constructions, the type of *v* included is the deficient one, i.e. the one that does not assign an external argument, and does not check accusative case. Thus, nominalizations

constitute a reflex of Burzio's generalization.²⁵

In contrast to this, gerunds have a transitive v with all four features: They are eventive, license agent subjects and allow accusative-marked objects (Alexiadou 2001: 135-137).²⁶ To sum up, different compositions of the properties in (69), yield different manifestations of case assignment.

Given the properties of the VNC, this analysis of v predicts that the predicate domain of the VNC should be like that of a gerund or even a transitive sentence. This prediction is not borne out. To show this, I need to introduce the concepts of binding and PRO subjects.

Binding is a relation in which the reference of a certain element (such as the anaphor *himself*) is dependent on the reference of another element, the antecedent. In (70), for instance, *himself* has to refer to *Cem* (and not, say, another male person, *John*)—with the co-reference between these two elements usually indicated by co-indexation.

(70) Cem_{*i*} saw himself_{*i*/**j*} in the mirror.

A defining property of anaphors is that they must be bound. Thus, they require a suitable antecedent for the binding relation to occur.

Let me now turn to PRO subjects. Consider (71):

(71) I want [to go home].

This sentence is constituted of two clauses. In the embedded clause, there is no visible subject, but there is obviously a 'goer', an understood subject. In the matrix clause, we find *I*. This kind of understood subjects have standardly been represented as PRO in generative literature. Often, PRO is interpreted as obligatorily co-referential with the subject of the matrix clause. In other words, the 'wanter' and the 'goer' are the same person in (71). Thus, we have (72) as the representation of (71), where co-referentiality is indicated by the use of indices. In these cases, the overt matrix subject is said to (obligatorily) control the covert embedded subject.

(72) I_{*i*} want [PRO_{*i*} to go home].

Now, I will return to the main line of discussion. I will contrast the behaviour of non-finite VNCs with that of finite VNCs and non-finite LVCs. I had introduced non-finite VNCs above in (1); I give more examples in (73), where the VNCs are the strings in square brackets.

(73) a. Piyasa-lar [dolar-a ani / ?aniden hücum]-u
 market-pl [dollar-Dat sudden / ?suddenly attack]-Acc
 kaldır-a-ma-dı.
 withstand-Abil-Neg-Past.3sg
 'The markets could not withstand the sudden rush to the dollar.'

²⁵See chapter 2 section 2.2.4.3 for a discussion on Burzio's generalization.

²⁶Alexiadou has the overt subjects of gerunds generated in the specifier of DP while the specifier of vP is filled by PRO. I explain below what PRO is.

- b. [Parti-den istifa-lar] üye sayı-sı-nı iyice
 [party-Abl resignation-pl] member number-CmpM-Acc really
 azalt-tı.
 decrease-Past.3sg
 ‘Resignations from the party really decreased the number of members.’
- c. [Hata-lar-in-da inatla ısrar]-a devam et-me!
 [mistake-pl-2sg-Loc stubbornly insistence]-Dat continue-Neg
 ‘Do not continue with the stubborn insistence on your mistakes!’

In (73), the bracketed segments are headed by VNs (i.e. *hücum* ‘attack’, *istifa* ‘resignation’ and *ısrar* ‘insistence’). These are versions of the VNC analogous to Turkish non-finite clauses: No agreement morphology is present on the predicate, and consequently, an overt subject cannot be licensed. What tells us that these structures are indeed VNCs and not compounds is the possibility of inserting adjectival and adverbial modifiers between the complement and the VN, as can be seen in the examples.²⁷ Compounds do not allow that, as shown in (74).

- (74) a. kulağ-a (*sessizce) kaç-an
 ear-Dat (*quietly) slip-SubjP
 ‘earwig’
- b. kar-dan (*büyük) adam
 snow-Abl (*big) man
 ‘snowman’
- c. kız (*güzel) arkadaş
 girl (*beautiful) friend
 ‘girlfriend’
- d. yarış (*hızlı) araba-sı
 race (*fast) car-CmpM
 ‘race car’

In this respect, non-finite VNCs are comparable to complement–adjective structures, which also allow (adverbial) modifiers to intervene between the argument and the predicate ((75)).

- (75) a. [Tarkan-a delice hayran] kız-lar
 [Tarkan-Dat madly filled with admiration] girl-pl
 ‘girls filled with mad admiration for Tarkan’
- b. [ev-im-de üç gündür gizli] belge-ler
 [house-1sg-Loc for three days hidden] document-pl
 ‘documents hidden in my house for three days’
- c. [iş-in-den çok memnun] bir kişi
 [work-3sg-Abl very much pleased] a person
 ‘a person very much pleased with his/her work’

²⁷Notice, however, that the eventivity of the VNCs in (73) seems ‘reduced’ when compared to finite VNCs, as evidenced by the markedness of the aspectual adverb *aniden* ‘suddenly’ in (73a) (as opposed to (40) for instance), and the possibility of pluralizing the VN in (73b) (as opposed to the data in section 3.2.1.1.5). I will return to this issue later in sections 3.2.4.1 and 3.3.2.5.

Now, consider (76) and (77).

- (76) a. [Kendin-e hizmet et-mek] insan-ı yozlaş-tır-ır.
[self-Dat service do-Inf] human being-Acc corrupt-Caus-Aor.3sg
'Being self-serving corrupts people.'
- b. ??[Kendin-e hizmet] insan-ı yozlaş-tır-ır.
[self-Dat service] human being-Acc corrupt-Caus-Aor.3sg
'Self-servitude corrupts people.'
- c. Belediye başkan-ı [kendin-e hizmet]-i bırak-ıp
mayor [self-Dat service]-Acc quit-Conn
halka hizmet verse...
if he served the people
'If the mayor would quit self-servitude and serve the people...'
- d. [İnsan-ın kendin-e hizmet-i] de, aile-sin-e,
[human being-Gen self-Dat service-3sg] too family-3sg-Dat
toplum-un-a hizmet-i de kamu hayrı için-dir.
society-3sg-Dat service-3sg too public good for-EpCop
'Both one's self-servitude and one's service to one's family and society
is for public good.'
- (77) a. [Kendin-e itimat et-mek] insan-ı başarı-ya
[self-Dat confidence do-Inf] human being-Acc success-Dat
götür-ür.
take-Aor.3sg
'Having self-confidence leads one to success.'
- b. ??[Kendin-e itimat] sürekli başarısızlık sonucu
[self-Dat confidence] constant failure as a result of
azal-ır.
diminish-Aor.3sg
'Self-confidence diminishes as a result of constant failure.'
- c. Gerek bir alışkanlığı-ı yen-mek, gerek [kendin-e itimat]-ı
both a habit overcome-Inf both [self-Dat confidence]-Acc
geliştir-mek için...
develop-Inf for
'Both for overcoming a habit and for developing self-confidence'
- d. Bundan sonra [bu adam-ın kendin-e itimat-ı] kal-ır
After this [this man-Gen self-Dat confidence-3sg] remain-Aor.3sg
mı?
Q
'Would this man have any more self-confidence after this?'

In these examples, I contrast the behaviour of non-finite VNCs with that of finite VNCs and non-finite LVCs. In (76a) and (77a), we have non-finite LVCs as the subjects of two sentences. The reflexive *kendi* 'oneself' is bound by the PRO subject of those non-finite LVCs. In (76b) and (77b), within brackets are the non-finite VNCs headed by *hizmet* 'service' and *itimat* 'confidence'. In contrast to (76a) and (77a), when we have these non-finite VNCs as the subject of a sentence, the sentence becomes marginal at best

((76b) and (77b)). This is in all likelihood because the reflexive cannot be bound; which suggests that there is no PRO in a non-finite VNC to bind the reflexive. This predicts that if these non-finite VNCs are placed in a configuration where their reflexive objects can be bound by suitable antecedents, the sentences should be grammatical. This is borne out, as shown in (76c) and (77c). Examples (76d) and (77d) show that it is also possible to have a reflexive in a finite VNC when it is in the subject position. The genitive-marked subject of the VNC binds the reflexive pronoun in these cases. Then, to repeat, these examples suggest that there is no PRO, in other words a syntactic subject, in a non-finite VNC.²⁸

Second, if there is no PRO in a non-finite VNC, this predicts that a non-finite VNC cannot be obligatorily controlled, whereas a non-finite LVC should allow this, due to the presence of a PRO subject there. This is indeed the case. In (78a), the ‘expector’ and the ‘attacker’ cannot be the same people, where as in (78b) it is so. So, these examples also suggest that there is no syntactic subject in a non-finite VNC.²⁹

- (78) a. Düşen döviz fiyatlarıyla [Amerikan dolar-ın-a
with the falling foreign currency rates [American dollar-CmpM-Dat
hücum] bekli-yor-uz.
attack] wait-Prog-1pl
‘We expect a rush to the American dollar with the falling foreign currency rates.’
- b. Düşen döviz fiyatlarıyla [Amerikan dolar-ın-a
with the falling foreign currency rates [American dollar-CmpM-Dat
hücum et-meğ]-i bekli-yor-uz.
attack do-Inf]-Acc wait-Prog-1pl
‘We are waiting to rush to the American dollar with the falling foreign currency rates.’

Now, if non-finite VNCs do not have covert subjects, specifier of vP in the VNC must be empty, or not even projected. All this makes the Turkish VNC a bit of an oddity from the proposal I am entertaining: It violates Burzio’s Generalization by allowing accusative case assignment without having an external argument (Burzio 1986: 178). To put this in terms of the features in (69), it is an intransitive transitive predicate. In conclusion, adopting Alexiadou’s (2001) treatment of v for the VNC leads us to a contradiction.

3.2.3.4.3 *Turkish versus Japanese* As I have noted at the beginning of this chapter, Japanese and Korean have their own variants of the VNC. I repeat the examples in (79).

²⁸The diagnostic value of this test was pointed out to me by Mark Baker.

²⁹This contrast is reminiscent of the behaviour of English gerunds with respect to control. Consider (i).

- (i) a. We enjoyed [a singing of the Marseillaise].
b. We enjoyed [singing the Marseillaise].

The gerund in (ia) cannot be obligatorily controlled, where as the gerund in (ib) is. This has been argued to be a sign of the absence of PRO in (ia) and the presence of it in (ib) (see e.g. Wasow and Roeper 1972, Milsark 2006).

- (79) a. Gun-no sono machi-no hakai
 army-Gen that city-Gen destruction
 ‘the army’s the destruction of that city’ (Japanese)
- b. John-uy yenge-uy kongpu
 John-Gen English-Gen study
 ‘John’s study of English’ (Korean)

The reasons why I assume these are comparable to the Turkish VNC are the following: They are structures with genitive subjects. They appear in typical noun phrase positions. This qualifies them as nominals. Furthermore, they are headed by nouns comparable to Turkish VNs. The similarities between Japanese and Korean VNs, on the one hand, and Turkish VNs, on the other, are interesting. Just as Turkish VNs, they can function as the nominal component of LVC predicates, like *hakai* ‘destruction’ in (80).

- (80) Gun-ga sono machi-o hakai shita
 army-Nom that city-Acc destruction did
 ‘The army destroyed that city.’ (Japanese)

Also, Japanese and Korean VNs are what are called Sino-Japanese/Sino-Korean compounds, words which were borrowed from Chinese, or have been coined from elements borrowed from Chinese. In this sense, they are quite akin to Turkish VNs which are borrowed from Arabic or Persian. Moreover, their behaviour in the LVC is also similar to the behavior of Turkish VNs in the LVC. They can be case-marked, for instance. Note the accusative case on *zyooto* ‘transfer’ in (81b), as opposed to (81a).

- (81) a. Mary-ga John-e toti-o zyooto sita
 Mary-Nom John-Dat land-Acc transfer did
 ‘Mary transferred the land to John.’ (Japanese, Kuroda 2003)
- b. Mary-ga John-e toti-no zyooto-o sita
 Mary-Nom John-Dat land-Gen transfer-Acc did
 ‘Mary transferred the land to John.’ (Japanese, Saito 2000)

Despite these similarities with the Turkish VNC, Japanese and Korean VNCs pattern with English derived nominals in disallowing accusative case assignment to the object ((82)) and having eventive readings but disallowing aspectual adverbs ((83)) (cf. (68)).

- (82) a. *Gun-no sono machi-o hakai
 army-Gen that city-Acc destruction
 Lit. ‘the army’s the destruction that city’ (Japanese)
- b. *John-uy yenge-lul kongpu
 John-Gen English-Acc study
 Lit. ‘John’s study of English’ (Korean, Choi and Wechsler 2001)

- (83) a. *[Gun-no sono machi-no ichijikaninai-de / jinsoku-ni / kanzen-ni
 [army-Gen that city-Gen in an hour / quickly / totally
 hakai]-wa igai datta.
 destruction]-Top unexpected was
 ‘The quickly/totally destruction of that city by the army in an hour was unexpected.’
- b. [Gun-no sono machi-no ichijikaninai-de-no / jinsoku-na / kanzen-na
 [army-Gen that city-Gen in an hour / quick / total
 hakai]-wa igai datta.
 destruction]-Top unexpected was
 ‘The quick/total destruction of that city by the army in an hour was unexpected.’ (Japanese)

Under the DM analysis being discussed here, if we analyse the Turkish VNC and English derived nominals as having a verbal layer, we have all the reason to assume that the same analysis also holds for the Japanese and Korean VNCs. This implies that the structure of the VNC is the same in all three languages. This naturally begs the question of why accusative case assignment is licit in the Turkish VNC but bad in the Japanese and Korean VNCs. One can give the simplest answer to this question by adopting the scheme in (69): The abstract light verb in the Japanese and Korean VNCs lacks the feature (69c) (and (69d)), i.e. it is like an unaccusative *v* in being unable to license accusative case. This is an answer, albeit a stipulative one in my opinion. I think that in order to find a more plausible explanation to the contrast in case assignment in the VNC in Turkish versus Japanese and Korean, one needs to look for the answer in some observable contrast between these constructions. I believe that the relevant contrasting property is nominal agreement morphology, which is present in the Turkish VNC but absent in Japanese and Korean. I will use this observation as the foundation of my proposal in section 3.4.

3.2.3.5 Conclusion

In this section, I have discussed a DM approach to the accusative case assignment puzzle in the VNC. In this approach, the VN can be treated as an acategorial element in the VNC, but a noun in the LVC. This explains the differences in the behaviour of the VN in the two environments, as well as generating the distribution of the modifiers that may modify a VNC and an LVC predicate. Issues of morphology can also be addressed with some degree of success. However, a DM account is faced with serious challenges. First, the assumption that the VN is acategorial is at odds with the fact that the VN can be referential in the VNC. Second, under this account it is impossible to explain how a accusative case may be assigned by a verb which does not seem to introduce the subject in seeming violation of Burzio’s generalization. The differences between the Turkish VNC and the Japanese and Korean VNCs also remains unexplained.

3.2.4 General objections to the Abstract Light Verb Hypothesis

In sections 3.2.1-3.2.3 I have argued against three proposals espousing the ALVH to explain accusative case assignment in the VNC. Each proposal was designed to counter the arguments levelled against the previous one and was more adequate than the previous at explaining the properties of the VNC. Next, I will present three more counter-arguments against proposals adopting the ALVH. To the ultimate detriment of these proposals, if these counter-arguments are correct, I do not think they can be countered by any approach that attributes accusative case assignment to a verbal layer in the VNC.

3.2.4.1 Subject agreement–accusative case link

Data shows that when subject agreement morphology (i.e. φ -features instantiating D^0 , as shown in chapter 2 section 2.2.3.2) is not present in the VNC, accusative case assignment to the object is barred. This suggests that accusative case assignment depends on these φ -features. Consider (84):

- (84) a. *[Anadolu-yu mahv] Moğol-lar-ı tatmin
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3sg
 Lit. ‘The devastation Anatolia did not satisfy the Mongols.’
- b. Piyasa-lar [dolar-a ani/?aniden hücum]-u
 market-pl [dollar-Dat sudden/?suddenly attack]-Acc
 kaldır-a-ma-di.
 withstand-Abil-Neg-Past.3sg
 ‘The markets could not withstand the rush to the dollar.’

In these examples, the bracketed segments are non-finite VNCs headed by the VNs *mahv* ‘devastation’ and *hücum* ‘attack’. In this syntactic environment, accusative case assignment is not possible ((84a)), whereas dative case is unaffected ((84b)). Thus, there appears to be a dependency between subject agreement and accusative case in the VNC.³⁰

It is important to note that in non-finite VNCs it is the entire DP layer that is missing, along with agreement features, and not simply agreement features themselves. This effectively rules out the possibility that there may be covert subject agreement features present at D^0 , and that the ungrammaticality of accusative case in a non-finite VNC is due to a factor other than the lack of subject agreement. The absence of the DP projection is indicated by the following. Consider, first, the data in (85).

- (85) a. uyu-ma-n*(-ı) isti-yor-um.
 sleep-ANom-2sg*(-Acc) want-Prog-1sg
 ‘I want you to sleep.’

³⁰There are some quite specific environments where accusative assignment to the theme argument of a non-finite VNC is allowed. I discuss these in section 3.4.2.2.1.

with φ -features.³¹ I will return to this point in section 3.4, when I am constructing my own theory of accusative case assignment in the VNC.

These observations are particularly interesting in the light of Larson's (2000; 2008) and Larson and Yamakido's (2008) theory on the parallelism between the DP and the VP. These authors argue that the core of a nominal structure is D, which possesses a rich semantic structure, including argument structure. (And argument structure may be linked to eventivity: eventivity is associated with event structure, which breaks events into aspectual subparts. As a result, eventive elements have an argument structure—potentially selecting agents (see e.g. Grimshaw 1990).) In this sense, D has the essential character of canonical predicates like verbs. My association of accusative case with D enriches the parallelism.

3.2.4.2 Specificity contrasts

There are differences between sentential structures (such as the LVC) and regular nominalizations (such as nominalizations from the LVC), on the one hand, and the VNC, on the other, in allowing specificity contrasts. First, consider the LVC ((87)) and nominalizations ((88)).

- (87) a. Köy-ü fare istila et-ti.
village-Acc mouse invasion do-Past.3sg
'Mice invaded the village.'
- b. Çocuk-lar ev işgal et-ti.
child-pl house occupation do-Past.3sg
'The children occupied a house.'
- (88) a. [Köy-ü fare istila et-me-si] sonucunda bütün
[village-Acc mouse invasion do-ANom-3sg] as a result of entire
hasat heba oldu.
harvest ruined become:Past.3sg
'The entire harvest was ruined as a result of mice invading the village.'
- b. [Çocuk-lar-ın ev işgal et-me-si] sonucunda planlar
[child-pl-Gen house occupation do-ANom-3sg] as a result of plan:pl
altüst oldu.
upside down become:Past.3sg
'Plans were turned upside down as a result of the children's occupying a house.'

In both environments, the arguments *fare* 'mouse' and *ev* 'house' can be non-specific. These, then, obligatorily occur immediately to the left of the predicate without case marking. In contrast to this, arguments in the VNC have to be specific, as shown in (89):

³¹By that I do not mean that finite D should exclusively combine these three properties. For instance, the absence of finite D only reduces eventivity, does not eliminate it. Furthermore, as I argue in section 3.4, D is not the actual assigner of accusative case in the VNC, but is the source of the φ -features that are used for that purpose.

- (89) a.*??[Köy-ü fare istila-sı] sonucunda bütün hasat heba
 [village-Acc mouse invasion-3sg] as a result of entire harvest ruin
 oldu.
 become:Past.3sg
 ‘The entire harvest was ruined as a result of mice invading the village.’
- b.*??[Çocuk-lar-ın ev işgal-i] sonucunda planlar altüst
 [child-pl-Gen house occupation-3sg] as a result of plan:pl upside down
 oldu.
 become:Past.3sg
 ‘Plans were turned upside down as a result of the children’s occupying a
 house.’

First, under ALVH approaches, due to the similarity assumed between the LVC and the VNC, this is quite puzzling. Second, and more importantly, in the light of Diesing (1992), this suggests that there is no VP in the VNC. Diesing proposes the Mapping Hypothesis, given in (90).

- (90) *Mapping Hypothesis*
 Material from VP is mapped into the nuclear scope.
 Material from IP is mapped into a restrictive scope.

What this means for Turkish is that non-specific readings of arguments are obtained when these arguments are in the VP, whereas specific readings are obtained outside the VP (Diesing 1992: 85-88). Take the subject *arı* in (91) as an illustrative example.

- (91) a. adam-ı feci arı sok-tuğ-u
 man-Acc terribly bee sting-FNom-3sg
 ‘a bee’s terribly stinging the man’
- b. *adam-ı feci arı-nın sok-tuğ-u
 man-Acc terribly bee-Gen sting-FNom-3sg
 ‘the bee’s terribly stinging the man’
- c. arı-nın adam-ı feci sok-tuğ-u
 bee-Gen man-Acc terribly sting-FNom-3sg
 ‘the bee’s terribly stinging the man’
- d. *adam-ı arı feci sok-tuğ-u
 man-Acc bee terribly sting-FNom-3sg
 ‘a bee’s terribly stinging the man’

When it is in the VP, evidenced by its being to the right of the adverb *feci* ‘terribly’ that marks the VP boundary, *arı* is interpreted as non-specific ((91a)). A specific reading cannot be obtained inside the VP ((91b)). (As mentioned above, non-specific arguments do not bear any case marking, while specific arguments do.) When it is outside the VP, indicated by its being to the left of the adverb *feci*, *arı* is specific ((91c)). A non-specific reading cannot be obtained outside the verb phrase ((91d)).

From this perspective, the unavailability of non-specific readings for arguments in the VNC is an indication that there is no VP in the VNC. When the VP is absent, the only reading available for arguments is the specific reading—presumably the default

reading for arguments.³²

There are two *prima facie* problematic cases that I need to resolve, though. The first case is that of negative polarity items (NPIs) such as (*hiç kimse* ‘nobody’, *hiç birşey* ‘nothing’ and *hiç biryer* ‘nowhere’. These have non-specific interpretation but may occur in the VNC ((92a)). The second is that of certain non-specific partitive structures, which may also occur in the VNC ((92b)).

- (92) a. [Düşman-ın hiç kimse-yi katl-i] biz-i
 [enemy-Gen nobody-Acc murder-3sg] 1pl-Acc
 yıldır-ma-malıdır.
 discourage-Neg-Neces-EpCop
 ‘The enemy’s killing of nobody should discourage us.’
- b. [Düşman-ın il-ler-imiz-in herhangi bir-in-i işgal-i]
 [enemy-Gen province-pl-1pl-Gen any one-3sg-Acc invasion-3sg]
 savaş nedeni-dir.
 casus belli-EpCop
 ‘The enemy’s invasion of any one of our provinces is *casus belli*.’

These items should not constitute a serious challenge to my argument from the Mapping Hypothesis for the following reasons: First, they seem to be inherently non-specific and do not require to be in a VP to obtain non-specific readings. Examples in (93) show that they can appear in ordinary nominal environments. My argument from the Mapping Hypothesis concerns noun phrases that do necessitate a VP for a non-specific reading.

- (93) a. [Hiç kimse-nin tez-i] vazgeçilmez değil-dir.
 [nobody-Gen dissertation-3sg] indispensable not-EpCop.
 ‘Nobody’s dissertation is indispensable.’
- b. [İl-ler-imiz-in herhangi bir-i-nin değer-i]
 [province-pl-1pl-Gen any one-3sg-Gen value-3sg]
 diğer-ler-in-kin-den az değil-dir.
 other-pl-Gen-Rel-Abl less not-EpCop
 ‘The value of any of our provinces is not less than that of the others.’

Second, NPIs need to be licensed by another negative element. In Turkish this licensing negative element may either be found in the same clause as the negative polarity item, or in its matrix clause. Examples in (94) demonstrate these two possibilities, with the negative affix *-mA* as the licenser.

- (94) a. [Hiç birşey ye-me-me-n]-i isti-yor-um.
 [nothing eat-Neg-ANom-2sg]-Acc want-Prog-1sg
 ‘I want you to eat nothing.’

³²Specific arguments are referential (see chapter 2 section 2.1.4) and referentiality is a defining feature of nouns (cf. Baker 2003; Chierchia 1998). So, there is reason to suppose that the specific reading is indeed the default reading for a noun.

- b. [Hiç birşey ye-me-n]-i iste-mi-yor-um.
 [nothing eat-ANom-2sg]-Acc want-Neg-Prog-1sg
 'I do not want you to eat anything.'

The data in (93) and (94) imply that, neither non-specific partitives nor NPIs need to have a licenser inside the VNC, removing the need for a verbal projection in the VNC.

This discussion implies that the availability of a non-specific reading necessarily requires a VP. That appears to be true: Non-specific noun phrases (other than the non-specific partitives and the NPIs discussed above) are disallowed in ordinary nominal environments, where verbal projections would not normally be assumed to exist. As shown in (95), there are contrasts that *prima facie* appear to be specificity contrasts. *Kale* 'fortress' in these examples may or may not bear case marking and this correlates with what looks like a difference in specificity.

- (95) a. kale kapı-sı
 fortress gate-CmpM/3sg
 'fortress gate'
 b. kale-nin kapı-sı
 fortress-Gen gate-CmpM/3sg
 'the gate of the fortress'

However, this pattern dissolves upon closer examination. First, pairs showing these contrasts are rather limited. The non-productivity goes both ways:³³ In (96), *çingene* 'gypsy' cannot appear with genitive marking, i.e. as what looks like a specific noun phrase. In (97), the pattern is reversed and *adam* 'man' cannot appear without genitive marking, i.e. as what looks like a non-specific noun phrase.

- (96) a. çingene pembe-si
 gypsy pink-CmpM/3sg
 'gypsy pink'
 b. *çingene-nin pembe-si
 gypsy-Gen pink-CmpM/3sg
 'the pink of the gypsy'
 (97) a. *adam ev-i
 man house-CmpM/3sg
 'man house'
 b. adam-ın ev-i
 man-Gen house-CmpM/3sg
 'the man's house'

³³There are instances where specificity contrasts are disallowed in the VP as well ((i)).

- (i) mimar plan*(-i) bit-ir-di.
 architect plan*(-Acc) finish-Caus-Past.3sg
 'The architect finished the/*a plan.'

This obviously does not suggest there is no VP in the clause. It only shows that non-specific readings are allowed under the right conditions in the clause.

Furthermore, some noun phrases that disallow non-specific readings in the VP allow what appear like non-specific readings in a nominal environment, such as *Roma* ‘Rome’ in (98):

- (98) a. Barbar-lar Roma*(-y1) yağmala-dı-lar.
 Barbarian-pl Rome*(-Acc) sack-Past-3pl
 ‘The barbarians sacked Rome.’
 b. Roma İmparatorluğ-u
 Rome empire-CmpM/3sg
 ‘the Empire of Rome, i.e. the Roman Empire’

These observations suggest that what look like specificity contrasts in the nominal domain in reality are not. In reality, what look like structures involving non-specifics are in all likelihood simply compounds. The VNC is, then, just like a regular nominal structure which does not have verbal projections, in disallowing non-specific noun phrases.

3.2.4.3 *The verb phrase anaphor öyle yap*

Fu et al. (2001) use the VP anaphor *do-so* to argue for the presence of a VP projection in English derived nominals ((68d)). When applied to the VNC—using the expression *öyle yap*, which may be considered the Turkish counterpart of the English VP anaphor—the same test suggests that there is no verbal projection in the LVC ((99)).

- (99) a.*??[Sauron-un Rohan-ı istila-sın]-dan sonra [Saruman da öyle
 [Sauron-Gen Rohan-Acc invasion-3sg]-Abl after [Saruman too thus
 yap-tı].
 do-Past.3sg]
 ‘After Sauron’s invasion of Rohan, Saruman did so too.’
 b.*??[Nazgul-un kale-ye hücum-un]-dan sonra [Uruk Hai de öyle
 [Nazgul-Gen fortress-Dat attack-3sg]-Abl after [Uruk Hai too thus
 yap-tı].
 do-Past.3sg]
 ‘After Nazgul’s attack on the fortress, Uruk Hai did so too.’

Neither a VNC that contains an accusative object ((99a)), nor one that has an inherently case-marked object ((99b)) can be the antecedent of *öyle yap*. By contrast, both an action nominal form of the LVC ((100a)) and the factive nominal form of the LVC ((100b)) are fine as antecedents.

- (100) a. [Sauron-un Rohan-ı istila et-me-sin]-den sonra
 [Sauron-Gen Rohan-Acc invasion do-ANom-3sg]-Abl after
 [Saruman da öyle yap-tı].
 [Saruman too thus do-Past.3sg]
 ‘After Sauron’s invading Rohan, Saruman did so too.’

- b. [Sauron Rohan-ı istıla et-tik]-ten sonra [Saruman da
 [Sauron Rohan-Acc invasion do-FNom]-Abl after [Saruman too
 öyle yap-tı].
 thus do-Past.3sg]
 ‘After Sauron’s invading Rohan, Saruman did so too.’

This contrast shows that there is no verbal projection in the VNC. In nominalizations, on the other hand, a verb phrase layer is, not surprisingly, present.

3.2.5 Conclusion

In this section, I have argued against the ALVH, the thesis that there is an abstract light verb in the VNC that assigns accusative case to the object. I have evaluated various possible implementations of this idea. I have started out with Sezer (1991), who proposes a lexical derivation that derives the VNC from an LVC. Next, I have moved on to a more ‘syntactic’ implementation of the basic idea. Finally, I have discussed DM-style approaches to postulating a verbal projection in the VNC. I have presented the specific flaws of each implementation of the ALVH during the discussion and proposed remedies for these as I went along. However, there are three fundamental problems that a proposal espousing the ALVH will never be able solve. These problems are the points that I have discussed at the end of the section: I have pointed out that accusative case in the VNC correlates with subject agreement morphology. This suggests that the solution should be sought somewhere other than a putative light verb. Second, I have shown that it is impossible to have non-specific arguments in the VNC. This is especially problematic in the light of Diesing (1992), who shows that a VP is necessary to obtain a non-specific reading for arguments. Third, the VP anaphor *öyle yap* cannot take the VNC as an antecedent, which means that there is no verbal projection in the VNC.

3.3 The structure of the verbal noun construction

In this section, I will put forth my proposal about the structure of the VNC. I treat the topics of VNC structure and accusative case assignment to the object in the VNC separately. I will take up the latter issue in section 3.4.

3.3.1 The nature of nominal predication and Baker (2003)

So, what is the internal structure of a VNC like (101)?

- (101) bizim ülke-yi istıla-mız
 1pl.Gen country-Acc invasion-1pl
 ‘our invasion of the country’

We can reasonably say that the VN is a noun. Outside the VNC, it can be modified by typical noun modifiers, compounded with nouns or pluralized, for instance ((102)).

- (102) a. yıkıcı Moğol istila-lar-ı
destructive Mongol invasion-pl-CmpM
'destructive Mongol invasions'
- b. bu şiddetli hücum
this violent attack
'this violent attack'

These nominal properties are preserved inside the VNC: As I have shown in section 3.2.1.2.1, the VN functioning as the VNC predicate can be modified by adjectives. Furthermore, it is referential in the VNC (see section 3.2.3.4.1), and referentiality is a property of nouns (Baker 2003, Chierchia 1998).

I have also established in chapter 2 section 2.2.3.2 that the agreement morphology on the VN spells out D^0 . So, the topmost projection in the VNC is DP. We now have the bottom and the top of the syntactic structure of the VNC. What remains to be established is the intermediate structure where the arguments are positioned.

I will begin with the question of where the subject is positioned. In section 3.2.3.4.2, I have shown that anaphors are marginal in non-finite VNCs ((76) and (77)). I have concluded on this basis that a non-finite VNC does not even have a covert subject that could act as an antecedent for an anaphor. Next, in section 3.2.4.1, I have argued, using the data in (85) and (86), that non-finite VNCs do not have a DP layer. Then, the lack of a DP layer and the lack of a covert subject go hand in hand in the VNC. Putting these facts together, I propose that the subject of a VNC is generated at the DP level. The specifier position of the DP is the highest and the only position available for subjects in this construction.

I will now turn to the object. At this point, I will incorporate into the discussion some important ideas from Baker's (2003) theory of lexical categories. This theory has a bearing on a discussion of syntactic structures involving nominal predicates (VNs being the relevant case in the present context) and the licensing of the arguments of nominal predicates in these structures.

3.3.1.1 Baker (2003) and the verbal noun construction

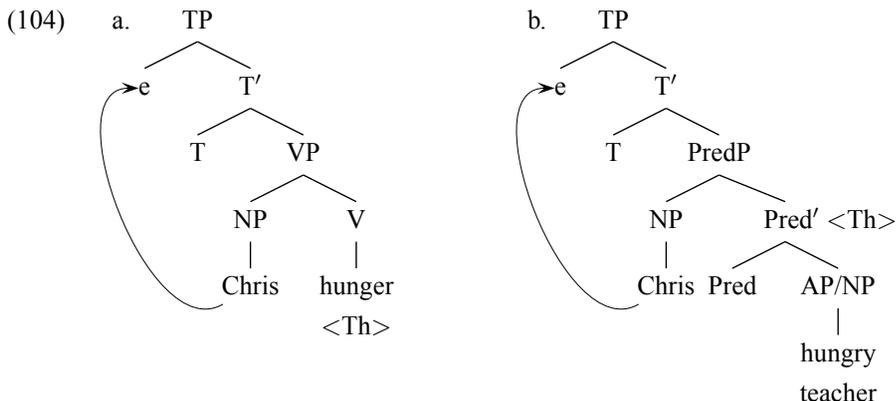
Baker (2003) points out that verbs are canonical predicates that have their arguments generated inside their maximal projection. He contends that nouns and adjectives contrast with verbs in this respect. He writes the following (Baker 2003: 31):

Nouns and adjectives are never predicates in and of themselves; they can only count as predicates in a derivative sense, by being part of a more articulated structure. More specifically... the subject in sentences like [(103b) and (103c)] originates outside the NP/AP, as the specifier of a [frequently] silent functional category... Pred [that takes NP/AP as its complement].

- (103) a. Chris hungers.
b. Chris *(is) hungry.
c. Chris *(is) a skier.

Baker (2003: 35), then, proposes the basic structures in (104) for the sentences in (103) reflecting the differences between structures with verbal predicates, on the one hand,

and nominal and adjectival predicates, on the other.^{34,35}



Here, I will present one argument that Baker puts forth in favor of this proposal (Baker 2003: 31-32, 62 ff.) (A few more arguments will follow in section 3.3.2.3.): Burzio (1986) extensively argues that the phenomenon of *ne*-cliticization in Italian is possible only from the structural object position. Consider, as an example of the phenomenon, the transitive sentences in (105).

- (105) a. Giovanni inviterà molti esperti.
Giovanni will invite many experts
'Giovanni will invite many experts.'
- b. Giovanni *ne_i* inviterà [*multi t_i*].
Giovanni of them_i will invite [many *t_i*]
'Giovanni will invite many of them.' (modified from Burzio 1986: 23)

³⁴Bowers (1993) has an alternative to this proposal. He argues that no category can assign a θ -role to its specifier position, not just nouns and adjectives. Every category must be supported by a functional head called Pred. One area where the two theories make different predictions is the following (Baker 2003: 38): Given that only like categories may be coordinated, Bowers predicts that it should be possible to conjoin verbs with non-verbal predicates, since both are PredPs ((ia)). For Baker, on the other hand, this would imply conjoining ν P with PredP and should be ruled out by the ban against coordinating unlike categories ((ib)).

- (i) a. poison made him_i [_{PredP} *t_i* Pred [_{AP} sick]] and [_{PredP} *t_i* Pred [_{VP} *t_i* die]]
b. poison made him_i [_{PredP} *t_i* Pred [_{AP} sick]] and [_{ν P} *t_i* ν [_{VP} *t_i* die]]

It is Baker's prediction that is borne out; a verb cannot be coordinated with a non-verbal predicate ((ii)):

- (ii) a. *Eating poisoned food made Chris sick and die.
b. *Sitting in the hot sun made Chris thirsty and drink a can of soda.
c. *Winning the game made Chris champion of the chess club and celebrate.

See Baker (2003: 34 ff.) for a more extensive comparison of these two proposals.

³⁵Note that in the second diagram, the theme role is discharged at the intermediate projection level. This is because Pred takes an NP/AP and makes a θ -marking element out of it. Thus, the precise θ -role assigned to the element in the specifier of PredP is a function of the lexical meaning of the A/N and not just the meaning of Pred.

The head of a nominal expression, such as *esperti* ‘experts’ in (105a), can attach to a verb as *ne*, as in (105b). The same applies to the inverted subjects of passive verbs, which are also held to be occupying the object position ((106b)).

- (106) a. Saranno invitati molti esperti.
will be invited many experts
‘Many experts will be invited.’
b. Ne_i saranno invitati [molti t_i].
of them_i will be invited [many t_i]
‘Many of them will be invited.’ (modified from Burzio 1986: 23)

However, *ne*-cliticization is disallowed for the inverted subjects of comparable nouns and adjectives, as shown in (107) ((107b) from Cinque 1990, via Baker 2003: 32, 64; (108b) from Mario Fadda p.c. with Mark Baker, via Baker 2003: 32, 64). This shows that there is a structural difference between verbs on the one hand, and predicate nouns and adjectives on the other.³⁶

- (107) a. Sono buoni pochi dei suoi articoli.
are good few of his articles
‘Few of his articles are good.’
b. **Ne* sono buoni pochi (dei suoi articoli).
of them are good few (of his articles)
‘Few of them (his articles) are good.’
(108) a. Sono professori molti delle persone con gli occhiali.
are professors many of people with the glasses
‘Many of the people who wear glasses are professors.’
b. ?**Ne* sono professori molti.
of them are professors many (e.g. of people who wear glasses)
‘Many of them (people who wear glasses) are professors.’

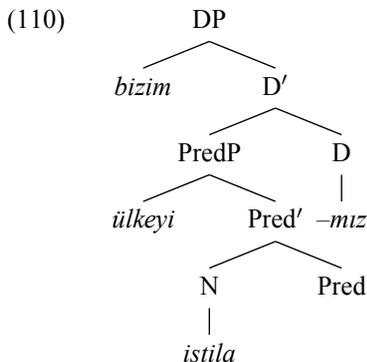
Corroborating these ideas, Baker discovers copular particles in Edo, Chichewa, Awtuw and Samoan that have the distribution expected from Pred; thus, they seem to be particles spelling out Pred. In (109) are examples from Edo.

- (109) a. Èmèrí (*ye/*re) mòsé.
Mary (*Pred) be.beautiful_V
‘Mary is beautiful.’
b. Èmèrí *(yé) mòsèmòsè.
Mary *(Pred) beautiful_A
‘Mary is beautiful.’
c. Úyì *(rè) òkhaèmwèn.
Uyi *(Pred) chief_N
‘Uyi is a chief.’ (Baker 2003: 40)

³⁶Some of the structures that Baker (2003) applies the PredP analysis to could also be analysed, adopting a more standard approach, as ‘small clauses’. Baker himself uses the term, but in a descriptive way. I refer the reader to Emonds and Whitney (2006) for arguments against attributing any theoretical reality to the concept of small clause.

When nouns and adjectives are used as (main clause) predicates in Edo, they must be assisted by a copular element. This is *yé* for adjectives ((109b)) and *rè* for nouns ((109c)). Verbs do not require a comparable element ((109a)).

Then, adopting Baker's ideas, I will propose the structure in (110) for the VNC (more specifically example (101)).



Here, the predication relation is mediated by PredP. This projection selects a VN as its complement and houses the theme argument of the VNC in its specifier. The subject is positioned in the specifier of DP. D⁰ is spelled out by a nominal agreement marker, while Pred⁰ remains phonologically null.

I assume that the specifier of PredP may also host non-theme objects, such as goal arguments bearing dative case, if the VN selects such noun phrases. As for the placement of the arguments of ditransitive VNs, such as *devr* 'turn over, transfer', *iade* 'give back, restore, return' and *transfer* 'transfer', the situation is more complex. There are not enough positions in (110) for the two objects of these VNs. This suggests that PredP has a more articulated structure than has been assumed here and in Baker (2003). This is hardly surprising. It has been argued in several works in the literature that core functional categories like C and T should be construed as conglomerates of various force/mood and tense/aspect related projections, respectively (see e.g. Rizzi 1997 and Cinque 1999). Accordingly, it is assumed in the framework adopted here (Chomsky 2000, et seq.) that C and T are shorthand notations for force/mood, tense/aspect systems. Similarly, the DP is often argued to be composed of several nominal projections (see e.g. Giusti 2005, Zamparelli 2000, Aboh 2004, Cinque 2005). Furthermore, given the mirror principle (see chapter 1 section 1.3.2) and the morphological complexity of the Turkish verbs and nouns, it becomes clear that syntactic structure is more articulated than the conventional labels make it out to be. PredP is in all likelihood no exception to this—though I will not elaborate further on this issue. That said, I do assume (110) to be an 'exclusive' structure in the sense that, apart from the probable enrichment of the PredP domain, there are no other projections in the VNC, in particular between PredP and DP.

My claim that both theme arguments, goals and other kinds of arguments occupy the specifier of PredP looks problematic from the perspective of the well-known Uniformity of Theta Assignment Hypothesis (Baker 1985a: 58). This hypothesis proposes a link between semantic roles and structural positions, as expressed in (111).

- (111) *The Uniformity of Theta Assignment Hypothesis*
 Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

This hypothesis might be taken to imply that the specifier of the PredP should be reserved for arguments bearing a particular θ -role. Baker (2003: 36) writes the following, however: “[I]t is not really the Pred that theta-marks the subject of a nominal. . . Rather, Pred takes an NP. . . and makes a theta-marking category out of it. . . The precise theta-role is a function of the lexical meaning of the. . . N, not just the meaning of Pred.” Then, the specifier of PredP is a ‘thematically dynamic’ position that arguments bearing various kinds of θ -roles may occupy.

Having presented my proposal for VNC structure, I will now evaluate it.

3.3.2 Evaluation of the proposal

Preliminary evidence that nominal predication in the VNC should not be analysed as a simple complement–head structure—where the complement is generated as a sister to the head—can be gathered from the comparison of non-finite VNCs with certain comparable structures with predicate adjectives and postpositional phrases. I had shown above in (73) that non-finite VNCs allow adverbs and adjectives to modify the VN. I repeat one example in (112a). I had also shown in (75) that structures that look like reduced relative clauses with adjectival predicates also allow modifiers in between the predicative adjective and its complement. I repeat one example in (112b).

- (112) a. Piyasa-lar [dolar-a ani / ?aniden hücum]-u
 market-pl [dollar-Dat sudden / ?suddenly attack]-Acc
 kaldır-a-ma-di.
 withstand-Abil-Neg-Past.3sg
 ‘The markets could not withstand the rush to the dollar.’
 b. [Tarkan-a delice hayran] kız-lar
 [Tarkan-Dat madly filled with admiration] girl-pl
 ‘girls filled with mad admiration for Tarkan’

Postpositional phrases disallow anything similar. Turkish has a postpositional intensifier *ta* ‘all the way’ that may be used to show this ((113)). The only position available for *ta* is to the left of both the complement and the postposition.

- (113) a. {ta} ev-den {*ta} beri
 {all the way} house-Abl {*all the way} since
 ‘all the way since the house’
 b. {ta} ev-e {*ta} kadar
 {all the way} house-Dat {*all the way} until
 ‘all the way until the house’

These similarities and differences fall into place if the VNC is analysed as in (110) (and if, in a parallel fashion, the PredP analysis is applied to structures with adjectival predicates), while postpositional phrases are treated as simple complement–head structures. Below, I provide more evidence for (110).

3.3.2.1 *The verbal noun construction as argument*

As a nominal construction, the VNC should be able to function as an argument of a predicate. This means that it should be able to bear a θ -role. According to Baker (2003), θ -roles are borne by elements that have referential indices, i.e. nouns. A constraint is imposed in that work on elements that have referential indices ((114), from Baker 2003: 165):

- (114) *The Reference–Predication Constraint*
No syntactic node can have both a specifier and a referential index.

This implies that if the VNC is to receive θ -roles as an argument by virtue of a referential index that it has, that index could only be borne by the VN, the only category in the VNC that does not project a specifier, according to (110). This ties in neatly with my observation in section 3.2.3.4.1 that the VN is referential in the VNC. And the referentiality of the VN as the VNC predicate converges with Baker's assumption that predicate nouns preserve their referential indices inside PredP (see Baker 2003: 166 for discussion and some special cases where a predicate noun does lose its referential index).³⁷

3.3.2.2 *Obligatory specificity and the VP anaphor öyle yap*

One advantage of the analysis in (110) is that it provides an explanation for the obligatory specificity of the arguments in the VNC brought up earlier in 3.2.4.2, and used as a counter-argument against the ALVH. Recall from that section that specificity contrasts with respect to a given argument require a lower and a higher position for that argument. The VP-internal lower position is associated with a non-specific reading and the higher position, located outside the VP, with a specific reading (Diesing 1992). The unavailability of non-specific readings of arguments in the VNC follows naturally in my proposal: There is no VP in the VNC to obtain a non-specific reading for an argument.³⁸

Similarly, the fact that the VP anaphor *öyle yap* cannot take the VNC as an antecedent (pointed out in section 3.2.4.3) also falls out from (110). PredP cannot be an antecedent for a VP anaphor.

3.3.2.3 *Morphology*

I pointed out in section 3.2.1.2.4 that VNs cannot take any verb morphology. I used this as a counter-argument against the ALVH in several places. I can address this issue with the approach I adopt here. Assuming the presence of a PredP in the VNC makes the

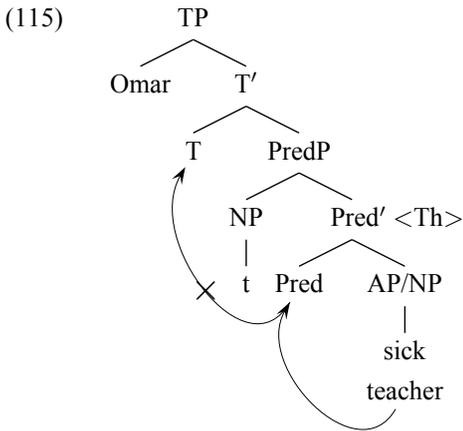
³⁷This account suggests that there should be different degrees of referentiality: As I have pointed out in section 3.2.3.4.1 a factive nominalization cannot be referred back to, which suggests that it is not referential. However, under Baker (2003, 2005) a factive nominalization presumably does have *some* referentiality, if it is to receive a θ -role from the predicate that selects it. I do not have an account that fills in this theoretical gap.

³⁸Note that this explanation presupposes that the specific reading is the default reading for a noun phrase argument. This seems to be on the right track: Specific noun phrases are referential. And according to Baker (2003), nouns are elements that have referential indices by definition.

following predictions: First, there should be no tense morphology in the VNC; second, there should be no causative morphology in the VNC. Let me spell out how I derive these predictions and show how they are borne out.

3.3.2.3.1 Tense morphology Baker (2003: 46-52) observes that “[p]erhaps the most obvious difference between verbs and [nouns] is that in many languages only verbs can be inflected for tense and related notions, such as aspect and mood.” As it is natural in languages of the world to conceptually place both verbal and non-verbal predication in some tense, this restriction on tense and related notions needs to be accounted for. Baker, then, undertakes to provide an explanation for the restricted distribution of tense inflection without relying on stipulative concepts, such as features like $+/-V$ or $+/-N$ in the morphological subcategorizations of affixes.

Baker begins by noting that it is standardly assumed that tense is generated as a separate node in the syntax, he goes on as follows: “[I]f a particular tense is specified as being an affix . . . it will attract another head to itself so it can attach to that head morphologically.” In the light of his proposal that predicate nouns are assisted by a PredP, he later explains why nouns cannot bear any tense morphology: Pred⁰ intervenes between the lexical noun root that tense could attract and tense itself. If the lexical noun moved into Pred⁰, this would produce a complex Pred head (under standard assumptions about head movement), a functional head, and be unsuitable for the tense affix to attach ((115)).



The alternative of jumping over Pred⁰ would violate the head movement constraint (Travis 1984) given in (116):³⁹

³⁹The head movement constraint is a corollary of Relativized Minimality (Rizzi 1990). Relativized Minimality is a condition that prevents a syntactic dependency from being established between two elements across an intervening element of the same kind. This is because the intervening element would be a closer antecedent for the lower position in the dependency. Head movement chains are among the syntactic dependencies that Rizzi investigates, where the dependency is between the moving element and its trace. In this case, a moving head A cannot skip over another head B and move into a higher head C. The only possible options are either for A to remain in situ and B to move into C, or for A to move first to B and then to C (as also stated in the head movement constraint ((116))). Now, Roberts (1992) and den Dikken and Hoekstra

(116) *The Head Movement Constraint*

A word-level category X can move to adjoin to another word-level category Y only if the phrase headed by X is immediately dominated by a projection of Y.

Baker proposes that the reason tense cannot attach to the complex Pred head is because tense seems to have a basic morphological requirement ((117)):⁴⁰

(117) (In certain languages, certain) tenses must attach to a lexical category.

This constraint is motivated by the fact that tense affixes cannot attach to the copular particles that spell out Pred (exemplified in (109)) in Edo, Chichewa, Awtuw and Samoan.

As verbs do not have a Pred layer that could intervene between the tense head and the verb, nothing prevents tense affixes from attaching to a verb. However, given the constraint in (117), one might object that a *v* head intervenes between the verb root and the tense node under standard assumptions on phrase structure. This *v* head should, as a functional category, prevent the tense affix from attaching to the verb root, as in (118).

(118)

The answer is that Baker (2003: 26) construes *v* as a category with lexical properties (as well as functional).⁴¹ This view is implicit in the works that have postulated a *v* in the verbal domain (e.g. Kratzer 1994b, Kratzer 1994a, Chomsky 1995, Hale and Keyser 1993, i.a.): *v* is assumed to assign the agent θ -role, like an item with lexical content, as well as assigning accusative case to the theme through agreement, like a functional category. Thus, *v* counts as a lexical head for the purposes of (117), and does not block the attachment of tense.

Turkish past tense is precisely the kind of tense to be used for a test for the presence of PredP in the VNC: It is an affix (*-DI*) that needs to attach to a lexical category. It can attach directly to a lexical verb root ((119a)). If, on the other hand, it needs to attach to an inflected verb form, as in the case of a complex tense form, it attaches to a light verb of sorts (*i*) which may phonologically cliticize onto the verb ((119b)).⁴²

(1997) propose a less strict version of the head movement constraint, what may be called the relativized head movement constraint. These works propose that head movement is not blocked by intervening heads in general, but only by heads of the same type. Clearly, for Baker's explanation of why tense markers cannot attach to nouns to work, relativized head movement constraint should not be violated either. In other words, A/N and Pred must be heads of the same type (whatever "same type" is taken to mean in this theoretical context) so that A/N may not skip over Pred. The same concerns are valid for the VNC since I generalize Baker's account to that construction. I will not investigate this issue here.

⁴⁰This is a purely morphological requirement of the affix. As Baker notes "[i]f a language has no tense affixes at all, tense inflection per se obviously does not distinguish one category from another".

⁴¹The concept of "grammatical verb", i.e. a hybrid verb that displays both lexical and functional properties, in Emonds (1985) is comparable to this. See also by N. Corver and van Riemsdijk (2001) for a selection of articles exploring the nature of "semi-lexicality".

⁴²See Kornfilt (1996b) for a more detailed discussion.

- (119) a. git-ti-m
go-Past-1sg
'I went.'
- b. git-miş i-di-m (> git-miş-ti-m)
go-Perf i-Past-1sg
'I had gone.'

The light verb *i* that the past tense attaches to is in all probability not a functional category: It has an infinitive form (used only as its citation form) ((120a)) and a nominalized form (used in some fossilized archaic structures) ((120b)) like all lexical verbs.

- (120) a. i-mek
i-Inf
'to be'
- b. ne i-düğ-ü belirsiz
what i-FNom-3sg uncertain
Lit. 'It's what being is uncertain.'
'It is uncertain what it is.'

The inflected verb form *gitmiş* in (119b) that *-DI* attaches to may be analysed as a verb phrase with a dominating functional projection that the aspect marker *-miş* spells out, following the mirror principle. If that step is taken, the behaviour of *-DI* would be another manifestation of the generalization in (117).

In addition to requiring *i* as the intermediary in complex verb forms, *-DI* also requires *i* when it attaches to nouns ((121a)) and adjectives ((121b)).

- (121) a. Dilbilimci i-di-m (> Dilbilimci-y-di-m)
linguist Cop-Past-1sg
'I was a linguist.'
- b. Hasta i-di-m (> Hasta-y-di-m)
sick Cop-Past-1sg
'I was sick.'

Under these facts, if the VNC has a PredP layer as I have proposed, then we would predict the VN to be unable to bear any tense morphology. This prediction is borne out, as evidence by data in (122) that I had previously brought to the reader's attention:

- (122) *siz(-in) Rohan-ı istila-dı-nız
2pl(-Gen) Rohan-Acc invasion-Past-2pl
Lit. 'your invasioned of Rohan/you invasioned Rohan.'

I schematize this in (123).

- (123) [DP *sizin* [TP [PredP *Rohanı* [N *istıla*] Pred] [T *-dı*]] [D *-nız*]]
-

The VN raises to attach to T passing through Pred. The complex head formed by this operation prevents the tense morpheme from attaching to the VN.⁴³

⁴³*i* cannot be used in this syntactic context because *i* cannot be used in nominalizations (for reasons

3.3.2.3.2 *Causative morphology* As to causative morphology, Baker (2003: 53-59) observes that “many languages have causative morphemes that attach productively to verb roots, but not to nouns”. He notes that it is fairly standard to derive such forms from an underlying source like (124a) by way of a process of head movement/incorporation as in (124b).

- (124) a. The hot sun made [_{VP} Chris hunger]
 b. The hot sun hunger_i-made [_{VP} Chris t_i]

As with tense inflection, Baker aims to provide an explanation for the restricted distribution of causative morphemes without relying on features like +/–V or +/–N in the morphological subcategorizations of these affixes which specify to what kinds of roots these morphemes may attach to. Again in the light of his proposal about predicate nouns, Baker later explains why nouns cannot bear any causative morphology by recourse to a fact observed by Li (1990): The kind of head movement that derives causative forms cannot take a lexical category and move it through a functional category before attaching it to another lexical category such as the causative verb. Baker refers to this as the proper head movement generalization ((125)):

- (125) *The Proper Head Movement Generalization*
 A lexical head A cannot move to a functional head B and then to a lexical category head C.

The derivations by means of which a causative noun or adjective could be formed are ruled out in the following way: If the noun or adjective moved through Pred⁰ on its way to the causative morpheme, it would violate the proper head movement generalization ((126)). If the noun or adjective skipped over the Pred⁰ head this would violate the head movement constraint.

- (126) a. *The hot sun hungry_i-made [_{PredP} Chris Pred(+t_i) [_{AP} t_i]]
 b. *The hot sun invalid_i-made [_{PredP} Chris Pred(+t_i) [_{NP} t_i]]

In this theoretical context, if the VNC has a PredP layer as I propose, then we would predict the VN to be unable to bear any causative morphology. This prediction is borne

unknown to me) and is replaced by another light verb, *ol* ‘be, become’. The use of *ol* with VNs is restricted, but when it is possible, it is impossible to construct a structure that looks like a VNC due to the fact that verbs in Turkish cannot take agreement markers directly, without tense markers, nominalization markers, or similar morphemes. And when a marker of this sort is attached to *ol* in the company of a VN in a nominal structure, as in (ib), this gives rise to a nominalized LVC with a passive interpretation. Thus, (ib) is one passive of (ic).

- (i) a. siz-in Rohan-ı mahv-iniz
 2pl-Gen Rohan-Acc devastation-2pl
 ‘your devastation of Rohan’
 b. Rohan-in mahv ol*(-ma)-sı
 Rohan-Gen devastation be*(-ANom)-2pl
 Lit. ‘the devastating of Rohan’
 c. siz-in Rohan-ı mahv et-me-niz
 2pl-Gen Rohan-Acc devastation do-ANom-2pl
 ‘your devastating Rohan’

out ((127)):

- (127) *siz-in biz-e Rohan-ı istila-t-ınız
 2pl-Gen 1pl-Dat Rohan-Acc invasion-Caus-2pl
 Lit. ‘your making our invasion of Rohan’

I schematize this in (128).

- (128) [DP *sizin* [_{CausP} *bize* [_{PredP} *Rohani* [_N *istila*] Pred] [_{Caus} *-t*]] [_D *-ınız*]]
-

The VN raises to attach to the causative morpheme passing through Pred. The first leg of the displacement involves movement to a functional head, and the second to a lexical head, in violation of the proper head movement generalization.

Thus, the contrasts between the morphological properties of the VNC and structures with verbal predicates (nominalized or not) naturally follow from my account: Pred, which is present in the VNC but not in constructions with verbal predicates, bars the attachment of verbal morphological markers.

3.3.2.4 Adverbs and adjectives

I have observed in section 3.2.1.2.1 that a VN may be modified by both adverbs and adjectives. Now note that there are two positions that these modifiers can be found in: Adverbs are allowed to appear immediately to the left of the object or the VN; adjectives may only occur immediately to the left of the VN ((129)).

- (129) siz-in {ansızın / *anı} Rohan-ı {ansızın / anı}
 2pl-Gen {suddenly / *sudden} Rohan-Acc {suddenly / sudden}
 istila-nız
 invasion-2pl
 ‘your sudden invasion of Rohan’

Given the structure proposed for the VNC in (110), the higher position appears to be adjoined to PredP and the lower position to N⁰. I will now discuss these possible sites of attachment.

Baker (2003: 39) notes that there is “no automatic expectation” that an adverb should be able to attach to PredP, but seems to leave the question open (see Baker 2003: fn. 9). It might be possible to exploit this opening and suppose that adverbs can adjoin to PredP, under the right conditions. The possibility of having adverbs attach to PredP, or more precisely the type of modifiers that may be attached to PredP, seems to be partly determined by the semantic properties of the VN. Consider (130).

- (130) a. ordu-nun sessizce / *sessiz düşman-a hücum-u
 army-Gen silently / *silent enemy-Dat attack-3sg
 ‘the army’s silent attack on the enemy’
 b. Cem-in *çocuksu bir şekilde / *çocuksu saklambac-a heves-i
 Cem-Gen *childishly / *childish hide-and-see-Dat yen-3sg
 ‘Cem’s childish yen for hide-and-see’

In (130a), the adverb *sessizce* ‘silently’ can attach PredP by virtue of the fact that the VN *hücum* ‘attack’ is eventive. By contrast, in (130b), the adverbial *çocuksu bir sekilde* ‘childishly’ is not allowed to attach PredP because the VN *heves* ‘yen’ does not have an eventive reading. Compare this with the situation in the LVC, where the VN exerts no such influence ((131)). Adverbial modification is allowed regardless of the eventivity of the VN.

- (131) a. Ordu sessizce / *sessiz düşman -a hücum et -ti.
 army silently / *silent enemy -Dat attack do -Past.3sg
 ‘The army silently attacked the enemy.’
- b. Cem çocuksu bir sekilde / *çocuksu saklambac -a heves et
 Cem childishly / *childish hide-and-peek -Dat yen do
 -ti.
 Past.3sg
 ‘Cem childishly had a yen for hide-and-peek.’

Then, if the semantic properties of the VN allow adverbial modification as well as adjectival, PredP allows (only) adverbs to attach to it. If the semantics of the VN disfavors adverbial modifiers, no modifier can adjoin to PredP.

As for the lower position, i.e. N^0 , adverbs may target this position due to reasons I have just laid out, namely the semantic properties of the VN. Adjectives are licensed in this position due simply to the categorial properties of the VN; nouns normally allow adjectival modifiers.⁴⁴

This explanation raises two questions. The first is that of how adverbs can target a noun. English derived nominals, for instance, do not allow this. The second question is that of why only adverbs can target PredP. I have given a possible answer to the first question in section 3.2.2.2. There, I conjectured that what seem to be adverbs in Turkish might actually be adpositional phrases—which are well-known to be able to modify nouns. It may well be that Turkish lacks the syntactic category adverb, but only possesses functionally adverbial elements. Under this outlook, the second question posed above would become one of why adjectives cannot modify PredP. The answer is trivial: PredP is not a noun phrase.

As an alternative to this account of adverbial modification I have presented above, one may try to dissipate the problem by attributing the object–adverb–VN order in (129) to scrambling: The adverb that *prima facie* appears to be adjoined to the maximal projection of the VN (N^0) is actually adjoined to PredP. The object scrambles to the left of it giving rise to the order in question. This way, one can avoid the problem of explaining how an adverb may modify a noun.

This alternative predicts an order of modifiers where adverbs are to the left of adjectives. This is because PredP, which the adverb adjoins to is higher than the VN that the adjective attaches to. This prediction is not borne out: Native speakers accept both

⁴⁴It is also possible that the adverb–object–VN order is derived through the scrambling of the object to the right of the adverb modifying the VN. In other words, the underlying structure is one where adjectival and adverbial modifiers both target the maximal projection of the VN. This would raise the question of why adjectives cannot occur to the left of the object away from the VN they modify. It seems possible to attribute this to the strong tendency of adjectives to remain close to the nouns they modify. They allow scrambling only with certain nominal modifiers, such as numerals.

orders of modifiers. Some speakers allow the order in (132a) and some others the order in (132b). There are also other speakers, including myself, who allow both orders.

- (132) a. %Ork -lar -in Rohan -ı istenmedik, ansızın istila -sı
 ork -pl -Gen Rohan -Acc unwanted suddenly invasion -3sg
 ‘the orks’ unwanted sudden invasion of Rohan’
 b. %Ork -lar -in Rohan -ı ansızın, istenmedik istila -sı
 ork -pl -Gen Rohan -Acc suddenly unwanted invasion -3sg
 ‘the orks’ sudden unwanted invasion of Rohan’

This outcome implies that this alternative account of adverbial modification should be scrapped in favor of the first—which proposes that adverbial modification is essentially modification by an adpositional phrase.

The preceding discussion also corroborates the position of the object in the structure I have proposed for the VNC in (110). Given (110) and the order of the various elements in (129), we are forced to conclude that *Rohan* cannot be positioned in the maximal projection of the VN, i.e. NP, as the complement. This would predict an ordering of elements where an adjective modifying the VN could be positioned to the left of *Rohan*, as in (133).

- (133) [DP *sizin* [_{PredP} Adv/Adj [_{NP} *Rohanı istila*] –nız]

As (129) shows, this order is ill-formed. This leaves the specifier of PredP as the only possible position for the object to fill. This conclusion holds for arguments bearing other cases, such as the dative, as well those bearing accusative, because the observations concerning the positions of modifiers applies to these as well.

3.3.2.5 *The agent θ -role*

The positioning of the agent argument under the analysis in (110) raises questions about how this argument is θ -marked. Arguments receive their θ -roles by being merged in the maximal projections of their θ -markers (see e.g. Chomsky 1986b, et seq.). Then, merging the agent of a VNC in the specifier of DP implies that the agent is θ -marked by D.⁴⁵ In other words, the specifier of DP in the VNC is a θ -position—a position to which θ -roles are assigned. In this sense, this position, as the specifier position of a functional category to which θ -roles can be assigned, is like the specifier position of *v*.

The claim that the specifier of DP in the VNC is a θ -position predicts the following: Syntactic expletive elements, which cannot be assigned θ -roles due to their lack of semantic content, should be barred from the subject position of the VNC. Passives with inherently case-marked arguments are the only environments to test this prediction in the VNC.

I have proposed in chapter 2 section 2.1.1 that in sentential passives with inherently case-marked arguments the sole argument of the passive does not raise to the specifier of TP and these constructions have a covert expletive in the specifier of TP (indicated

⁴⁵Baker (2005) entertains precisely this possibility. In his paper, Baker assumes that in possessive noun phrases in languages like Turkish the agreement marker is D and that the possessor is θ -marked by this possessive determiner head. He extends this analysis to nominalizations.

by Expl in (134)) (cf. Kornfilt 1996a). The specifier of TP is a position to which θ -roles are not assigned (see e.g. Chomsky 1981).⁴⁶

- (134) Expl adam-a (hırsızlar tarafından) sal-dır-ıl-ma-sı.
 Expl man-Dat (burglars by) attack-Caus-Pass-ANom-3sg
 Lit. 'there being a man's attacked (by burglars)'

A passive VNC with an inherently case-marked sole argument is ungrammatical ((135)). This suggests that the specifier of DP in the VNC is indeed a θ -position.

- (135) *Expl düşman-a ordu tarafından hücum-u
 Expl enemy-Dat by the army attack-3sg
 'the attack on the enemy (by the army)'

However, this analysis about the status of the specifier of the DP raises an interesting question about passivization in general in the VNC. Under this analysis, it becomes quite mysterious how normal passives, i.e. those that do not require expletive insertion, are derived. Take (136), for instance, which has the structure in (137).

- (136) Rohan-ın (orklar tarafından) istila-sı
 Rohan-Gen (orks by) invasion-3sg
 'the invasion of Rohan (by orks)'

- (137) [DP *Rohan-ın* [_{PredP} *t istila*] -sı]

Here, the sole argument *Rohan* is merged in the internal argument position, i.e. in the specifier of PredP, receive a θ -role from the predicate *istila* and subsequently raise to the subject position, i.e. specifier of DP.⁴⁷ If I am interpreting (135) correctly, this position is also a θ -position so *Rohan* would receive a second θ -role in violation of

⁴⁶In Turkish, the other environment where the subject position is occupied by a covert expletive is structures with non-specific subjects. Unfortunately, non-specific arguments are disallowed in the VNC, making it impossible to use this environment as a test case.

⁴⁷This structure seems to predict that (ia) (with neutral intonation) should be grammatical just like (ib), contrary to fact. (The string in (ia) is much better with contrastive focus and genitive case on *Rohan*. This is probably a scrambled version of (ib).)

- (i) a. *aniden Rohan(-ın) istila-sı
 suddenly Rohan(-Gen) invasion-3sg
 'the sudden invasion of Rohan'
 b. Rohan-ın aniden istila-sı
 Rohan-Gen suddenly invasion-3sg
 'the sudden invasion of Rohan'

There are two positions that *Rohan* could occupy in (137), namely the specifier of DP or PredP. It could in principle remain in the specifier of PredP. This structure should be ill-formed at least for the following reason: The structure of (ia) should be as in (ii).

- (ii) [DP Expl *aniden* [_{PredP} *Rohan(-ın) istila*] -sı]

Here the specifier of the DP is occupied with an expletive, which is barred from this position, as in (135), giving rise to ungrammaticality.

Similarly, the derivation where *Rohan* remains in the specifier of PredP and is assigned accusative case by a jump-started Pred should also be ill-formed due to the impossibility of inserting an expletive in the specifier of the DP.

the θ -criterion. The θ -criterion is a commonly assumed principle of grammar that regulates θ -role assignment. In its standard form, the θ -criterion (Chomsky 1981: 36) is formulated as follows ((138)):

(138) *The θ -Criterion*

Each argument bears one and only one theta-role and each theta-role is assigned to one and only one argument.

One could resolve this problem under theories that reduce the syntactic effects of the θ -criterion to other independent grammatical principles, and eliminate the θ -criterion. Bošković (1994) is one such theory. Bošković notes that something like (139) (from Brody 1993) must hold out of interpretative necessity, independent of the requirements of syntax.

- (139) a. Every θ -role must be assigned to some argument.
b. Every argument must be assigned some θ -role.

What is syntactic in the θ -criterion is the so-called biuniqueness requirement imposed by (138), as opposed to (139), which prevents an argument from receiving two θ -roles. However, Bošković argues that, semantically, there is nothing wrong with one argument receiving two θ -roles. Problems arise when one argument is associated with more than one θ -role in syntax as a result of movement. Bošković, then, shows how one can reduce the effects of this kind of a θ -criterion violation to the effects of improper movement.⁴⁸ Improper movement is defined as a movement operation as in (140), where X and Y are different types of syntactic positions.

- (140) X Y X
 α t' t
 ↑ ↓ ↓
 └──────────┬──────────┘

Various types of syntactic positions have been postulated in the literature, the A/A' distinction being the most widespread one (see e.g. Chomsky 1981). An A-position is a position to which a θ -role can be assigned. In the VNC, the specifiers of both PredP and DP are, then, A-positions. An A'-position, by contrast, is a position which is not an A-position.

Then, when we look back at (136)-(137) from this theoretical angle, we see that the movement of *Rohan* from the specifier of PredP to the specifier of DP is not an instance of improper movement—both positions are A/ θ -positions. Then, there is no reason to expect (136) to be ill-formed, at least from this perspective.

This discussion implies that (135) must be bad due to the semantic version of the θ -criterion, and not the biuniqueness condition imposed by the syntactic θ -criterion. This seems to be true. Above, I have labelled (135) as ungrammatical. But, strictly

⁴⁸The only potentially problematic cases such as (i) can be explained with reference to other principles of grammar.

- (i) *_{[TP John [_{VP} t [_{VP'} hit t]]]}

Here, if *John* is assigned case by *hit*, *John* will become inactive for Agree purposes and will not be able to value the φ -features of T.

speaking, the string in this example does have an interpretation (without the *by*-phrase). It is interpreted as a structure with a third person singular implicit subject. (Turkish is a so-called pro-drop language which allows subjects to be unexpressed under the right conditions.) The passive with expletive subject interpretation (analogous to (134)), which would be forced by the presence of the *by*-phrase, is ruled out here in favor of the implicit subject interpretation.

3.3.3 Conclusion

In this section, I have argued for an analysis of the VNC that postulates a PredP layer in the VNC. This proposal was inspired by the PredP analysis of predicate nominals in Baker (2003). I have shown that my proposal elegantly accounts for several facts concerning the VNC. It explains how the VNC can function as an argument by virtue of the referentiality of the VN. It also explains why the arguments of the VNC should be obligatorily specific. That the VP anaphor *öyle yap* cannot take the VNC as antecedent also falls out naturally under this analysis. The unavailability of verb morphology, particularly tense and voice morphology, is also accounted for, so are the positions that adverbs and adjectives may occupy in the VNC. Finally, my proposal implies the convergence of eventivity, agentivity and accusative assignment capability on the DP projection. The relatedness of these properties has often been remarked in the literature, and these properties have been attributed to *v* in the verbal domain.

3.4 Accusative case in the VNC

3.4.1 The role of nominal agreement

In the discussion of accusative case assignment in the VNC in section 3.2, I have concentrated almost exclusively on the predicate of the VNC as the possible source of the properties relevant for case assignment in the VNC. However, if we study the VNC once more, this time around shifting our focus away from the VN towards other elements in the structure, we notice that nominal agreement morphology possibly has a role to play in accusative case assignment in this construction. *Prima facie* evidence for this role of nominal agreement morphology comes from a comparison of Turkish with Japanese and Korean. Consider (141).

- (141) *siz-in* *Rohan-ı* *istila-nız*
 2pl-Gen *Rohan*-Acc *invasion*-2pl
 ‘your invasion of *Rohan*’

As has been shown numerous times before, in the presence of a subject (in this example *sizin* ‘your’), the predicate of the VNC (here *istila*) is marked with a subject agreement affix (here *-nız*). Now note that this suffix is found only in Turkish and not in Japanese and Korean VNCs. I show this in examples (142) and (143), which involve Japanese and Korean versions of the VNC.⁴⁹ Crucially, these languages also disallow structural

⁴⁹The constructions in these examples are comparable to the Turkish VNC because they are headed by nouns which share commonalities with Turkish VNs, such as the ability to take part in LVCs as the nominal

case assignment in their version of the VNC. The same observations hold for nominals in Indo-European languages like English.

- (142) a. Gun-no sono machi-no hakai
 army-Gen that city-Gen destruction
 ‘the army’s the destruction of that city’
 b. *Gun-no sono machi-o hakai
 army-Gen that city-Acc destruction
 Lit. ‘the army’s the destruction that city’ (Japanese)
- (143) a. John-uy yenge-uy kongpu
 John-Gen English-Gen study
 ‘John’s study of English’
 b. *John-uy yenge-lul kongpu
 John-Gen English-Acc study
 Lit. ‘John’s study English’ (Korean, Choi and Wechsler 2001)

I will provide one piece of evidence as to the nature of the Japanese genitive *no* in nominal structures like (142). Wada (1997) notes that there are different views regarding the exact nature of *no*: It may either be structural genitive case or inherent genitive case, or a postposition. Wada, however, argues that there is good evidence that *no* is not likely to be a case particle. In Japanese not only noun phrases but also postpositional phrases are obligatorily marked with the particle *no* in a nominal environment, as shown in (144). (In addition, Wada shows that other categories such as adverbial phrases and CP/IP with copular verbs also require *no*.)

- (144) a. John-*(no) tegami
 John-*(Gen) letter
 ‘John’s letter’
 b. John-kara-*(no) tegami
 John-from-*(Gen) letter
 ‘a letter from John’

In the light of these data, it is clear that *no* cannot be the spell-out of a genitive case feature because case features are generally considered to be properties of noun phrases (summary of the argument from Tsujioka 2002; see also Inoue 2006 for review of various treatments of Japanese cases and particles).

Then, if the goal of looking for the solution in a difference between Turkish, on the one hand, and Japanese, Korean, English and several other languages, on the other, is a reasonable one, there is reason to suspect that the element responsible of case assignment to the object in the VNC is none other than nominal agreement. This is the idea that I explore in Keskin (2006, 2009). Here, I will expand on the proposal that I

component of an LVC predicate, and consequently, license arguments and assign θ -roles. They are, just as in Turkish, borrowed words.

advance there.⁵⁰

Clearly, the fact that the agreement, which I believe to be essential for accusative case, is with the subject (and not the object) requires me to make use of additional machinery to enable it to assign accusative to the object. This machinery is available in some form in the literature, notably in Chomsky (to appear, 2005). I will present this ingredient of my account after I have presented evidence that supports my idea about the role of subject agreement.

3.4.1.1 The evidence

3.4.1.1.1 *Agreement, case and D in Turkish* The idea that nominal agreement is an essential factor in accusative case assignment, predicts that when agreement is not present in the VNC, structural case assignment to the object should be barred. As the assignment of inherent case does not rely on agreement, it should not be affected by the lack of nominal agreement. This is indeed the case. I had made this observation earlier in section 3.2.4.1. I repeat the relevant data below in (145):

- (145) a. Piyasa-lar [dolar-a ani/?aniden hücum]-u
 market-pl [dollar-Dat sudden attack]-Acc
 kaldır-a-ma-dı.
 withstand-Abil-Neg-Past.3sg
 ‘The markets could not withstand the rush to the dollar.’
- b. Cem ban-a [bir olay-dan şikâyet]-e gel-di.
 Cem 1sg-Dat [a incident-Abl complaint]-Dat come-Past.3sg
 ‘Cem came to me for a complaint about an incident.’
- c. [Hata-lar-ın-da inatla ısrar]-a devam et-me!
 [mistake-pl-2sg-Loc stubbornly insistence]-Dat continue-Neg
 ‘Do not continue with the stubbornly insistence on your mistakes.’
- d. *[Anadolu-yu mahv] Moğol-lar-ı tatmin
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3.g
 Lit. ‘The devastation Anatolia did not satisfy the Mongols.’

In these examples, the bracketed segments are non-finite VNCs headed by the VNs *hücum* ‘attack’, *istifa* ‘resignation’, *ısrar* ‘insistence’ and *mahv* ‘devastation’. No agreement morphology is present on the VNs, as opposed to the example in (141). In this syntactic environment, accusative case assignment is not possible ((145d)), whereas the inherent cases are unaffected ((145a)-(145c)). Thus, there appears to be a dependency between subject agreement and accusative case in the VNC. In (146), I express this observed link between subject agreement and accusative case as an empirical generalization.

⁵⁰This general idea should not be cast as a biconditional implication. For instance, as shown in (6), North Azerbaijani has subject agreement on the VN but accusative case assignment in the VNC is not acceptable for all speakers. Thus, the generalization is that accusative case is licit in the VNC only if subject agreement is present.

(146) *The Non-finiteness Effect on Accusative Case*

(In certain constructions) when subject agreement is absent, accusative case is barred.

This is an important generalization. I will show in other sections of this book (notably in chapter 4 section 4.1.1) that it holds in several other constructions in Turkish and even other languages (chapter 5).

It is important to remind the reader that in non-finite VNCs it is the entire DP layer that is missing, along with agreement features, and not simply agreement features themselves. I had pointed this out in section 3.2.4.1. This effectively rules out the possibility that there may be covert subject agreement features present at D^0 , and that the ungrammaticality of accusative case in a non-finite VNC is due to a factor other than the lack of subject agreement.

To reiterate an observation of section 3.2.4.1, the licensing of agents, eventivity and the licensing of structural object case are commonly related to each other in the literature. In contrast to finite VNCs, non-finite VNCs have no syntactically represented subjects (hence no agent arguments) and they seem to be somehow less eventive. The data in (145) section adds to this the fact that, again in contrast to finite VNCs, non-finite VNCs cannot license accusative case. Thus, if there is a single element that embodies all three properties of agentivity, eventivity and accusative case licensing, that has to be D with φ -features; this is where the structural difference between a non-finite and a finite VNC is.

3.4.1.1.2 Case and D in Japanese Above, I have contrasted Turkish with Japanese and Korean VNCs ((142) and (143)). I have pointed out that the lack of nominal subject agreement and the concomitant impossibility of accusative case assignment in the VNC in the latter two languages is suggestive of the role of agreement in accusative case assignment. Next, I have shown that, indeed, the lack of subject agreement features rules out accusative case in the Turkish VNC. And the lack of agreement features goes hand in hand with the absence of a DP projection. In the backdrop of these facts, one would have reason to suspect that the DP layer is absent in Japanese and Korean VNCs.

This suspicion is borne out. Fukui (1986: 227 ff.) argues that there is no D in Japanese, and consequently no DP. He begins by proposing that only functional heads close a projection. According to Fukui, a projection that has been closed-off can have at most one specifier. In nominals, this position would be filled by a genitive-marked element. On the other hand, a projection that has not been closed-off allows multiple specifiers. In nominals, these could each be filled by genitive-marked elements.⁵¹ Fukui, then, makes the following observation:

[G]enitive phrases, as well as demonstratives, do not close off the projection of N, so that the following Japanese examples [in (147)] are all grammatical in contrast to the corresponding English phrases in the quotes, which are all ungrammatical.

⁵¹In the framework I have adopted here, these conditions would have to be restricted to noun phrases that fill these specifiers by merge, and not by movement. Accusative objects, for instance, are assumed to be in the external specifier of v , while agent subjects fill the inner specifier (see chapter 2 section 2.3). Objects end up in this position by moving there.

- (147) a. Yamada-sensei-no so-no koogi
 Yamada-teacher-Gen that/the lecture
 Lit. ‘Prof. Yamada’s that/the lecture’
- b. kyonen-no Yamada-sensei-no so-no koogi
 last year-Gen Yamada-teacher-Gen that/the lecture
 Lit. ‘last year’s Prof. Yamada’s that/the lecture’
- c. Tokyo-daigaku-(de)-no sensyuu-no Yamada-sensei-no
 Tokyo-university-(at)-Gen last week-Gen Yamada-teacher-Gen
 so-no koogi
 that/the lecture
 Lit. ‘Tokyo University’s last week’s Prof. Yamada’s that/the lecture’

What this would entail for the VNC is that it should be open in Japanese but closed in Turkish, i.e. allowing multiple genitive-marked elements in the former language but not in the latter. This is indeed the case, as demonstrated by (148) and (149):

- (148) a. [Gun-no sono machi-no hakai]-wa igai datta.
 [army-Gen that city-Gen destruction]-Top unexpected was
 ‘The army’s destruction of that city was unexpected.’
- b. [Kyonen-no gun-no sono machi-no hakai]-wa igai
 [last year-Gen army-Gen that city-Gen destruction]-Top unexpected
 datta.
 was
 Lit.: ‘Last year’s the army’s destruction of that city was unexpected.’
- (149) a. [Ordu-nun kent-i feth-i] beklenmiyordu.
 [army-Gen city-Acc conquest-3sg] was not expected
 ‘The army’s conquest of the city was not expected.’
- b. *[Geçen yıl-in ordu-nun kent-i feth-i] beklenmiyordu.
 [last year-Gen army-Gen city-Acc conquest-3sg] was not expected
 Lit.: ‘Last year’s the army’s conquest of the city was not expected.’

Later, Fukui and Takano (2000) show that a variety of differences between English and Japanese relative clauses fall out in a simple and elegant manner, based on the single parametric difference between the two languages: In English nouns raise to D^0 , while in Japanese they do not. This is simply because the latter language lacks the category D. The differences between English and Japanese relative clauses that Fukui and Takano account for include the following: head noun initial order in English versus head noun final order in Japanese, presence of a relative pronoun in English versus its absence in Japanese, the gap as trace versus the gap as silent pronoun, presence versus absence of island effects, absence versus presence of gapless relative clauses, presence versus absence of relative complementizers and absence versus presence of internally headed relative clauses. Harada (2002) presents some acquisition data that corroborates the analysis of relative clauses presented in Fukui and Takano (2000).⁵²

This discussion points to a structural difference between the Turkish and the Japa-

⁵²But see Watanabe’s (2006) alternative analysis of the Japanese noun phrase, where he argues for the presence of a DP projection on the basis of the various orders of nouns and numeral–classifier combinations.

nese VNCs: In Turkish, the subject of the VNC is positioned in the specifier of DP. In Japanese, the DP being absent in the VNC, the subject has to be positioned in specifier of the lexical ‘counterpart’ of the DP, i.e. NP.⁵³

This conclusion converges with an assumption adopted from Baker (2008) in chapter 2 section 2.2, repeated in (150).

(150) *Agreement is a property of functional categories.*

Any lexical category can be immediately dominated by the projection of a functional head that matches it in gross categorial features. Functional heads, unlike lexical heads, can manifest agreement.

Thus, the DP layer in the Turkish VNC, being a functional projection, can house subject agreement features—which eventually come into play in the assignment of accusative case in the Turkish VNC. By contrast, the NP layer of the Japanese VNC (which matches the DP in gross categorial feature and hence can be considered its lexical counterpart) is incapable of housing agreement features—which has a role in the impossibility of having accusative-marked objects in the Japanese VNC.

3.4.1.1.3 *Agreement, focus and D* We can find further support for the present proposal that subject agreement and accusative case are linked in the VNC, if we can find another syntactic process linked to agreement and show that it too is unavailable in the Japanese VNC, but is present in the Turkish VNC. One such process is focus: Chomsky (2005) and Miyagawa (to appear) argue that C is the source of both agreement and focus features.⁵⁴ Agreement and focus features are members of one feature complex located at C⁰. Miyagawa notes that Simpson and Wu (2001) show that, historically, agreement in a variety of languages, indeed, developed from a focus structure.

If agreement and focus features are bundled together on the same functional head, this would mean that if D⁰ is the locus of agreement in Turkish, it is also the locus of focus. Then, we would expect the data patterns associated with focus to be identical to that of accusative case assignment: It should be possible to focus arguments in the Turkish VNC, impossible in the Japanese VNC, due to the presence of D⁰ in the VNC in the former language and the absence of it in the latter. That is indeed the case, as shown in (151)–(152).⁵⁵

(151) a. [Ordu-nun da kent-i feth-i] beklenmedikti.
 [army-Gen Foc city-Acc conquest-3sg] was unexpected
 ‘The ARMY’s conquest of the city was unexpected, too.’

⁵³Note that this need not violate the RPC given in (114). As I have shown in section 3.3.2.1, the referentiality of the VNC is due to the VN. So, one can assume that it is the VN that is θ -marked by the predicate. Given this, the N node in the Japanese VNC need not bear a referential index and, thus, may project a specifier.

⁵⁴See also chapter 2 section 2.2.2.3 for the role of C in agreement.

⁵⁵Speakers of Japanese inform me that these sentences are perfect when *mo* ‘also’ is replaced with *dake* ‘only’. These two focus particles fall into two separate categories: *mo* is a K-particle and *dake* an F-particle (Aoyagi 1999). Japanese syntactic literature proposes different licensing mechanisms for these two types of focus particle.

- b. [Ordu-nun kent-i de feth-i] beklenmedikti.
 [army-Gen city-Acc Foc conquest-3sg] was unexpected
 ‘The army’s conquest of the CITY was unexpected, too.’
- (152) a. *[Gun-mo sono machi-no hakai]-wa igai datta.
 [army-Foc that city-Gen destruction]-Top unexpected was
 ‘The ARMY’s destruction of the city was unexpected, too.’
- b. *[Gun-no sono machi-mo hakai]-wa igai datta.
 [army-Gen that city-Foc destruction]-Top unexpected was
 ‘The army’s destruction of the CITY was unexpected, too.’

Furthermore, it should be impossible to focus arguments in non-finite VNCs in Turkish, because these also lack a DP projection. This prediction is also borne out, as shown in (153).

- (153) [Altın-a (*da) hücum] tüm Batı-yı kasıp kavur-du.
 [gold-Dat (*Foc) attack] all West-Acc ravage-Past.3sg
 ‘The Gold Rush ravaged the whole West.’

Inherent case assignment, which does not rely on agreement, is intact in a non-finite VNC. Focus, however, is ruled out in this environment, concomitantly with the unavailability of accusative case.⁵⁶

3.4.1.2 Conclusion

In the Turkish VNC, subject agreement correlates with accusative case. This converges with the correlation between subject agreement and the availability of focus. Both subject agreement and focus features originate at D⁰. These form a body of contrasts with the Japanese VNC, which lacks D⁰, has no subject agreement, disallows accusative case assignment and focus. Non-finite VNCs in Turkish parallel Japanese VNCs

⁵⁶Contrastive focus, expressed by stressing the object, is fine in (153):

- (i) [ALTIN-A hücum] tüm Batı-yı kasıp kavur-du, petrol-e değil.
 [gold-Dat attack] all West-Acc ravage-Past.3sg oil-Dat not
 ‘It was the GOLD Rush that ravaged the whole West, not the Oil Rush.’

This is not dependent on agreement features. It seems to me that the prosodic domain of the VNC is merged with the prosodic domain of the main clause by the stress on the object: The intonation contour of the VNC has a peak on *altın*, which starts descending by *hücum* and fades into the intonation pattern of the matrix clause. This pattern is reminiscent of the prosodic pattern of *wh*-questions in Turkish. Richards (2006) proposes that every language tries to create a prosodic structure for *wh*-questions in which the *wh*-phrase and the corresponding complementizer are separated by as few prosodic boundaries as possible. One way of altering the structure of the question sentence to make it prosodically acceptable is to move the *wh*-phrase, so that it is closer to the C, in a position where no prosodic boundaries intervene between C and the *wh*-phrase. This is restricted to languages like English which have overt movement of *wh*-phrases. Another is to change the prosody of the question sentence, creating a prosodic domain in which C and the *wh*-phrase are not separated by prosodic boundaries. This is seen in *wh*-in situ languages like Turkish. It may be possible to extend this proposal to other ‘left periphery’ phenomena such as focus. I propose here that, in (i), the prosodic domains of the VNC and the main clause are merged by the manipulation of the prosodic patterns of the two syntactic domains. The main clause has a C head with focus features and these are used in licensing the focus on *altın*. Presumably, what looks like DP internal focus in the English translations of the examples in (151)-(152) is an analogous process.

in these respects: They too lack D^0 , have no subject agreement and disallow accusative case assignment and focus. These multiple correlations constitute a solid body of evidence for my claim that subject agreement has a central role in accusative case assignment in the VNC.

3.4.2 The Jump-start Hypothesis

Searching for a solution in agreement morphology to the problem of how accusative case can be assigned in the VNC looks promising. However, clearly, the agreement morpheme in the VNC spells out *subject–predicate* agreement, and has no apparent connection with the *object*. I bridge the gap as follows: I have shown in chapter 2 section 2.2.3 that genitive case on an argument, as structural case, is assigned through the agreement of that argument with D^0 , a functional head. Accusative case in the VNC being structural, it too should be licensed through agreement with a functional head, distinct from D^0 under normal conditions. Then, to account for the subject agreement–accusative case link in the VNC, I propose that the functional head that hosts the subject agreement features somehow activates the functional head with which the object agrees. I express this as in (154).

(154) *The Jump-start Hypothesis (JuSH)*

In a finite domain, the agreement capability of each agreeing functional head—and the potentially ensuing assignment of case—is activated by a single source of φ -features.

This may seem like a rather broad hypothesis for a ‘small’ construction like the VNC, but in fact, it is a very important hypothesis for this book. It is its central thesis. It accounts for the non-finiteness effect ((146)) and, as I will show in the following chapters of this book, it can also be used to explain a wide range of (mostly case related) phenomena in Turkish and other languages. In fact, I believe its domain of application can be extended to even the most common cases in Turkish, namely accusative case assignment to direct objects of finite clauses.

This does not go to say that the JuSH has universal applicability. As I have noted earlier, North Azerbaijani has subject agreement on the VNC but accusative case assignment in the VNC is not acceptable for all speakers ((6)). This means that the source of φ -features in the North Azerbaijani VNC, namely D, sometimes fails to activate Pred for accusative case assignment. This implies that the grammatical process that the JuSH makes reference to has limited scope, although the precise limits and the full range of factors which impose those limits are yet to be determined.

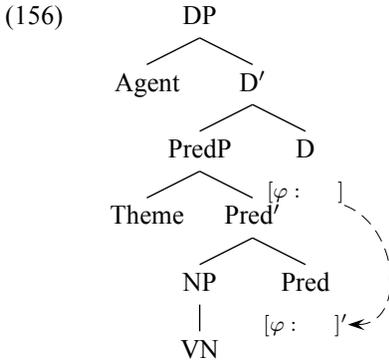
3.4.2.1 The Jump-start operation

I derive the following implementation from the JuSH, building on the technical implementation of the structural case–agreement link presented in chapter 2 section 2.3: Let us assume that the dependency between the source of φ -features and the functional head to be activated is as ‘tight’ as possible. What I mean by this is the following: There need to be present unvalued φ -features on the functional category with which the object agrees. This category is dependent on the source of φ -features in the sense

that it actually receives these φ -features from the source. Then, suppose that this happens through an operation that I will dub Jump-start ((155)).

- (155) *Jump-start*
Clone the unvalued φ -feature set of functional head x and paste it onto functional head y .

I schematize the application of Jump-start in the VNC as in (156).



Before D agrees with the subject and its φ -features are valued, this unvalued φ -feature set is cloned and pasted onto Pred. Subsequently, D and Pred separately agree with the agent and the theme respectively, assigning them case.^{57,58}

The term “clone” in the definition of Jump-start refers to the creation of an independent duplicate of the φ -feature set on the source functional head. I have refrained from using a term like ‘copy’ because in syntactic theory this term denotes an occurrence of a given element (as in the framework of the copy theory of movement). In other words, the element and its copy are one and the same entity. That is not the meaning I would like to convey here: In (156), for instance, φ and φ' are distinct feature sets that have independent derivational lives.⁵⁹ As for the term “paste”, it has no technical meaning

⁵⁷This raises the question of why another structural case, i.e. nominative or genitive, is not assigned to the object in the VNC. Pesetsky and Torrego (2001), Pesetsky and Torrego (2004) propose that case assignment does not involve a specific structural case but only structural case. The “encyclopedic content” of structural case is irrelevant for syntax. Following this, one might suppose that a case realization algorithm operates post-syntactically to spell out the cases that have been assigned, as nominative, accusative, etc. That algorithm realizes the case of the second structurally case-marked argument of a finite construction as accusative.

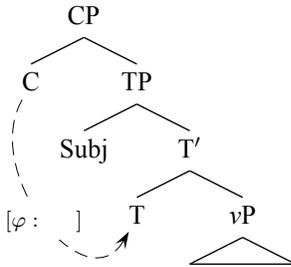
⁵⁸Thus, there is an ordering of operations, where Jump-start precedes Agree. One theoretical problem with this is that the framework that I adopt here tries to avoid assuming any sequence in the application of operations (pointed out to me by Marjo van Koppen). The order under discussion here, however, need not be stipulated: Given that a feature inheritance operation is necessary, jump-starting before agreeing would yield the only grammatical derivation. If valuing occurred before a feature set is cloned, there would be no way of obtaining a feature set that can be used in another Agree operation. This would result in the theme not receiving structural accusative case, leading to ungrammaticality. This is clearly not the case. One alternative to this is having the φ -features on D agree with both the agent and the theme in a ‘multiple’ Agree relation. I rule this out in section 3.4.2.2.2.

⁵⁹Despite the creation of a novel syntactic object, Jump-start probably does not violate the inclusiveness condition, which requires that the syntactic objects build in a derivation contain nothing other than the original input of that derivation (Chomsky 1995:225 ff.).

other than the physical action that it connotes.

Jump-start is an operation clearly akin to the φ -feature inheritance idea advanced in Chomsky (to appear, 2005) (discussed earlier in chapter 2 section 2.2.2.3). In these works, Chomsky proposes that the φ -features that T^0 uses to agree with the subject are not inherent to T^0 but are derivative from C^0 .⁶⁰ I show this in (157). Chomsky (to appear) conjectures that this process might also exist in the verbal domain between v and V . I refer the reader to the relevant section for the data presented in support of this proposal.

(157)



Chomsky (to appear, 2005) is not very explicit about whether φ -features are left on C^0 , i.e. whether the features are cloned as in (155) (and (156)), or whether C^0 simply passes them on to T^0 without retaining anything. Works that discuss this proposal, such as Richards (2007), assume the second option. This might be one difference between my Jump-start operation and Chomsky's feature inheritance. But the West Flemish data presented in partial support of (157) constitutes counter-evidence for this, or at least suggests that both options are available. I present these data in in (158).

(158)

- a. Kpeinzen dan-k (ik) morgen goan.
I-think that-1sg (I) tomorrow go
'I think that I will go tomorrow.'
- b. Kpeinzen da-j (gie) morgen goat.
I-think that-2sg (you) tomorrow go
'I think that you will go tomorrow.'
- c. Kvinden dan die boeken te diere zyn.
I-find that.pl the books too expensive are
'I find those books too expensive.'

In this language, the complementizer in a complex sentence shows agreement with the embedded subject. This implies that if C^0 transferred φ -features to T^0 , it must have kept a copy for itself to be able agree. This would mean that Jump-start and feature inheritance are identical.

An important issue should be addressed at this point, that of which element drives Jump-start. In the current stage of generative syntactic theory, which I have adopted, it is assumed that sentence derivation proceeds in what are called phases (e.g. Chomsky 2000, et seq.). Phases are chunks of derivation that are inaccessible when completed. CP, vP and DP are assumed to be phases. In a phase, all operations, such as Agree,

⁶⁰I refer the reader to the aforementioned section for the role of T in nominative case assignment.

Move, as well as feature inheritance, are assumed to be driven by the phase head. Then, suppose that Jump-start is driven by whichever syntactic head is the head of the phase. In the VNC—which is a DP phase under phase theory—this is D^0 . It carries φ -features down the syntactic structure, cloning them and pasting them on functional heads to be jump-started.

3.4.2.2 *Some constraints*

It is natural to presume that some constraints are imposed on the operation of Jump-start. First, it is reasonable to expect that x and y cannot be in a random configuration. In (156), it is clear that D and Pred are in a c-command relation. Then, I propose that x and y are linked by a c-command relation ((159)).

- (159) *The C-Command Condition on Jump-start*
 x c-commands y .

Another condition that clearly constrains Jump-start is an intervention condition. I have shown above that the presence of D (and only D) is crucial for accusative assignment in the VNC. Other functional categories with φ -features are also certainly present in the syntactic contexts where the VNC may be found. Evidently, these cannot skip over D to jump-start Pred, assuming they can potentially jump-start another functional head. Then, suppose that (160) is another constraint imposed on Jump-start.

- (160) *The Intervention Condition on Jump-start*
 There is no functional head z with an unvalued φ -feature set such that x c-commands z and z c-commands y .

This condition may well be a ‘phase condition’. One important property of the syntactic elements that head phases, i.e. C, v and D, is that they seem to be the only sources of φ -features in their domain (Chomsky 2000, to appear). If this is correct, then, (160) is a corollary of the inaccessibility of a phase—called the phase impenetrability condition in the literature.

Another question is that of how a functional head to be jump-started is identified. If a functional head that does not, at a subsequent stage of the derivation, agree with a noun phrase is jump-started, the derivation would be doomed to fail because the functional head in question would not be able to value the φ -features that it has.⁶¹ I have shown in chapter 2 section 2.3.2 that in a case assignment configuration, a probe searches upwards to agree with an argument that is found in its specifier position. In the light of this, a functional head whose specifier is occupied by an argument that has inherent case would be an example of a head not to be jump-started: Arguments with inherent case do not agree, so they could not be used to value an unvalued φ -feature set. So, my theory should rule out the application of Jump-start in such configurations. Then, suppose that a functional category is jump-started only if it has an active noun

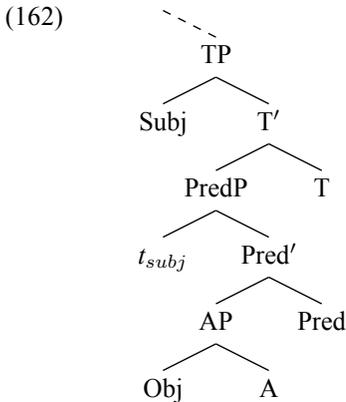
⁶¹I do not want to assume that these φ -features may be valued as third person singular by default due to the fact that default valuing is an excessively powerful tool, which if not used correctly, such as when absolutely supported by empirical evidence, could lead any derivation to be well-formed. This clearly something that a theory should avoid.

phrase in its specifier ((161)), where “active” is understood as a noun phrase that is eligible for Agree, i.e. requires case (see chapter 2 section 2.3 for further discussion).

- (161) *The Activity Condition on Jump-start*
x jump-starts *y* only if an active argument occupies the specifier of *y*.

Then, the phase head scans its c-command domain and pastes φ -features only on functional heads that host active arguments in their specifiers. One consequence of this is that an argument should be in position by the time Jump-start begins, if this argument is to be assigned case and the element that assigns case to it is to be identified for Jump-start.

3.4.2.2.1 *The role of head movement* One prima facie problem with the Jump-start operation is that it seems to over-generate.⁶² According to Baker (2003), which I adopt as a point of reference for my analysis of the VNC, predicative adjectives are also complements of Pred. Their subjects are generated in the specifier of PredP and their objects in the complement position of the AP (Baker 2003: 77 ff). This structure is topped up by the usual sentential projections ((162)).



There is nothing that prohibits the application of Jump-start to this structure. This implies that it should in principle be possible for adjectives to take accusative case objects, contrary to fact ((163)).

- (163) a. *Ben Deniz-i kışkanc-ım.
 1sg Deniz-Acc envious-1sg
 ‘I am envious of Deniz.’
 b. Ben Deniz-i kışkan-ıyor-um.
 1sg Deniz-Acc envy-Prog-1sg
 ‘I envy Deniz.’

As a solution to this problem, I propose that the presence of head movement makes it possible to pass φ -features between functional heads, where it would otherwise be

⁶²This was pointed out to me by Mark Baker.

impossible to do that. This idea applied to the present issue is as follows. Suppose that Pred resists φ -features being copied onto it. Call this a blocking effect ((164)).

(164) *The Blocking Effect on Jump-start*

Some heads do not allow φ -features to be pasted on them.

Suppose also that head movement through Pred⁰ breaks this resistance and opens up a channel along which φ -features can flow down, so to speak. In clauses with adjectival predicates, the adjective does not raise through Pred⁰ into T⁰. Even though tense and subject agreement are commonly seen on adjectives in Turkish, these morphemes are in actual fact on a copula (*i*), which may phonologically cliticize onto the adjective ((165)) (Kornfilt 1996b). This means that the resistance of Pred⁰ is not broken and φ -features cannot be pasted onto it.

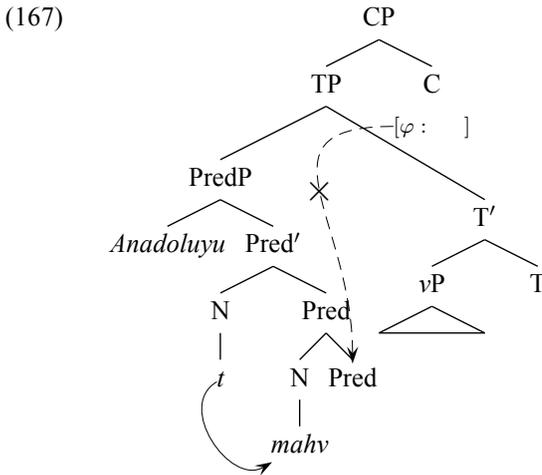
- (165) Hasta i-di-m. (> Hasta-y-di-m.)
 sick Cop-Past-1sg
 ‘I was sick.’

In the VNC, by contrast, there is no evidence showing that the VN does not raise to D⁰ passing through Pred⁰, so (assuming, after Baker 2002, that head movement is one of the primary mechanisms by which morphologically complex words can be formed) suppose that it does. This makes it possible to paste φ -features of D onto Pred.

This account predicts that if the VN were unable to raise to the source of φ -features, it would be impossible to have accusative-marked objects in the VNC: Pred would not allow φ -features to be pasted on it. This is precisely the case in the non-finite VNC. I had shown in section 3.4.1.1.1 that accusative case marking in non-finite VNCs is illicit even though non-finite VNCs are fine in principle. I repeat the relevant examples in (166).

- (166) a. *[Anadolu-yu mahv] Moğol-lar-ı tatmin
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction
 et-me-di.
 do-Neg-Past.3.g
 Lit. ‘The devastation Anatolia did not satisfy the Mongols.’
 b. [Altın-a hücum] tüm Batı-yı kasıp kavur-du.
 [gold-Dat attack] all West-Acc ravage-Past.3sg
 ‘The Gold Rush ravaged the whole West.’

Now, consider the derivation of (166a) in (167).



Non-finite VNCs are simple PredPs, not topped up by a DP layer. I had shown this in section 3.2.4, using the data in (85) and (86). Here, the non-finite VNC *Anadoluyu mahv* is the subject of a sentence. There is no source of φ -features in the VNC, due to the lack of the DP projection that is the source of these features. The closest accessible φ -features are on the matrix C^0 . The VN *mahv* moves only till Pred^0 (creating a complex head as is standardly assumed) and not further into the matrix clause. This means that the resistance of Pred cannot be broken and no channel is open for φ -features to get to the VNC for assignment of accusative case to be possible, as predicted. This yields ungrammaticality.^{63,64} Then, the role of head movement in Jump-start may be expressed as follows ((168)):

(168) *Facilitating circumstance for blocking effects*

Head movement through a category neutralizes the blocking effect of that category.

Head movement seems to be creating a locality within which Jump-start may be proceed unhampered.

⁶³One might think that head movement could be possible from out of a non-finite VNC to the source of φ -features, if the VNC is in the object position, ruling in accusative case (Marjo van Koppen, p.c.). That is not the case. As shown in (i), the whole non-finite VNC (with the VN still inside it) can be case-marked or be targeted by a question particle.

- (i) Piyasa-lar [dolar-a ani / ?aniden hücum]-u mu kaldır-a-ma-dı?
 market-pl [dollar-Dat sudden / ?suddenly attack]-Acc Q withstand-Abil-Neg-Past.3sg
 'Is it the rush to the dollar that the markets could not withstand?'

This shows that VN could not have moved out of the VNC.

⁶⁴One question that arises under this account is what actually is jump-started, if head movement takes place before Jump-start. It cannot be that a head is jump-started when it has moved, because this would imply that functional heads in Turkish always c-command the noun phrases they agree with (this resulting in case assignment). This predicts a pattern of case and agreement parallel to a language where probes look downwards, contrary to fact (see 2 section 2.3.2). The only option seems to be to suppose that φ -features are pasted on the *trace* of the moved head, or its copy under the copy theory of movement.

One might argue that, given the data presented for (168), the movement of a head to a source of φ -features is enough to activate that head for case assignment, making the postulation of an operation like Jump-start unnecessary (Marjo van Koppen, p.c.). In chapter 4, I present data where an inter-clausal case assignment dependency can be observed, but where head movement could not take place. These cases argue for the necessity of postulating Jump-start and restricting the role of head movement to that of a facilitator.

However, even without additional data, it might be possible to conclude that the postulation of Jump-start is a theoretical necessity: First, one could imagine that the φ -features on D are used to agree with two arguments simultaneously in a ‘multiple’ Agree operation. I rule this out in section 3.4.2.2.2. Second, one could imagine that φ -features on D are first used to agree with one argument, then reset by head movement into D, and used again to agree with a second argument. The problem with this account is that it seems to be impossible to find a way to have D agree first with the object and then the subject, because it is clearly the values obtained through the Agree relation with the subject that are spelled out as an agreement marker on the VN.

Another case that shows some resemblance to the examples in (166) is that of what look like compounds involving non-finite VNCs and nouns that select these ((169)):

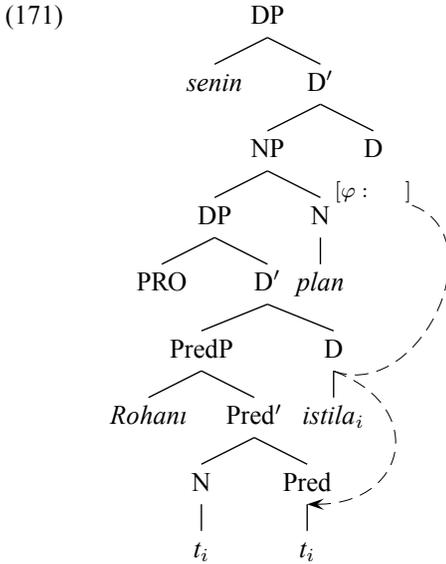
- (169) a. sen-in [Rohan-1 aniden istila] plan-in
 2sg-Gen [Rohan-Acc suddenly invasion] plan-2sg
 Lit. ‘your suddenly invasion plan Rohan’
 ‘your plan for the sudden invasion of Rohan’
- b. sen-in [Roham aniden istila] ihtimal-in
 2sg-Gen [Rohan-Acc suddenly invasion] probability-2sg
 Lit. ‘your suddenly invasion probability Rohan’
 ‘the probability of your sudden invasion of Rohan’

I would have to analyse the bracketed segments in these constructions as having a PredP projection, i.e. as VNCs. The unavailability of a non-specific reading for the theme argument suggests that this analysis is on the right track ((170)); VNCs disallow non-specific arguments (see section 3.2.4.2).

- (170) *sen-in [ülke istila] ihtimal-in
 2sg-Gen [country invasion] probability-2sg
 Lit. ‘your country invasion probability’

If I assumed a non-finite VNC structure like the one in (167) (i.e. without a DP projection) for the segment in brackets, I would seem to predict that this PredP layer should reject φ -features coming from the DP spelled out by the agreement markers on *plan* ‘plan’ and *ihtimal* ‘probability’. That prediction is not borne out. Head movement of the VN *istila* to *plan* or *ihtimal* could not be the facilitating factor here: The VN would presumably have to move through Pred to N (which hosts *plan* or *ihtimal*) in violation of the proper head movement generalization in (125). As a solution to this puzzle, I propose that there is a silent DP layer in this VNC, that mediates the passage of φ -features down to Pred. In (169a), the semantic subject of *istila* and *plan* are obligatorily the same, *sen* ‘you’. Judging from the second person singular agreement marking on

plan, *sen* is in the specifier of the DP that is above *plan*. Suppose, then, that a PRO fills the specifier position of a silent DP projection that is part of the VNC, as in (171). This PRO is controlled by *sen*.^{65,66}



In this structure, *istila* moves through Pred^0 into the lower D^0 head. This movement through Pred^0 neutralizes the blocking effect that Pred induces. Pred^0 is jump-started, and accusative case is assigned to *Rohani*. It should be possible to extend this account to (169b)—with some modifications where necessary—where the noun *ihimal* is intuitively not a ‘control’ noun like *plan*, but of a different nature.

One fact that corroborates this analysis is the fact that aspectual adverbs like *aniden* are fine in this non-finite VNC, as shown in the examples in (169). Recall that these modifiers are marked in non-finite VNCs due to the lack of a DP layer (see sections 3.2.3.4.2 and 3.2.4.1). The fact that the adverb is fine in these examples is a sign of the presence of a DP projection there.

Another relevant related construction involves non-finite VNCs selected by restructuring motion verbs and restructuring aspectual verbs.⁶⁷ These structures also allow accusative case assignment in a non-finite VNC ((172)).

⁶⁵This is essentially the inverse of the argument that I have used in (76)–(77) to show that certain kinds of non-finite VNC do not have a DP projection.

⁶⁶The kind of control that (169a) involves is partial control, a kind of obligatory control (Landau 1999: 37 ff.). Note that in this example Sauron need not be planning to invade Rohan in person, but through his armies of Uruk-hai. Partial control “allows the controller to be a proper subpart of PRO” writes Landau (1999: 49).

⁶⁷Restructuring verbs are verbs like *want*, *try*, *begin*, *come*, etc. that select complement clauses which behave as if they are ‘transparent’ to the matrix clause. These allow inter-clausal passivization in many languages for instance. I refer the reader to chapter 4 sections 4.1.2 and 4.2.2 for an extensive discussion.

- (172) a. [Cem-i birkaç dakika ziyaret]-e gel-di-k.
 [Cem-Acc for a few minutes visit]-Dat come-Past-1pl
 Lit. ‘We came to a visit Cem for a few minutes.’,
 ‘We came to visit Cem for a few minutes.’
- b. Cem [komşu-lar-ı sık sık şikâyet]-e başla-dı.
 Cem [neighbor-pl-Acc frequently complaint]-Dat begin-Past.3sg
 Lit. ‘Cem began a frequently complaint neighbors.’,
 ‘Cem began to frequently complain about the neighbors.’

Note that these non-finite VNC allow aspectual adverbs to modify the VN. See, for instance, the aspectual adverb *sık sık* ‘frequently, often’ in (172b). This suggests that these VNCs have a DP projection (with possibly a PRO subject that fills the specifier of that projection).⁶⁸ In other words, my analysis of the structures in (172) is essentially the same as the one I have proposed for the construction in (169). Then, the account in (171) could be extended, *mutatis mutandis*, to (172): The VN moves through Pred⁰ into the lower D⁰ head. This movement through Pred⁰ neutralizes the blocking effect that Pred induces. Pred⁰ is jump-started, and accusative case is assigned to the object of the non-finite VNC.

Interestingly, an exact replica of this construction is found in Japanese, where, a VNC without an overt subject allows accusative case assignment, while the Japanese VNC does not normally allow accusative case. I show this in (173).⁶⁹

- (173) Hanako-ga igirisu-e [eigo-o benkyoo]-ni itta.
 Hanako-Nom England-Dat [English-Acc study]-Dat went.
 ‘Hanako went to English to study English.’ (Tsuji-mura 1992)

This data is important in that it presents a preliminary indication that the JuSH may have a venue of application in Japanese: It is possible to claim that the PredP layer in the Japanese VNC in (173) is jump-started by the matrix clause to assign accusative case. In chapter 5 section 5.1, I argue for a JuSH-based account of restructuring clauses in Japanese.

The condition in (168) and the accompanying accounts in (167) and (171) create an apparent problem, given the Uniformity of Theta Assignment Hypothesis presented in (111). This hypothesis has been rephrased and interpreted in various different ways,

⁶⁸In chapter 4 section 4.2.2.2, I argue, along with Wurmbrand (2001), that complement clauses selected by restructuring verbs do not have PRO subjects. The non-finite VNCs in these examples might also not have PRO subjects. I refer the reader to Wurmbrand 2001: 246 ff. for a theory of control that accounts for the interpretation of understood subjects in the absence of syntactic PRO subjects.

⁶⁹Another comparable structure is a construction that may be called *chuu*-nominals where VNs function as predicates, pointed out to me by Sigeyuki Kuroda ((i)):

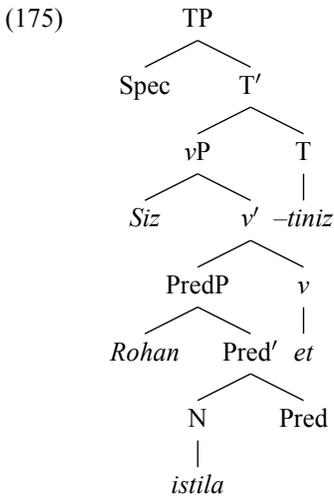
- (i) gun-ga sono machi-o hakai-chuu
 army-Nom that city-Acc destruction-during
 ‘during the army’s destruction of that city’

Due to presence of VNs in them, these may be considered akin to the VNC. I do not have an analysis of these structures but suspect that a JuSH-based account may be applied to them. Other similar structures are constructions that have other temporal affixes like *-go* ‘after’ and *-izen* ‘before’ in place of *-chuu* (Tsuji-mura 1992).

but for the current discussion it has the following implication: Take the LVC–VNC pair in (174).

- (174) a. *Siz Rohan-1 istila et-ti-niz.*
 2sg Rohan-Acc invasion do-Past-2pl
 ‘You invaded Rohan.’
 b. *siz-in Rohan-1 istila-niz*
 2pl-Gen Rohan-Acc invasion-2pl
 ‘your invasion of Rohan’

The predicate, the arguments and the roles that the arguments bear are identical in these two constructions. This being the case, and given that the VNC has a PredP, one might postulate a PredP in the LVC due to their parallelism with the VNC, following the Uniformity of Theta Assignment Hypothesis. The structure of (174a) would, then, be roughly as in (175).



The problem here is that there is data that could be interpreted as showing that the VN does not move through Pred⁰ into a higher functional head. This would imply that accusative case assignment to *Rohan* should not be possible, contrary to fact. For instance, one can insert a question particle in between the VN and the light verb ((176)). This suggests that no complex syntactic head has been formed by the VN and the light verb.

- (176) *Siz Rohan-1 istila m1 et-ti-niz?*
 2sg Rohan-Acc invasion Q do-Past-2pl
 ‘Did you invade Rohan?’

Furthermore, it is possible to assign accusative to the VN in some LVCs ((177)). This also suggests that the VN does not necessarily form a complex syntactic head with the

light verb.⁷⁰

- (177) Cem bu dua-y₁ Tanrı-ya et-ti.
 Cem this prayer-Acc God-Dat do-Past.3sg
 ‘Cem did this prayer to God.’

The solution is straightforward: Accusative is not assigned by Pred but by *v*. The object raises to the (outer) specifier of the *v*P and receives accusative case from *v*. Thus no problem of pasting φ -features onto Pred⁰ arises.

3.4.2.2.2 Ruling out Multiple Agree In principle, one could account for the dependency between subject agreement and accusative case assignment in the VNC by a multiple agreement mechanism. In that system, D would agree with both the object and the subject, assigning case to both and valuing its φ -features with the φ -feature values of the subject. Data rules out this option.

One can find a testable formulation of the idea of one probe entering into agreement relations with more than one goal in Hiraiwa (2001, 2005). Hiraiwa proposes the operation multiple Agree given in (178) (Hiraiwa 2005: 38).

- (178) *Multiple Agree*
 Multiple Agree... with a single probe is a single simultaneous syntactic operation; Agree applies to all the matched goals at the same derivational points derivationally simultaneously.

This relation can be schematized as follows ((179)):

- (179) $P > G_1 > \dots > G_n$
-
- The diagram shows a horizontal sequence of elements: P, G₁, ..., G_n. Below P and G₁ is a bracket with an upward-pointing arrow labeled Agree₁. Below P and G_n is a larger bracket with an upward-pointing arrow labeled Agree_n.

multiple Agree has several formal properties and is subject to various constraints. One constraint that governs its operation is the person case constraint ((180)).

- (180) *The Person Case Constraint*
 Person feature values must not be in conflict under Multiple Agree.

The effects of the person case constraint can be illustrated by the Icelandic example in (181) (adopted from Sigurðsson 1996, via Hiraiwa 2005: 76).

⁷⁰One question that seems to arise in the face of data like (177) is what happens when the VN does not receive case. Does it receive the morphologically unmarked general case that non-specific arguments get (see chapter 2 section 2.3.2.2), or is it caseless? Given the structure in (175), it seems impossible to achieve anything other than string adjacency between the VN and the light verb, which I presume does not fit the concept of structural of proximity that I have used in section 2.3.2.2. As a solution, it is possible to adopt an idea that I have proposed in section 3.2.2.1: Since case assignment is required by the visibility condition which applies to argument nouns, and the VN is a predicative element in the LVC, it need not receive any case. In (177), the possibility of assigning case to the VN is, then, purely optional.

- (181) Henni *leiddumst / ?*leiddust / ?*leiddist við.
 she.Dat *bore.Past.1pl / ?*bore.Past.3pl / ?*bore.3sg we.Nom
 ‘She is bored with us.’

Hiraiwa proposes that this example involves multiple Agree, with C^0 as the probe for the person feature and the dative and the nominative arguments as the goals. The dative argument provides a third person value (which is by default, because dative elements cannot provide actual values for the probe), while the nominative argument provides a first person value. The φ -features of the probe would normally be valued by those of the nominative argument, but the difference between the person feature values of the two goals yields ungrammaticality.

Then, if multiple Agree is at work in the VNC, this would predict that the subject and the object in the VNC should have the same person values if the derivation is not to lead to ill-formedness. A short glance at the several Turkish examples provided above will suffice to falsify this prediction. Any combination of person values for the subject and the object is fine. Take (182), for instance.

- (182) a. [Siz-in Rohan-ı istila-nız] biz-i korkut-tu.
 [2pl-Gen Rohan-Acc invasion-2pl] 1pl-Acc scare-Past.3sg
 ‘Your invasion of Rohan scared us.’
 b. [Başkan-ın siz-i aff-ı] biz-i mutlu et-ti.
 [president-Gen 2pl-Acc pardon-3sg] 1pl-Acc happy do-Past.3sg
 ‘The President’s pardon of you made us happy.’

A second person subject *siz* ‘you’ and a third person object *Rohan* are perfectly compatible in the VNC, as in (182a). Equally fine is a third person subject (*başkan* ‘president’) and a second person object (*siz*) combination, as in (182b). This means that a multiple Agree operation driven by D^0 cannot be thought of as the licensing mechanism for the accusative case on direct objects in the VNC. Two separate probes must be involved in assigning case to the two structurally case-marked arguments in the VNC.

3.4.3 English gerunds

It seems possible to extend the JuSH to explain some properties of English gerunds.⁷¹ I will particularly focus on the interaction between the case assignment patterns they present and whether or not they take determiners: Accusative case assignment to the object of a gerund precludes the presence of a determiner modifying the gerund. I propose that this is because determiners block a Jump-start operation that makes accusative case assignment possible.

3.4.3.1 The core data

In (183) and (184), I present the constructions I will be discussing.

⁷¹This was pointed out to me by David Pesetsky and Jane Grimshaw. The implementation of this idea and the errors in it are mine.

- (183) a. [A quick reading of The Bald Soprano] will not allow you to appreciate its literary value.
 b. [The inadequate treatment of cholera] is affecting the people of Zimbabwe.
 c. [Quickly reading The Bald Soprano] will not allow you to appreciate its literary value.
- (184) a. Cem's quick/*quickly reading of the book
 b. Cem's quickly/*quick reading the book

The gerund in (183a), sometimes called an Ing-of gerund (see e.g. Abney 1987), involves the deverbal predicate noun *reading*, which obligatorily takes determiners, allows only adjectival modification and takes prepositional phrase objects. In these respects, it is the same as the subject noun phrase in example (183b), which involves the deverbal noun *treatment*. Compare the bracketed nominals in these examples with the gerund in (183c), commonly called a PRO-ing gerund. The predicate in this construction disallows determiners, allows only adverbial modification and takes accusative objects. The Poss-ing gerund in (184) which has a genitive subject displays a mixed picture: It can have a prepositional phrase object and allow only adjectives as modifiers, like an Ing-of gerund. Alternatively, it selects an accusative object and allows adverbial modifiers, like a PRO-ing gerund.

Now, Ing-of gerunds may be interesting in themselves but they are largely irrelevant for the discussion of possible applications of the JuSH. This is because they are generally accepted to involve what appear to be simple deverbal nouns (Abney 1987: 107), derived in the lexicon (Milsark 2006). They would be of interest for my current purposes, if they took complements in a case such as structural accusative, like VNs. Here, I will reserve my JuSH-based account for PRO-ing and Poss-ing gerunds. In (185), I present some data used to construct an argument to support the claim that Ing-of gerunds are lexically derived.

- (185) a. *[Her achieving of legendary status] made us all green with envy.
 b. [Her achievement of legendary status] made us all green with envy.
 c. [Her achieving legendary status] made us all green with envy.
 d. [Achieving legendary status] is my foremost aim.

These sentences exemplify an important property of Ing-of gerunds, their limited productivity. (185a) shows that an Ing-of gerund derived from the verb *achieve* is ill-formed. Only a derived nominal is allowed ((185b)). By contrast, Poss-ing and PRO-ing gerunds are fully productive ((185c) and (185d)). As I had mentioned in section 3.2.1.1.1, limited productivity has standardly been taken as a hallmark of a lexical derivation, while syntactic derivation is generally assumed to be fully-productive (see for example Chomsky 1970). This suggests that while the predicates of Ing-of gerunds are lexically derived, the predicates of Poss-ing and PRO-ing gerunds are syntactically constructed in English. As a consequence of this, when they enter a syntactic derivation, the predicates of Ing-of gerunds behave as ordinary nouns, taking genitive-marked arguments, requiring determiners, and allowing only adjectival modification.

English gerunds contrast with the so-called nominal infinitivals in some closely related languages, such as German ((186a) and (187a)) and Dutch ((186b) and (187b)).

- (186) a. das Singen der Nationalhymne
the sing the.Gen national anthem
'the singing of the national anthem'
- b. het eten van appels
the eat of apples
'the eating of apples'
- (187) a. das oft kleine Katzen streicheln
the often small cats caress
'often caressing small cats'
- b. het aanhoudend appels eten begint mij te vervelen
the continuously apples eat begins me to bore
'continuously eating apples is beginning to bore me.'

These infinitivals come in two varieties. The examples in (186) appear, on the face of it, to be comparable to English Ing-of gerunds. They take genitive objects and allow determiners. Furthermore, they are limited in productivity like the English Ing-of gerunds ((188)):

- (188) a. *Dann fängt [das Drehen des Däumchens] an.
then begins [the turn the.Gen thumb.Dim.pl] Part
'Then begins the waiting.'
- b. *[Het krijgen van mot met je buren] is niet leuk.
[the getting of argument with your neighbors] is not fun
'Picking a fight with your neighbors is not fun.'

By contrast, the infinitivals in (187), comparable to PRO-ing gerunds in taking accusative objects and allowing adverbial modification, seem to be fully-productive ((189)):

- (189) a. Dann fängt [(das) daumen drehen] an.
then begins [(the) thumb.pl turn] Part
'Then begins the waiting.'
- b. [Mot krijgen met je buren] is niet leuk.
[argument get with your neighbors] is not fun
'Picking a fight with your neighbors is not fun.'

Then, we have here a kind of expression that is fully-productive like an English PRO-ing gerund, and matches it in the case that it assigns to its object. What is in stark contrast to the PRO-ing gerund is that these infinitivals allow determiners like an Ing-of gerund, as can be seen in (187) and (189a). One component of my treatment of the pattern of case assignment in English gerunds is based precisely on this contrast. The second component has the following simple observation at its core: Note again that a German lexical infinitival is headed by the infinitive form of a verb. In contrast, however, an English gerund is headed by a verb form identical to the progressive participle. Thus, I claim that the blend of properties in (183) versus (187)—particularly the mutual exclusiveness of determiners and accusative case in English gerunds and

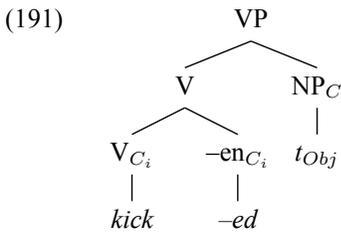
the possibility of their occurring together in German and Dutch infinitivals—is partly due to the defectiveness of the gerund verb form in English and the non-defectiveness of the infinitival verb form in German and Dutch.⁷² On this note, I will now turn to an earlier proposal about the case properties of participles in English, namely Fabb (1984), and adopt some of its ideas to construct my JuSH-based account of the case assignment patterns in English gerunds.

3.4.3.2 Fabb (1984)

3.4.3.2.1 *-en participles* Fabb (1984: 46 ff.) focuses on the active ((190a)), passive ((190b)) and adjectival passive ((190c)) forms of a verb.

- (190) a. I have broken it.
 b. It got broken.
 c. The toy seems broken.

He observes that for a given verb all three are identical even in suppletions. He concludes that this suggests that the three forms are related in some way. He claims that they have the same properties with regard to case, a significant claim considering that while the active participle assigns case, the passive participle does not. He goes on to propose a mechanism that yields the different case assignment patterns from identical case properties. He begins with the passive construction. Consider (191).



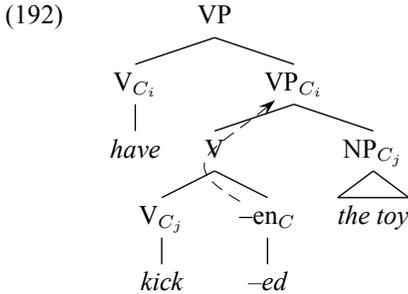
First, Fabb proposes that the participle affix *-en/-ed* has a case feature (represented by *C* in the diagram) that has to be “matched” by a case feature found on an element that governs the affix.⁷³ In the passive, matching is done between the case feature on the participle affix and the case feature on the verb, with matching between features indicated by co-indexation in (191). Due to a one-to-one matching constraint, the case feature on the object noun phrase cannot be matched by the verb. In other words, the object cannot be assigned case by the verb. This triggers the movement of the object

⁷²In German, the only syntactic context where infinitives are defective are restructuring contexts, where active infinitive verbs fail to assign accusative case when matrix verbs are passivized. Dutch does not even display this phenomenon, suggesting that infinitives are never defective in that language (see e.g. Wurmbrand (2001)). I refer the reader to the discussion in chapter 5 section 5.1.

⁷³‘Government’ is defined as follows: *x* governs *y* if and only if every maximal projection that dominates *x* also dominates *y*, and every maximal projection that dominates *y* also dominates *x*. Then, the presence of a maximal projection is a barrier for government (Chomsky 1981). ‘Dominance’, in its turn, is defined as follows: A node *x* dominates node *y* if and only if *x* is higher up the tree than *y* such that a line can be traced from *x* to *y* going only downwards (see e.g. Chomsky 1995: 34).

to the subject position where it is governed by I^0 .⁷⁴ I^0 has a case feature which can be matched with that of the object.

Given that the VP structure in (191) could be attributed the verb phrase in an active sentence, why is the case feature not absorbed in an active *-en* participle? Fabb builds the answer on the observation that the active must be governed by the auxiliary *have*, while the passive can be governed by any one of a number of elements, such as *be* and *get*. Then, Fabb goes on to suggest that an *-en* participle is passive unless it is governed by the auxiliary *have*. This auxiliary restores the case assignment capability of the verb. His idea is that *have* has a case feature that “balances out” the case features in the sentence, so that the object can be assigned case. The derivation is as in (192):



Have does not govern *the toy*, and consequently, the case features of the two cannot be matched. Instead, the case feature of *-en* percolates up to VP level where it is matched with that of *have*. The case feature of the object can now be matched with the case feature of the verb stem.

3.4.3.2.2 *-ing* participles Fabb does not explicitly generalize this mechanism to structures with progressive participles. This is probably because of the following reasons: First, the kinds of contrasts that lead Fabb to suggest that *-en* participles are passive unless selected by *have* (i.e. the contrast between, say, (190a) and (190b)) cannot be observed with *-ing* participles. Second, unlike *have*, *be*—which selects *-ing* participles—does not seem to assign any case to its complements. In fact, this is crucial if Fabb’s proposal is to work.

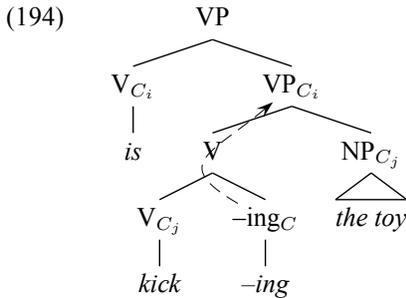
It is true that the kinds of observations necessary to generalize Fabb’s proposal to structures with progressive participles are not readily available. However, it is possible to derive some arguments from the behaviour of the verb *get*. Consider (193):

- (193)
- a. The car got stolen.
 - b. We got him running.
 - c. It’s time to get going.
 - d. %Once veterans get doing something outdoors . . .

Get commonly participates in passive constructions ((193a)), so it must be assumed that there are contexts where it does not assign case. Furthermore, it can have a causative

⁷⁴ I is a category that roughly corresponds to T that I have adopted in this work.

reading. In contexts where it does, it selects an accusative object and a progressive participle (or an infinitive) of which the accusative noun phrase is the argument ((193b)). It is rather similar to *have* in this respect. *Get* can also have an inchoative reading and select both intransitive and transitive *-ing* participles (193c)-(193d). Looking at this pattern from the perspective of Fabb (1984), one can conjecture that, as with *have*, there are several kinds of *get*; crucially, several kinds of *get* with different case properties. Suppose, then, that *be* also comes in (at least) two different types: a progressive auxiliary *be*, which has case properties similar to *have*, and a passive *be*, which does not have a case feature.⁷⁵ Suppose also that progressive expressions have the structure in (194), which is analogous to (192) in structure and derivation.



This sets the scene for a JuSH-based analysis of English gerunds that will follow in the next section.

3.4.3.3 *Jump-starting case assignment in English gerunds*

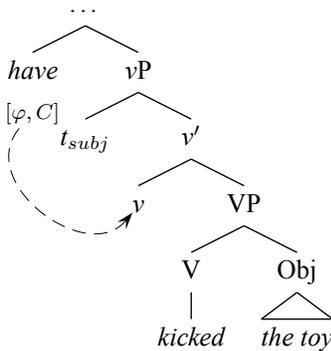
It seems perfectly possible to re-cast Fabb's proposal in terms of the theory that I advance in this work: Participial verb forms are defective and have to be jump-started if they are to assign case to their complements. In this treatment of participial forms, the verb phrase in active and passive structures in English are identical, as Fabb (1984) proposes. Their case assignment capabilities are a function of the case assignment capabilities of the verbal elements that select these verb phrases, say, *have* or *be*. For this to give us the difference between the VPs selected by passive *be* versus progressive *be*, we have to assume that, in a Jump-start operation that activates a participial form, selecting auxiliaries have case features that are transferred along with their φ -features.⁷⁶ This is because, for example, both passive *be* and progressive *be* can agree but only

⁷⁵Sentences like *You want to be me* may provide support for this assumption. Even though the kind of *be* that we see in these sentences are copular, there does seem to be a kind of *be* that assigns case to its complement. However, note that it may also be that the accusative in these environments is some sort of default accusative.

⁷⁶In chapter 2 section 2.3, I had mentioned that in the theory of case assignment I adopt in this work structural case is not assumed to be a feature of the probes, but it is assigned a value under agreement. The value assigned depends on the probe: nominative for T, accusative for v (Chomsky 2001). There are, however, alternatives within the same general framework that propose that case is a feature of the probes. The choice of either the standard approach or one of the alternatives does not seem to affect the essence of the proposal I advance in this work.

one selects a verb phrase in which case assignment is possible.⁷⁷ I have shown this in (195).⁷⁸

(195)



Let me now turn to English gerunds, having set the scene. Suppose, then, that the verb form in an English gerund is an *-ing* participle. This means that it is defective, requiring Jump-start, following my speculation above. Suppose also that the presence of an overt determiner like *the* constitutes a barrier for Jump-start. One can conjecture that this is because *the* does not agree, and so rejects agreement features. In the light of these assumptions, let me now turn to the data in (183) and (184), simplified below as (196)-(198).

- (196) a. the reading of the book
b. *reading of the book
- (197) a. *the reading the book
b. reading the book
- (198) a. Cem's reading of the book
b. Cem's reading the book

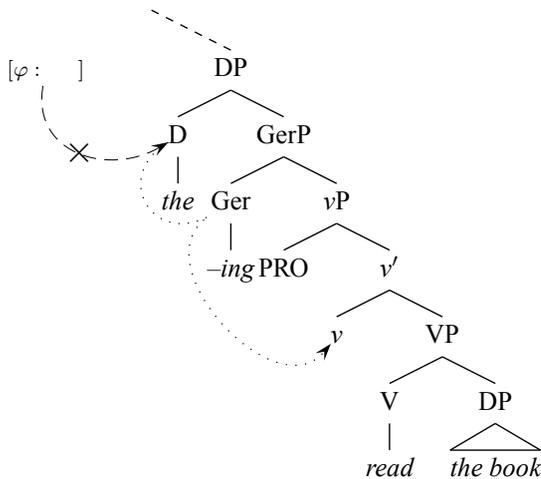
⁷⁷This does not make agreement or the transfer of φ -features spurious: Not any noun phrases can receive case. As shown in chapter 2, only agreeing noun phrases may. This only goes for the assignment of structural case, which is the only kind of case assigned through agreement.

⁷⁸One problem with this version of events is that it flies in the face of the some of the main assumptions of my theory. I assume in various places in this book, particularly chapter 4, that even though active and passive verb phrases in many languages are both incapable of assigning case as is, they are fundamentally different from each other, in that while the former can be jump-started and made to assign case, the latter cannot. My current assumptions for English force me to treat all participles the same.

There are some recent works in the literature that give me the leeway that I need to resolve this conflict. One of the most important proposals of the theoretical framework that I adopt here is the following: As I have mentioned previously, syntactic structure is built up in chunks, called phases (Chomsky 2000, et seq.). A crucial property of phases is the possession of φ -features by their heads that can be used to agree with and assign case to noun phrases. Thus, a transitive verb phrase is a phase, whereas an intransitive verb phrase is not. Now, Legate (2003a,b) develops some diagnostic tests for establishing which domains are phases. Using these tests, she shows that, intriguingly, all verb phrases in English behave as if they are phases, regardless of whether they are transitive or not. This implies that all verb phrases have the same case assignment properties. This is a welcome conclusion that echoes Fabb's claim that the case properties of participles are the same whether they are active or passive.

As noted above, the pair in (196) is not very interesting from the perspective of my theory. The example in (196a) is a lexical gerund. It is a nominal expression that requires a determiner just like many other nominal expressions; hence, the ungrammaticality of (196b). The examples in (197), on the other hand, are very relevant. Let me begin with the derivation of (197a) in (199).

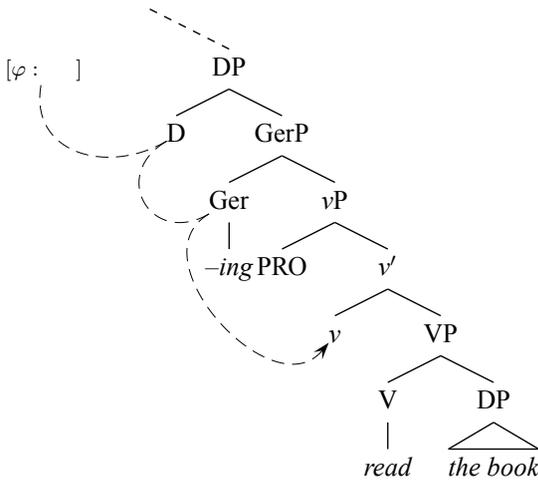
(199)



Here (and in the derivations below), I assume that the *-ing* suffix occupies a different position than in (194).⁷⁹ Along with Baker (2005), I assume this to be Ger^0 , which is a nominal functional category. I do not take this positional difference to be a crucial one due to the following reasons. First, following the framework I adopt (Chomsky 2000, et seq.), I have to attribute the defectiveness of a verb form (i.e. its incapability to assign structural case) to the v associated with it and not the affixes that make up the particular form. So both in (194) and (197) it is v that is defective and *-ing* plays no role. Second, Fabb (1984: 143) proposes that there are two kinds of *-ing* suffix, a nominal and a verbal kind. Adopting this idea, Milsark (1988) claims that *-ing* is an affix without set categorial features. So, we can assume that the same kind of *-ing* can occupy two different positions. Now, the *-ing* participle—or more precisely the v that heads the verb phrase in the gerund—needs to be jump-started (by an outside source of φ -features) for the object *the book* to receive accusative case. The presence of the determiner *the* prevents this from happening. The result is an ungrammatical expression. In contrast to (197a), nothing blocks the jump-starting of the participle in (197b)—in particular D^0 , presumably because it is empty. This way, accusative case can be assigned to *the book*. I have shown this in (200).

⁷⁹I suppress details such as verb raising to *-ing*.

(200)



An important assumption here is that Ger^0 does not block Jump-start. This is because I assume that functional heads, in principle, do not block Jump-start, unless suggested otherwise by data. Thus, there seems to be no a priori need to suppose that Ger^0 does induce a blocking effect.

Note also that I assume that a DP projection is present in the structure of the PRO-ing gerund in (200). One indication that this is on the right track is Poss-ing gerunds like (198b), which have overt subjects and accusative objects. The subject in these expressions needs a position above $-ing$. This has been commonly thought to be the specifier position of the DP since Abney (1987). Abney (1987: 107) himself leaves the question of whether PRO-ing and Poss-ing gerunds have similar structures in their left periphery, but writes that they are more likely to be identical in their upper layers than not.⁸⁰ Here, I will assume after Abney (1987), that the structures of PRO-ing and Poss-ing gerunds are identical in the relevant respects.

I will close this section with some brief remarks on the Poss-ing gerunds in (198). (198a) is analogous to (196a).⁸¹ Both are nominal gerunds headed by lexically constructed verb forms. This is evidenced by the limited productivity of this type of

⁸⁰The issue of the structures of various kinds of gerunds has been the subject of a complex and long lasting debate. See Milsark 2006 for a review.

⁸¹Note that (198a) lacks an overt determiner as opposed to (196a). This is surprising in the light of (196b), the ill-formedness of which I have attributed to the lack of an overt determiner. One would expect (198a) to be bad as well. I explain this contrast as follows: The article *the* gives a specific reading to nouns. This reading seems to be what the lexical gerund requires. The presence of the subject in the Poss-ing gerund in (198a) also gives a specific reading thereby satisfying this specificity requirement. Specific noun phrases are subject to certain constraints. Consider the data in (i).

- (i) a. *Who did you see [that picture of t]?
b. Who did you see [three pictures of t]?

In the first sentence, we have a specific noun phrase as object. It disallows *wh*-movement out of it. In contrast, in the second sentence, we see that a non-specific noun phrase allows *wh*-movement. Now, as shown in (ii), the presence of subject has the same effect on *wh*-movement as the demonstrative in (i).

- (ii) *Who did you see [John's picture of t]?

gerund, as I showed in (185a). Hence, there is little of interest in it from the perspective of my theory. As to (198b), as mentioned in the previous paragraph, I assume that it is essentially the same as (197b), with an additional specifier position at the DP level to house the genitive subject. Then, for (198b), I adopt, *mutatis mutandis*, the derivation that I have proposed in (200) for (197b).

3.4.4 Conclusion

In section 3.4, I have first demonstrated that the presence of subject agreement found on D^0 is necessary for accusative case assignment in the VNC. I have provided evidence for this from Turkish and Japanese, the former a language that has a D head in nominals, instantiated by nominal agreement, and the latter a language that has none. I have noted that the presence of D positively correlates with structural case assignment to the object in the VNC. Furthermore, on the basis of works that connect agreement features (hence, structural case assignment) and focus features I have shown that a positive correlation holds between the presence of D and focus marking on objects in the VNC in Turkish and Japanese, providing further support for my proposal. On the basis of these observations, I have next proposed the Jump-start Hypothesis which holds that in a finite domain, the agreement capability of each agreeing functional head—and the potentially ensuing case assignment—is activated by a single source of φ -features. I have implemented this hypothesis by an operation I call Jump-start. In the VNC, Jump-start clones the agreement features on D^0 and pastes them onto Pred^0 . Pred then agrees with the object and assigns it accusative case. Finally, I have proposed a JuSH-based explanation of the case assignment patterns in English gerunds.

3.5 Conclusion

In this chapter, I have adopted a generalized version of the George and Kornfilt Thesis and claimed that, in a given domain that shows agreement, one functional head, which is the source of agreement features, can be responsible for more than one structural case. I have called this the Jump-start Hypothesis. I have reached this hypothesis through the study of the verbal noun construction in Turkish, a nominal construction that allows accusative case assignment to an object that it contains, unlike its analogues in other languages. First, I have ruled out an explanation of this exceptional accusative case that involves postulating a silent verb phrase in the VNC, the ALVH. Three major flaws of this approach are, one, that it fails to capture the observation that the accusative case in the VNC is only available if subject agreement features are present; two, that it flies in the face of the fact that the VNC disallows specificity contrasts, something a structure with a verb phrase should allow; and three, that the VP anaphor *öyle yap* cannot take the VNC as an antecedent, which means that there is no verbal projection in the VNC. Next, I have put forth my own analysis of the VNC. I have proposed that the VNC has a PredP layer that selects a VN as its complement and hosts the direct object in its specifier. Later, I have returned to the correlation between accusative case and subject agreement, and proposed the Jump-start Hypothesis as an explanation of

Then, the presence of a subject in a noun phrase also triggers a specific reading (see e.g. Chomsky 1986a).

this observation. More specifically, I have argued that Pred assigns accusative case to the object in the VNC, and that the structural case assignment capabilities of Pred depend on D, the source of φ -features. The theoretical implementation of the Jump-start Hypothesis was a φ -feature copying operation that I have termed Jump-start. This operation clones the unvalued φ -feature set of a functional head and paste it onto another. Finally, I have demonstrated that the JuSH can be invoked to explain case assignment patterns in English gerunds.

Jump-starting case assignment

In chapter 2, I have presented the George and Kornfilt Thesis which holds that a noun phrase is assigned the structural case it bears by virtue of an agreement relation that it enters into with a functional category. I have demonstrated the empirical foundations of this thesis using Turkish data. Next, in chapter 3, I have observed a link between subject agreement and accusative case. This observation is given in (1).

- (1) *The Non-finiteness Effect on Accusative Case*
 (In certain constructions) when subject agreement is absent, accusative case is barred.

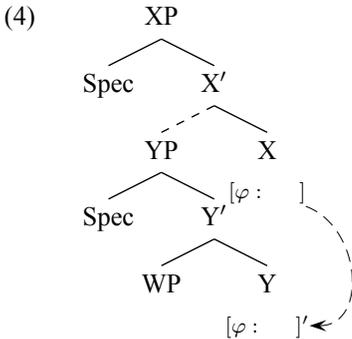
To account for this observation, I have adopted a generalized version of the George and Kornfilt Thesis and claimed that, in a given domain that shows agreement, one functional head, which is the source of agreement features, can be responsible for more than one structural case. I have called this the Jump-start Hypothesis ((2)):

- (2) *The Jump-start Hypothesis (JuSH)*
 In a finite domain, the agreement capability of each agreeing functional head—and the potentially ensuing assignment of case—is activated by a single source of φ -features.

More specifically, I have shown that, in a particular nominal construction that I term the verbal noun construction (VNC), D^0 , which hosts φ -features, activates the structural case assignment capabilities of Pred^0 . It is thanks to this that Pred^0 can assign accusative case to the object in what looks like an entirely nominal construction. I have formalized this dependency by a φ -feature copying operation that I have termed Jump-start. I have formulated this as in (3) and schematized as in (4).¹

¹Most of the technical terms used in this chapter have been defined in chapters 1 and 2.

- (3) *Jump-start*
Clone the unvalued φ -feature set of functional head x and paste it onto functional head y .



Furthermore, I have also proposed the constraints in (5) on Jump-start.

- (5) x jump-starts y only if,
- x c-commands y , (the c-command condition)
 - there is no functional head z with an unvalued φ -feature set such that x c-commands z and z c-commands y , and, (the intervention condition)
 - an active argument occupies the specifier of y . (the activity condition)

Finally, I have shown that functional heads may block Jump-start and that this is circumvented by head movement ((6)):

- (6) *Facilitating circumstance for blocking effects*
Head movement through a category neutralizes the blocking effect of that category.

In this chapter, I aim to show that the JuSH is not suited to just explaining the case assignment patterns in the VNC, but can also be invoked to explain several other phenomena in Turkish grammar (and some phenomena in the closely related Turkmen and Azerbaijani). In section 4.1, I will be focusing on accusative case assignment and demonstrating the dependence of v on a higher functional category (D, C or another v) for case assignment to the direct object. I will do this with data from various offshoots of nominalization, restructuring infinitival complements, and the distribution of non-finite subject clauses in Turkmen. In section 4.2, I will focus on case assignment to the subject and show that T—or whichever other functional category is responsible for subject case in a particular syntactic domain—may also be dependent on another functional category for case assignment. First, I discuss the distribution of non-finite subject clauses in Turkish, then I turn to non-restructuring infinitival complements.

4.1 Object case

In chapter 2 section 2.3.2.2, I have argued that arguments that do not have any morphological structural case marking in Turkish do not have an abstract version of a given overt structural case either. More specifically, for instance, the direct object *kitap* ‘book’ in (7b) (as opposed to that in (7a)), does not have an abstract accusative case, or any other structural case.

- (7) a. Cem kitab-ı oku-du.
Cem book-Acc read-Past.3sg
‘Cem read the book.’
b. Cem kitap oku-du.
Cem book read-Past.3sg
‘Cem read a book.’

The present section focuses on some constructions which, when non-finite, show a preference for these bare direct objects. The first type is constituted of various kinds of nominalization (section 4.1.1). Accusative case assignment becomes possible in these syntactic domains only when they are finite. The second type is restructuring infinitival clauses (section 4.1.2). The presence of accusative-marked objects is fully grammatical in these clauses only when they are embedded under an active ν or directly under a C head. This pattern suggests that the element that is responsible for accusative case assignment to the local object, namely the local ν , is defective, and that there is a dependency between the local ν and the higher functional head. The third construction is non-finite subject clauses in Turkmen (section 4.1.3). The distribution of these clauses is determined by whether they contain an accusative-marked object or not. This suggests a structural case-based interaction between them and the matrix clause.

4.1.1 Accusative case in offshoots of nominalization

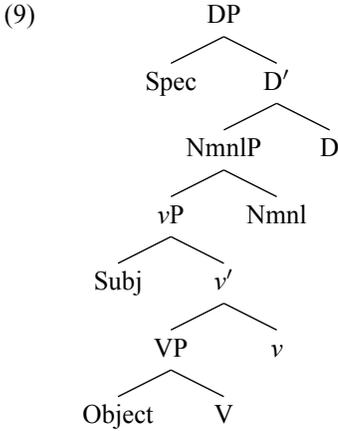
4.1.1.1 Offshoots of various nominalizations

As I have shown in chapter 1 section 1.2.3, Turkish has several different kinds of nominalization. Each of these can have various ‘offshoots’. Take for instance the action nominalization ((8)).

- (8) a. Cem [biz-im kitab-ı oku-ma-mız]-ı dinle-di.
Cem [1pl-Gen book-Acc read-ANom-1pl]-Acc listen-Past.3sg
‘Cem listened to our reading the book.’
b. Cem [kitab-ı oku-ma]-yı düşün-üyor.
Cem [book-Acc read-ANom]-Acc think-Prog.3sg
‘Cem is thinking of reading the book.’

It comes in two main types: finite and non-finite. As finiteness is defined in Turkish as the presence of subject agreement (see chapter 2 section 2.2.1), finite action nominals are those that have subject agreement morphology of the nominal paradigm ((8a)) and non-finite action nominals are those that do not ((8b)).

Several works (e.g. Abney 1987, Alexiadou 2001, Baker 2005, i.a.) attribute a basic structure to nominalizations along the lines of (9), where the structure starts off as a verb phrase and, at some point in the derivation labelled here as NmnI, is transformed into a nominal.



An action nominal can have another nominal suffix attached to it deriving a variation on the action nominalization theme. This variation may or may not be finite. In (10) are two examples.

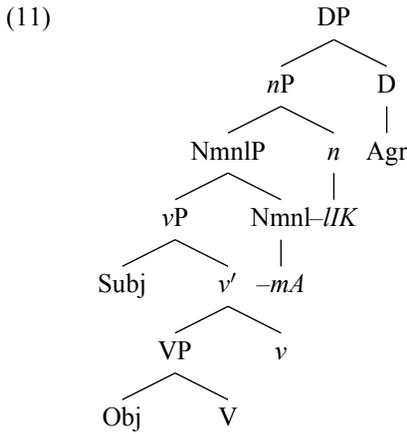
- (10) a. %[Saç-lar-ımız-ı kes-me-liğ-in]-e iddiaya girdik.
 [hair-pl-1pl-Acc cut-ANom-lik-3sg]-Dat we made a bet
 ‘We made a bet where the loser would cut his hair.’
- b. Tam [kitap oku-ma-lık] bir yer bul-du-m.
 perfect [book read-ANom-lik] a place find-Past-1sg
 ‘I found a place perfect for reading books.’

In both examples, the action nominal marker, *-mA*, is followed by another affix of a nominal nature, namely *-LIK*, deriving an offshoot of the action nominalization. (10a) involves a finite variant (see the third person singular nominal agreement marker on the nominal), and (10b) a non-finite one.²

Here, I will be focusing on three kinds of such offshoots. These are what I call *lik*-phrases, *ca*-phrases and *li/siz*-phrases, after the phonological shape of the markers used to derive them. The suffix *-LIK*, used to derive a *lik*-phrase, is typically used to express meanings like ‘fit for, used for, good for; tool for; state of, etc.’. As we will see shortly, *lik*-phrases express related meanings. *Ca*-phrases are used to express amusing, playful activities and *li/siz*-phrases have meanings that express the presence or absence of an action, thanks to the affixes *-li* and *-siz*, meaning ‘with’ and ‘without’, respectively. I will assume that these nominals have the structure in (11), with non-finite variants lacking the DP layer. I suppress details such as the actual positions of arguments and possible specifier positions above the *vP*.³

²The finite variant seems to be a dialectal form from the west of Turkey.

³There is a kind of *lik*-phrase that looks rather exotic ((i)):



One remark that I should make is about the nature of *-IK* and its kin. Their distribution suggests that these morphemes have a lexical character. However, if I assumed that they are purely lexical in structures like (11), I would run the risk of violating Li's Generalization (Li 1990), given in (12) (see also chapter 3 section 3.3.2).

(12) *Li's Generalization*

A lexical head A cannot move to a functional head B and then to a lexical category head C.

In (11), assuming head movement, the lexical verb would sequentially move to v^0 , $NmnI^0$, n^0 and D^0 . *-IK* lies in between $NmnI^0$ and D^0 , two functional categories. If I assumed *-IK* is lexical, this would imply a violation of Li's Generalization, which should result in ungrammaticality. No such outcome is observed. So, suppose that *-IK* and its kin are mixed categories which combine lexical and functional properties.⁴ I use the label *n* to reflect this mixed character of *-IK*. I will return to this issue later in section 4.1.3.

4.1.1.2 The non-finiteness effect in offshoots of nominalization

4.1.1.2.1 *The core data* I will now show how these various offshoots behave with respect to accusative assignment.

Offshoots of nominalization are constructions where one can clearly observe the non-finiteness effect ((1)). Hence, they can be readily subsumed under the JuSH.

-
- (i) [Ben-i tani-ma-ma-z-lik]-tan gel-di.
 [1sg-Acc know-Neg-ANom-Aor.3sg-lik]-Abl come-Past.3sg
 'He pretended not to recognize me.'

This form shows an intertwining of heads of different types: The negative and the third person singular aorist markers are sentential, and the action nominal marker and *-IK* are nominal. I do not have anything contentful to say about the structure of this construction. As for the accusative case assignment in them, it is probably driven by the sentential agreement.

⁴The concept of "grammatical verb", i.e. a hybrid verb that displays both lexical and functional properties, in Emonds (1985) is comparable to this. See also by N. Corver and van Riemsdijk (2001) for a selection of articles exploring the nature of "semi-lexicality".

Finite offshoots are perfectly ordinary. As shown in (13) for *lik*-phrases and in (14) for *ca*-phrases, direct objects receive accusative case in these syntactic domains as is normally the case with direct objects. *li/siz*-phrases do not have finite versions.⁵

- (13) a. %[Saç-lar-ımız-ı kes-me-liğ-in]-e iddiaya girdik.
[hair-pl-1pl-Acc cut-ANom-lik-3sg]-Dat we made a bet
'We made a bet where the loser would cut his hair.'
- b. Halk bana düşman olur, [can-ların-ı al-mak-liğ-ım]
The people would become my enemy [life-3pl-Acc take-Inf-lik-1sg]
nefretlerine sebep olur.⁶
would cause them to hate me.
'The people would become my enemy, for me to take their lives would cause them to hate me.'
- (14) [Saç-lar-ımız-ı kes-me-ce-sin]-e iddiaya girdik.
[hair-pl-1pl-Acc cut-ANom-ca-3sg]-Dat we made a bet.
'We made a bet where the loser would cut his hair.'

When these structures are non-finite however, accusative marking on the direct objects becomes illicit. I show this in (15)-(17), for *lik*-phrases, *ca*-phrases and *li/siz*-phrases, respectively.

- (15) a. Tam [kitap(*-ı) oku-ma-lık] bir yer bul-du-m.
perfect [book(*-Acc) read-ANom-lik] a place find-Past-1sg
'I found a place perfect for reading (*the) books.'
- b. %tam [şiir(*-i) yaz-mak-lık] bir gün
perfect [poem(*-Acc) write-Inf-lik] a day
'A day perfect for writing (*the) poems'
- (16) a. Anne-yle kitap(^{??}-ı) oku-ma-ca
mother-with book(^{??}-Acc) read-ANom-ca
'Reading a/*the book with mum.'
- (17) a. [Çok kitap(*-ı) oku-ma-lı] bir tatil dili-yor-um.
[a lot book(*-Acc) read-ANom-li] a holiday wish-Prog-1sg
Lit. 'I wish you a holiday with a lot of book reading.'
- b. ... ama [statik IP(*-yi) al-ma-sız] yayın
... but [static IP(*-Acc) take-ANom-siz] transmission
ver-e-me-di-m.
give-Abil-Neg-Past-1sg
'but I could not broadcast without obtaining a/*the static IP.'

In contrast to this pattern, no non-finiteness effect can be observed on inherent case. In all the examples in (18)-(20), the occurrence of an inherently case-marked object in an offshoot is perfectly grammatical, despite the fact that that offshoot is non-finite.

⁵Some of my examples are modified from material from Google.

⁶This is possibly an early modern Turkish or a dialectal form. *lik*-phrases tend to be derived from the action nominal *-mA* in modern standard Turkish and remain uninflected.

- (18) a. tam [deniz-e gir-me-lik] bir hava
 perfect [sea-Dat enter-ANom-lik] a weather
 ‘weather perfect for going into the sea’
- b. %[Bir başkası-nın sorumluluk alan-ın-a gir-mek-lik]
 [Somebody else-Gen responsibility domain-3sg-Dat enter-Inf-lik]
 çok dikkat edilmesi gereken hassas bir durumdur.
 is a delicate matter one should be cautious about.
 ‘Entering somebody else’s domain of responsibility is a delicate matter
 one should be cautious about.’
- (19) Anne-yle deniz-e gir-me-ce
 mother-with sea-Dat enter-ANom-ca
 ‘Going into the sea with mum.’
- (20) a. [Bol deniz-e gir-me-li] bir tatil dili-yor-um.
 [a lot sea-Dat enter-ANom-li] a holiday wish-Prog-1sg
 Lit. ‘I wish you a holiday with a lot of going into the sea.’
- b. Hack-siz, [veritabanın-a gir-me-siz]
 hack-without [database-Dat enter-ANom-siz]
 2720 yapan varsa...
 if there is anybody who scored 2720
 ‘If there is anybody who scored 2720 without a hack or without entering
 the database’

This pattern would be expected if the problem with non-finite offshoots has to do with structural case assignment. This is the possibility that I will explore as the basis of a theoretical account here.

4.1.1.2.2 *A JuSH-based account* I propose to apply the JuSH to the data in the previous section. I demonstrate how this could work in (21), the (partial) derivation I propose for (15a).

domain of the source.⁸ Consequently, the v that these nominalizations contain cannot be jump-started. (I have shown this with the dotted arrows in (21).) This has the outcome that v cannot assign accusative case. In (23), I express this as a condition on Jump-start.

(23) *The Blocking Condition on Jump-start*

There is no blocking category z such that x c-commands z and z c-commands y .

The most natural way of capturing the blocking effect of a category seems to be to assume that Jump-start proceeds from head to head in successive steps.⁹ I have indicated this on the tree diagram in (21). I express this in (24).

(24) *The Successiveness Condition on Jump-start*

Jump-start proceeds from x to y only if a projection of x is the immediately dominating functional category of the phrase headed by y .

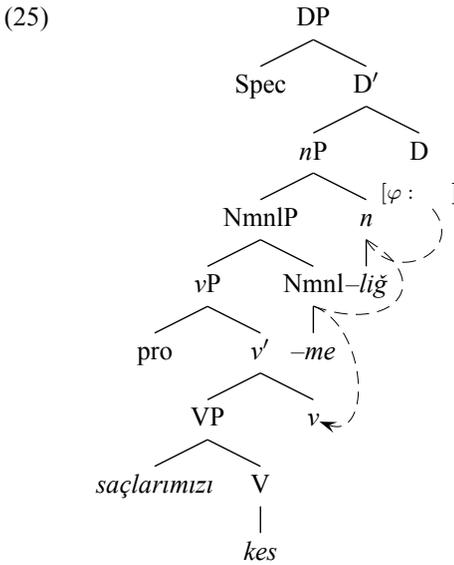
There must be circumstances that override the blocking effect of a category. Take, for instance, a non-finite *lik*-phrase. Although n^0 in this structure induces a blocking effect for Jump-start by a matrix functional head, no intervention effect occurs when the structure is finite ((13a)), i.e. has a DP layer with φ -features of its own, judging from the availability of accusative case in a finite *lik*-phrase. I propose that the head movement condition on Jump-start can be invoked to explain this difference ((6)).

Take for instance the simplified representation in (25) for the *lik*-phrase in the example (13a).¹⁰

⁸The noun in *bir yer* does not block Jump-start for the heads inside the *nP* because it does not c-command any of them.

⁹The alternative is to assume that Jump-start targets functional categories to be jump-started from a distance without the need for head-to-head progression. In this scenario, blocking categories found in the c-command domain of the head that drives Jump-start exert an ‘action at a distance’ sort of blocking effect.

¹⁰The “pro” in this structure is an implicit subject. Turkish is a so-called pro-drop language which allows subjects to be unexpressed under the right conditions.



In this derivation, the source of φ -features is the local D head. The φ -features derived from it are used to jump-start v . The verb *kes* ‘cut’ can (and does) move all the way up to D^0 passing through *-IJK*. (I suppress that detail here, as well as the movement of the arguments.) This helps circumvent the blocking effect of *-IJK*, thereby making it possible to jump-start v . This enables v to assign accusative case to the direct object.¹¹ In short, head movement seems to be creating a locality within which Jump-start may be proceed unhampered. The same account applies, *mutatis mutandis*, for the example (14). In the structure in (21) (for the example (15)), by contrast, the movement of the verb through *-IJK* (and out of the *lik*-phrase into the main clause) is barred under standard assumptions on head movement. The verb can only move as far as *-IJK*. Hence, the blocking effect of *-IJK* cannot be neutralized and *-IJK* blocks Jump-start from the outside. This has the consequence that v cannot be jump-started and accusative case cannot be assigned to the object. In other words, head movement cannot create a locality that encompasses the *lik*-phrase and the matrix clause within which Jump-start may be proceed unhampered. The same account goes, *mutatis mutandis*, for (16) and (17).

4.1.1.3 Ruling out an alternative

What is also compatible with the data in (13)-(20) is an account where non-finite offshoots of nominalization do not allow specific arguments.¹² I showed in various places in this book that accusative marking is illicit on non-specific objects while an inherent case, such as the dative, is unaffected. I repeat the relevant data in (26), where the non-specific objects are found to the right of a VP adverb, i.e. inside the VP.

¹¹Let me spell out an implicit assumption here: The agreement marking seen on finite nominalizations is intrinsic to those embedded clauses. In other words, it is not derived from a higher functional head.

¹²This was pointed out to me by Øystein Nilsen and Qiong-Peng Luo.

- (26) a. Cem yavaş çay(*-1) iç-er.
 Cem slowly tea(*-Acc) drink-Aor.3sg
 'Cem drinks tea slowly.'
 b. Cem geç iş-e gid-er.
 Cem late work-Dat go-Aor.3sg
 'Cem goes to work late.'

If offshoots of nominalization failed to obtain specific readings for arguments, this would produce a pattern whereby direct objects may have no accusative marking but inherently case-marked objects are unaffected—the very same pattern presented in (13)–(17). However, this is an unlikely scenario for the following reasons:

Diesing (1992) proposes that the non-specific reading of an argument is obtained in the VP, while the structure above the VP yields a specific reading. In the light of this proposal, the unavailability of accusative-marked objects in, say, a non-finite *lik*-phrase could be interpreted as a failure to assign a specific reading to objects due to the lack of a structure above the VP, where a specific reading would be obtained for that argument. The structure seems to be big enough, however: As is commonly held, a given kind of adverb may target a given syntactic projection. Thus, as syntactic structure is hierarchically organized, adverb placement follows a hierarchy which matches the hierarchical structure in syntax (see e.g. Cinque 1999). By this account, aspectual adverbs target projections above the VP layer and occur higher than VP adverbs in the hierarchy of adverbs. In non-finite offshoots of nominalization, aspectual adverbs can occur, as shown in (27), suggesting the presence of structure above the VP.

- (27) [tekrar tekrar oku-ma-lık] anlamsız birkaç mırıldanma
 [again again read-ANom-lik] meaningless a few murmuring
 'a few meaningless murmurings to be read again and again'

It could of course be that the structure is 'big enough', so to speak, but that the ability of assigning a specific reading is dependent on a higher functional head. I do not believe this to be the case due to the following: Even though accusative case marking and specificity is tightly linked in Turkish, one can dissociate the two in certain instances. In these cases, an argument can be accusative-marked but be interpreted as non-specific, or be bare and be interpreted as specific. In both these cases, accusative marking is present for purely formal reasons, with no relevance for the semantics of specificity. Then in these cases, it should be possible to assign accusative case to a noun phrase, in any one of the non-finite nominals we are presently studying, without yielding ungrammaticality, if the unavailability of accusative marking in these contexts is due to the unavailability of a specific reading and not due to a problem in case licensing. This prediction is not borne out. The following illustrates the point being made.

First, nominals that are interpreted as non-specific despite the accusative case marking on them: A certain type of partitive construction provides the example ((28)).

- (28) [Kitap-lar-in herhangi iki-sin¹³]-i al!
 [book-pl-Gen any two-3sg]-Acc take
 ‘Take any two of the books!’

This construction is essentially a DP, with a genitive-marked subject/possessor and nominal agreement marking. It must be marked with accusative or any other object case that the verb assigns. The presence of nominal agreement that these DPs bear is what makes case marking obligatory (von Stechow and Kornfilt 2005). Note for instance that a variant of these expressions that does not have agreement marking does not require accusative marking ((29)):

- (29) [Kitap-lar-dan herhangi iki tane](-yi) al!
 [book-pl-Abl any two Cl](-Acc) take
 ‘Take any two of the books!’

In other words, case marking is present on these DPs for purely formal reasons; they do not acquire a specific reading by the presence of accusative marking. As shown in (30), they are disallowed in *lik*-phrases.

- (30) [(*herhangi iki-si-ni) büyük bir afiyetle ye-me-lik] pastalar
 [(*any two-3sg-Acc) with great appetite eat-ANom-lik] cakes
 Lit. ‘cakes to eat any two of with great appetite’

Second, names of languages are examples of noun phrases that can be bare but are interpreted as specific (i.e. referential) nonetheless. I show this in (31a), where the possessive marker on *yapı* ‘structure’ refers back to *Adigece* ‘Adyghian’, which does not bear accusative marking. This is impossible with other kinds of noun phrase, as shown in (31b).

- (31) a. Adigece_i(-yi) öğren-mek isti-yor-um ama yapı-sı_i
 Adyghian_i(-Acc) learn-Inf want-Prog-1sg but structure-3sg_i
 ben-i korkut-uyor.
 1sg-Acc scare-Prog.3sg
 ‘I want to learn Adyghian but its structure scares me.’
 b. Bütün gün kitap_i oku-du-m, #reng-i_i kırmızı-ydı.
 whole day book_i read-Past-1sg #color-3sg_i red-Past.3sg
 ‘I read a book the whole day, its color was red.’ (i.e. did book-reading)

As shown in (32), assigning accusative case to these noun phrases in *lik*-phrases is not possible either.

- (32) [Moğolca(*-yı) öğren-me-lik] bir durum yok ortada.
 [Mongolian(*-Acc) learn-ANom-lik] a situation NegExist presently
 ‘This situation doesn’t require you to learn Mongolian.’

Then, the data in (30) and (32) suggest that the unavailability of accusative case in *lik*-phrases is due to a problem with the formal process of case assignment. This

¹³Number agreement with third person plural inanimate subjects is dispreferred in Turkish. See chapter 1 section 1.2.4 for more information.

is because accusative marking on the partitive phrases in (28) and language names in (31a) is there for formal reasons only and has not bearing on the specificity of the noun phrases it is found on.

The final piece of evidence against a specificity-based account of the data in (13)-(20) is the possibility of having specific inherently case-marked arguments in *lik*-phrases ((33)).

- (33) tam [Ortaköy-e in-me-lik] bir gün
 perfect [Ortaköy-Dat descend-ANom-lik] a day
 ‘a day perfect for going down to Ortaköy’

This suggests that the ability of *lik*-phrases to assign a specific reading is unhampered. Consequently, the impossibility of accusative case assignment in this construction cannot be due to the impossibility of obtaining a specific reading for the direct object.

4.1.1.4 Conclusion

Let me now recapitulate. I have shown that in various offshoots of nominalization the presence of accusative-marked direct objects correlates with the presence of agreement morphology, i.e. the D head. This suggests that the element that is responsible for case assignment to the direct object, i.e. v , is dependent on the D head for that capability. This provides further support for the JuSH.

4.1.2 Restructuring infinitival complements

Restructuring configurations constitute further evidence for a dependency, which makes accusative case assignment possible, between v and a higher functional head. The case assignment patterns that come about in these environments do not exhibit the non-finiteness effect, but are clearly related to other patterns that do. They can elegantly be explained by recourse to the JuSH.

4.1.2.1 Restructuring

Restructuring configurations are constructions where a matrix clause and an embedded clause behave as if they constitute one clause. These structures typically involve matrix verbs such as *want* and *try* and infinitival complement clauses. Languages may show variation as to which verbs enter restructuring constructions and language specific tests need to be done to determine whether a given syntactic environment is restructuring or not. In Turkish, the infinitival double passive construction constitutes a good such test (cf. Kornfilt 1996a). In (34) and (35) are some examples (Kornfilt 1996a).

- (34) a. Polis [üniversite-ler-i kuşat-mak] iste-di.
 police [university-pl-Acc surround-Inf] want-Past.3sg
 ‘The police wanted to surround the universities.’

- b. Üniversite-ler (polis tarafından) [*t t* kuşat-ıl-mak]
 university-pl (by the police) [*t t* surround-Pass-Inf]
 iste-n-di.
 want-Pass-Past.3sg
 ‘The universities were wanted to be surrounded by the police.’
- c. Polis [üniversite-ler-i kuşat-mağ]-a çalış-tı.
 police [university-pl-Acc surround-Inf]-Dat try-Past.3sg
 ‘The police tried to surround the universities.’
- d. Üniversite-ler (polis tarafından) [*t t* kuşat-ıl-mağ]-a
 university-pl (by the police) [*t t* surround-Pass-Inf]-Dat
 çalış-ıl-dı.
 try-Pass-Past.3sg
 ‘The universities were tried to be surrounded by the police.’
- (35) a. Polis [üniversite-ler-i kuşat-mağ-]ı planla-dı.
 police [university-pl-Acc surround-Inf]-Acc plan-Past.3sg
 ‘The police planned to surround the universities.’
- b. *Üniversite-ler (polis tarafından) [*t t* kuşat-ıl-mak]
 university-pl (by the police) [*t t* surround-Pass-Inf]
 planla-n-dı.
 plan-Pass-Past.3sg
 ‘The universities were planned to be surrounded by the police.’
- c. Polis [üniversite-ler-i kuşat-mağ]-a yardım et-ti.
 police [university-pl-Acc surround-Inf]-Dat help do-Past.3sg
 ‘The police helped to surround the universities.’
- d. *Üniversite-ler (polis tarafından) [*t t* kuşat-ıl-mağ]-a yardım
 university-pl (by the police) [*t t* surround-Pass-Inf]-Dat help
 ed-il-di.
 do-Pass-Past.3sg
 ‘The universities were helped to be surrounded by the police.’

The sentences in (34) involve restructuring infinitives. When both the embedded and the matrix verbs are passivized, it is possible to raise the object of the embedded clause (i.e. *üniversiteler* ‘universities’) to the subject position of the matrix clause. The two clauses act as though they are one locality. In (35), by contrast, passivization does not enable *üniversiteler* to raise out of the embedded clause into the matrix. These sentences simply become ungrammatical under passivization. These are non-restructuring constructions. Note that, in this respect, the structures in (35) behave in a way comparable to the complex sentences in (36).

- (36) a. Cem [Hasan-ın Zeyneb-i sev-diğ-in]-i duy-du.
 Cem [Hasan-Gen Zeynep-Acc love-FNom-3sg]-Acc hear-Past.3sg
 ‘Cem heard that Hasan loves Zeynep.’

- b. *Zeynep [*t* (Hasan tarafından) *t* sev-il-diğ-i]
 Zeynep [*t* (by Hasan) *t* love-Pass-FNom-3sg]
 duy-ul-du.
 hear-Pass-Past.3sg
 ‘Zeynep was heard is loved by Hasan.’
- c. [Zeynep-in (Hasan tarafından) *t* sev-il-diğ-i]
 [Zeynep-Gen (by Hasan) *t* love-Pass-FNom-3sg]
 duy-ul-du.
 hear-Pass-Past.3sg
 ‘It was heard that Zeynep is loved by Hasan.’

These examples involve finite factive nominalizations as complement clause. The complement clauses are self-contained: The theme argument *Zeynep* cannot raise to the matrix clause even when both verbs are passivized ((36b)). It may only raise to the subject position of its own clause ((36c)). Thus, the infinitivals in (35) are like the finite clauses in (36) in this respect, rather than the infinitivals in (34).

4.1.2.2 The passivization effect in restructuring

Let me now show in what way these constructions are relevant for my theory. Consider, first, the data in (37)

- (37) a. mafya-nın [adam(-ı) öldür-mek] (*çok) iste-me-si
 mafia-Gen [man(-Acc) kill-Inf] (*very much) want-ANom-3sg
 ‘the mafia’s wanting to kill the/a man’
- b. Expl [adam^{(?)(?)}-ı) öldür-mek] (*çok) iste-n-me-si
 Expl [man^{(?)(?)}-Acc) kill-Inf] (*very much) want-Pass-ANom-3sg
 Lit. ‘there being wanted to kill a man’
- c. Expl [adam-a saldır-mak] (*çok) iste-n-me-si
 Expl [man-Dat attack-Inf] (*very much) want-Pass-ANom-3sg
 Lit. ‘there being wanted to attack the man’

In (37a), we have the transitive verb *öldür* ‘kill’ in the embedded clause, and the restructuring verb *iste* ‘want’ in the matrix clause. The embedded clause is positioned inside the verb phrase, judging from the impossibility of inserting an adverb (*çok* ‘very much’) between *iste* and the embedded clause. Everything is normal; in particular accusative case assignment in the complement clause is unimpaired. When we passivize the matrix verb as in (37b), however, accusative marking on the object *adam* ‘man’ becomes marginal in the embedded clause. Example (37c) shows that inherent case assignment is unaffected by the passivization of the matrix verb. (Incidentally, in both passives the subject position of the matrix clause is filled by a silent expletive element, analogous to the English *it/there*.) Admittedly, the judgments are not as clear as desired, with some degree of speaker variation, but there does exist a contrast between sentences with passive and transitive restructuring verbs.

I should note that I use nominalized matrix clauses in these examples because this makes it easier to show where the arguments are: A genitive-marked argument is in the subject position of the matrix clause, whereas a bare argument could not have raised

to that position. If I had used a sentence as the matrix clause in (37b), for instance, it would have been more difficult to show where *adam* is: As the subjects of sentences are nominative and nominative is phonologically null, *adam* could have been argued to be the subject of the matrix clause. The unavailability of genitive case on *adam* in (37b) also argues against it being the object of the *main* clause, rather than the embedded, assigned accusative case by the matrix verb in (37a): If *adam* were the object of the matrix sentence it would have been possible to raise it to the subject position and assign it genitive case in (37b). Furthermore, if *adam* is in the embedded clause, it could not have been assigned case by the matrix verb because, as I have shown in chapter 2 section 2.3.2.1, probes look upwards in Turkish, as a consequence of which case assignment is also ‘upwards’.

I explain the contrast in (37) by recourse to the JuSH: The embedded v is defective (i.e. unable to assign accusative case) and needs to be jump-started. The embedded clause, however, is non-finite and so lacks the φ -features to jump-start the embedded v . Then, this v has to be jump-started by a source of φ -features in the matrix clause, namely D^0 (because the matrix is a nominalization), the phase head.¹⁴ Ignoring details such as the precise positions of the arguments, I give the partial derivation of this example in (38).^{15,16}

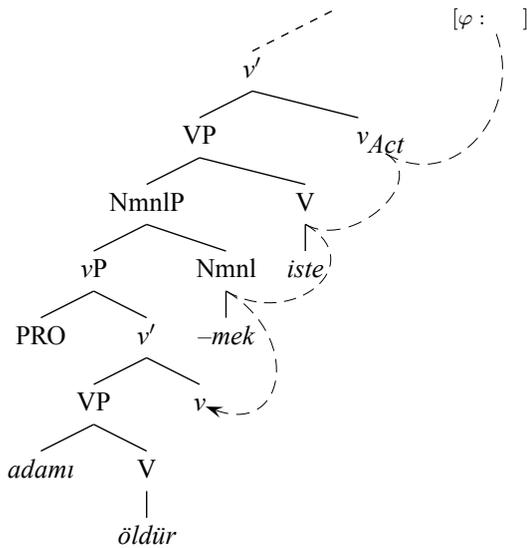
¹⁴See chapter 3 section 3.4.2.1 for the definition of a phase head and its role in Jump-start.

¹⁵Note that V in this derivation does not induce a blocking effect even though it is a lexical category. I propose that this is because of the head movement of the matrix verb into v^0 . Head movement through a head helps circumvent the blocking effect of that category. It seems that the head movement of a category into a φ -feature bearing functional head has the same effect on the moving category.

¹⁶Note the PRO in the specifier of the vP . This is the ‘understood subject’ of the embedded clause. The sentences in (37) are constituted of two clauses. In the embedded clause there is no visible subject, but there is obviously a ‘doer’, an understood subject. In the matrix clause we find overt subjects. Understood subjects, in certain contexts such as this one, have standardly been represented as PRO in generative literature. Thus, we have (ib) as the representation of (ia).

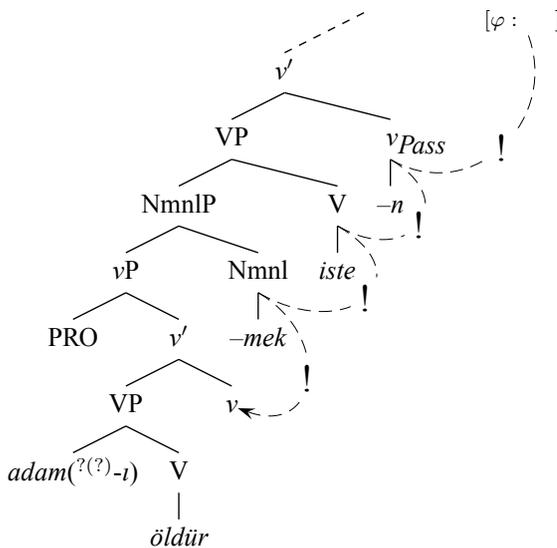
- (i) a. I want to go home.
b. I want [PRO to go home].

(38)



By contrast, in (37b) the derivation does not proceed as smoothly. I show this in (39).

(39)



Here, the passive v in the matrix clause does not induce a full blocking effect but does resist the passage of φ -features. I speculate that this is due to the fact that passive v is unable to agree (cf. Chomsky 2000, et seq.). This puts an additional cost on the Jump-start operation, leading to the accusative marking on the embedded object *adam* being marginal. I attribute the dampened blocking effect (as opposed to a full-blown one) of v to head movement, which helps circumvent the blocking effect of a syntactic

head:¹⁷ The matrix verb *iste* moves through *v* to adjoin to T. It is interesting, though, that the blocking effect of *v* is not fully neutralized. I will show in section 4.2.2 that the same effect can be observed in another related syntactic configuration. Similar dampened blocking effects induced by other syntactic heads might be observable in other environments as well. I do not have an account of this phenomenon.

4.1.2.3 Ruling out Wurmbrand (2001) and supporting the analysis

My JuSH-based explanation of the data in (37) is not the only explanatory account available. These examples may also be accounted for by Wurmbrand's (2001) theory of restructuring. In this section, I will rule out this alternative.

Wurmbrand (2001: 18 ff.) shows that in German, as in Turkish, restructuring infinitives do not have the capability to assign accusative case to their direct objects and that the accusative case seen on the objects in these infinitives is dependent on the matrix verb. The strongest evidence that she provides comes from "long" passives. I exemplify this in (40).

- (40)
- a. weil Hans den Traktor zu reparieren versuchte
since John the tractor-Acc to repair tried
'since John tried to repair the tractor'
 - b. dass der Traktor zu reparieren versucht wurde
that the Tractor-Nom to repair tried was
'that they tried to repair the tractor'
 - c. dass der Traktor und der Lastwagen zu reparieren versucht wurden
that the tractor and the truck-Nom to repair tried were
'that they tried to repair the the tractor and the truck'

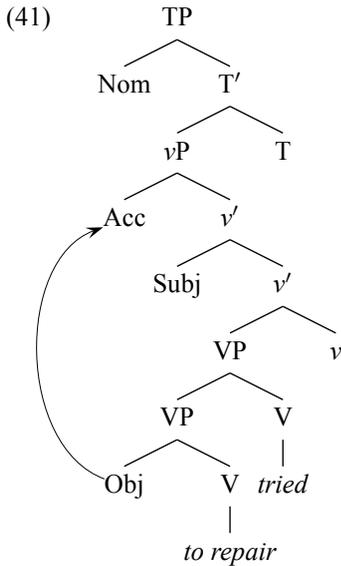
In these constructions, the passive of a restructuring verb, such as *versuchen* 'try', affects the argument structure of the embedded predicate, here *reparieren* 'repair', in such a way that the embedded theme argument is assigned nominative case and agrees with the matrix auxiliary. Wurmbrand writes the following:

What is crucial about object movement of this sort is that in restructuring infinitives, the case assignment properties of the embedded verb are affected by passivization of the matrix verb; i.e., the suppression of structural case in the matrix clause [...] causes the loss of accusative in the embedded complement.

On the basis of this observation, Wurmbrand proposes that in basic sentences with active restructuring verbs, such as (40a), the embedded clause is a bare VP and the matrix *v*P is what is responsible for the structural case of the embedded object. Assuming a movement approach for case licensing she assumes that the embedded object raises overtly or covertly to the matrix clause in order to receive its accusative case ((41)).¹⁸

¹⁷As yet, I do not have a way of testing whether passive *v* would have induced a full blocking effect had head movement not taken place.

¹⁸Note that Wurmbrand proposes that there is no PRO in restructuring infinitives. I will take up this issue in section 4.2.2.2.

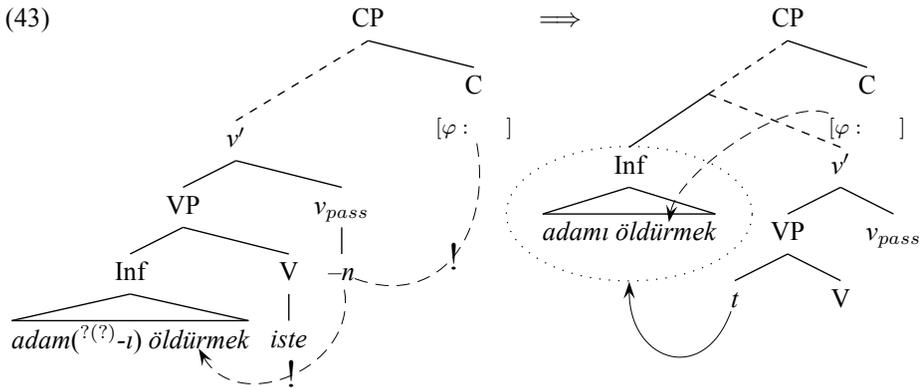


I will now show that this analysis could not be applied to the Turkish data in (37).

4.1.2.3.1 High infinitival clauses What my account predicts and Wurmbrand's (2001) does not is the following. It is possible to assign accusative case to infinitival complements in Turkish. Thus, it is possible to have a sentence parallel to (37a) with accusative marking on the embedded clause, as in (42):

- (42) Mafya [adam(-i) öldür-meğ]-i iste-di.
 mafia [man(-Acc) kill-Inf]-Acc want-Past.3sg
 'The mafia wanted to kill the/a man.'

If matrix v in this restructuring configuration also has the capability to assign accusative case, it would be natural to assume under my theory that, like embedded v , it too is dependent on a higher functional category, i.e. the phase head C , for that capability. (See 2 section 2.2.2.3 for the idea that finite C is a source of φ -features.) What this would imply is that if we could take the infinitival complement out of the c-command domain of matrix v (by raising it out of the vP) and position it in between v and the matrix source of φ -features C , then it should be possible to avoid the mild blocking effect induced by matrix v . This would get the embedded v closer to C and make it possible for v to assign accusative case to the object in the embedded clause without resulting in a marginally grammatical outcome like (37b). I schematize this configuration in (43).



Ideally, this prediction should be tested with a minimal pair using the restructuring verb *iste* as matrix verb, and high and low complement clauses. However, it is not possible to obtain the desired configuration using *iste* for the following reason: This verb cannot assign accusative case when passivized, which leaves the infinitival clause bare and left adjacent to the *iste*. Thus, the complement clause cannot raise out of the vP . A restructuring verb that assigns dative to its complement would not be affected by passivization, however, and the prediction in (43) could be tested with such a verb; *çalış* ‘try’ is one such verb. Consider the examples in (44).

- (44) a. Mafya [adam-ı öldür-meğ]-e çok çalış-tı.
 mafia [man-Acc kill-Inf]-Dat a lot try-Past.3sg
 ‘The mafia tried a lot to kill the man.’
 b. Expl [bun-u ört bas et-meğ]-e çok çalış-ıl-dı.
 Expl [this-Acc cover up do-Inf]-Dat a lot try-Pass-Past.3sg
 Lit. ‘It has been tried a lot to cover this up.’

In example (44a), *çalış* assigns dative to the embedded clause which is positioned above the vP . The positioning of the embedded clause can be evidenced from its occurring to the left of the verb phrase adverb *çok* ‘a lot’. Now note, in (44b), that the passivization of *çalış* does not affect accusative case assignment to the embedded object. This corroborates the prediction that my theory makes, to the detriment of Wurmbrand (2001).

The data in (37) and (44) present a congruent picture showing the effect on infinitival complements of passivizing a matrix verb with differently positioned complement clauses that have differently case-marked objects. I will call the pattern in these sets of examples the passivization effect ((45)).

- (45) *The Passivization Effect on Infinitival Complements (preliminary version)*
 A passive sentence with a low infinitival complement has reduced grammaticality, if this complement contains a structurally case-marked object.

This is a first formulation of this effect. I believe it can be seen in other comparable environments. I will take these up in section 4.2.2, where I will present a re-worked version of (45).

4.1.2.3.2 *High infinitival clauses in lik-phrases* Even though the complementary evidence in (44) does jeopardize the application of Wurmbrand's (2001) restructuring analysis to (37), it is not enough to rule it out completely. Now, Wurmbrand shows that, in contrast to restructuring infinitives, non-restructuring clauses disallow the long passive and allow accusative to be assigned in the infinitival clause even when the matrix verb is passivized ((46)).

- (46) a. *dass der Traktor zu reparieren geplant wurde
 that the tractor-Nom to repair planned was
 'that they planned to repair the tractor'
 b. *dass die Traktoren zu reparieren geplant wurden
 that the tractors to repair planned were
 'that they planned to repair the tractors'
 c. dass den Traktor zu reparieren geplant wurde
 that the tractor-Acc to repair planned was
 'that they planned to repair the tractor'

As opposed to restructuring infinitives which are bare VPs (i.e. lacking a vP layer and anything above that) as shown in (41), non-restructuring infinitives have a vP projection and possibly additional syntactic structure above the VP. Consequently, holds Wurmbrand, they are not dependent on the matrix clause for accusative case assignment. In the light of this, one may very well argue that the higher infinitives in (44) (i.e. those that are outside the verb phrase) are non-restructuring—consequently, not dependent on the matrix clause for accusative case assignment. Lower infinitives in (37) (i.e. those that are inside the verb phrase), on other hand, are restructuring—consequently, dependent on the matrix clause for accusative case assignment.¹⁹

I have two arguments against this option. First, the infinitival double passive test that I had introduced in (34)-(35) shows that the sentence in (44a) is indeed a restructuring configuration ((47)).

- (47) Adam (mafya tarafından) [*t t* öldür-ül-meğ]-e çalış-ıl-dı.
 man (mafia by) [*t t* kill-Pass-Inf]-Dat try-Pass-Past.3sg
 'the man's being tried to be killed (by the mafia)'

When both *öldür* 'kill' and *çalış* 'try' are passivized, *adam* 'man' raises to the subject position of the matrix clause. If (44a) were a non-restructuring configuration, (47) would simply have been ungrammatical, just like the passive sentences in (35).²⁰

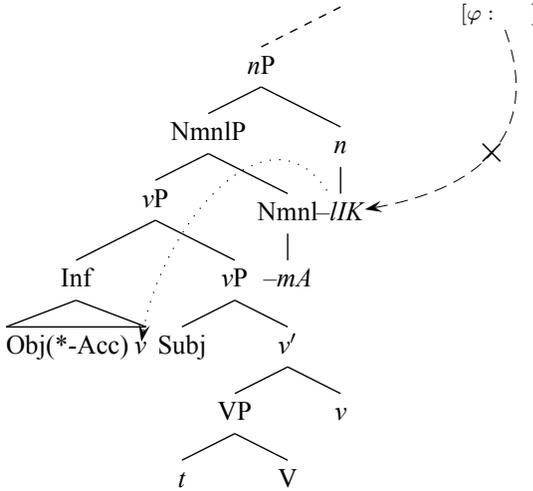
Second, the data in (44) and the discussion that centers on it enable me to make another prediction that rules out this option: If the φ -features of v in the (high) dative-marked infinitival clause in (44) indeed come from the matrix, embedding this clause in a non-finite *lik*-phrase with a verb that selects this kind of non-finite clause (i.e. high and (potentially) restructuring) should make it impossible to assign accusative case to an object in this infinitival. This is because, as I have shown in section 4.1.1, non-finite

¹⁹This was pointed out to me by Mark Baker and Carlos Fasola.

²⁰The *by*-phrase in (47) should not be taken as a reference point to determine the position of the embedded clause: In Turkish, *by*-phrases can freely occur in various positions in syntax, so they do not necessarily demarcate the VP boundary.

lik-phrases themselves do not have φ -features they could jump-start the infinitive with and are opaque to receiving φ -features from the outside. I show the configuration I have described in (48).

(48)



This prediction is borne out, as shown in (49).

- (49) a. tam [[tez / *tez-im-i yaz-mağ]-a başla-ma-lık] bir
 perfect [[thesis / thesis-1sg-Acc write-Inf]-Dat begin-ANom-lik] a
 gün
 day
 ‘a day perfect to begin writing a thesis/*my thesis’
- b. Tez-im (sekreterim tarafından) [t t yaz-ıl-mağ]-a
 Tez-im (secretary.1sg by) [t t write-Pass-Inf]-Dat
 başla-n-dı.
 begin-Pass-Past.3sg
 ‘My thesis was begun to be written (by my secretary).’
- c. Sekreter-im [tez / tez-im-i yaz-mağ]-a başla-dı.
 secretary-1sg [thesis / thesis-1sg-Acc write-Inf]-Dat begin-Past.3sg
 ‘My secretary began writing a thesis/my thesis.’

In (49a), a high infinitival clause is the complement of the verb *başla* ‘begin’ in a non-finite *lik*-phrase. (As I show in (49b), *başla* passes the double passive test just like *çalış* in (47), so it is a comparable verb.) In this *lik*-phrase, accusative marking on *tez* ‘thesis’ is illicit, as predicted, while it would be fine in a complex sentence, for instance ((49c)).

These data rule out the application of Wurmbrand (2001) to restructuring configurations in Turkish.

4.1.2.3.3 *Against the optionality of restructuring* One important aspect of Wurmbrand’s (2001) theory is the optionality of restructuring: In this theory, there are obliga-

torily non-restructuring verbs, such as *plan*, but restructuring predicates are optionally restructuring. Compare the passive German sentences in (40) with the passive sentence in (50):

- (50) *dass versucht wurde/*wurden den Traktor und den Lastwagen zu*
 that tried was/*were the.Acc Tractor and the.Acc truck to
reparieren
 repair
 ‘that they tried to repair the tractor and the truck’

This is a complex embedded clause containing *versuchen* ‘try’ as the matrix verb. The matrix clause is passivized as in (40), but unlike that example, the object in the deepest embedded clause *den Traktor und den Lastwagen* ‘the tractor and the truck’ is accusative-marked and this argument does not agree with the matrix auxiliary.

This *prima facie* looks like a counter-example to Wurmbrand’s claim that the matrix verb in a restructuring configuration determines the case of the embedded object. However, what Wurmbrand argues is that (50) may look like a restructuring environment, judging from the verb *versuchen* ‘try’, but it is not. This is because restructuring is optional. Wurmbrand argues for this claim by showing that passives, such as (50), are systematically different from the long passives in (40) in the following way: Restructuring makes an embedded clause effectively an integral part of the matrix by eliminating the projections which may be called clause boundaries, such as the CP. Non-restructuring does not give rise to such “clause union” (Wurmbrand 2001: 35 ff.). This predicts that the syntactic processes that operate across clauses—the long passive being one example—should be unavailable in non-restructuring environments. That is indeed the case. For instance, while restructuring passives allow remnant topicalization out of them, non-restructuring passives disallow this operation. Remnant topicalization is a movement operation that has two steps, as shown in (51). First, the phrase XP is scrambled out of the phrase YP. Next, YP is moved to the topic position.

- (51) [CP [YP ... *t*_{XP} ...] C [XP ... *t*_{YP}]]

Extrapolating this to structures like (40c) and (46), we can identify YP with the VP that contains the infinitival clause and XP with the object inside the infinitival in (52) and (53).

- (52) a. [_{VP} [*t*_{Obj} Zu reparieren] versucht] wurde der Traktor noch nie
 [_{VP} [*t*_{Obj} to repair] tried] was the tractor-Nom yet never
 ‘What has never happened before was that they tried to repair the tractor.’
 b. [_{VP} [*t*_{Obj} Zu reparieren] versucht] wurden die Traktoren noch nie
 [_{VP} [*t*_{Obj} to repair] tried] were the tractors yet never
 ‘What has never happened before was that they tried to repair the tractors.’
- (53) a. * [_{VP} [*t*_{Obj} Zu reparieren] versucht] wurde den Traktor noch nie
 [_{VP} [*t*_{Obj} to repair] tried] was the tractor-Acc yet never
 ‘What has never happened before was that they tried to repair the tractor.’

- b. *_{VP} [_{tObj} Zu reparieren] versucht] wurde die Traktoren noch nie
 [_{VP} [_{tObj} to repair] tried] was the tractors yet never
 ‘What has never happened before was that they tried to repair the tractors.’
- c. [_{VP} [Den Traktor zu reparieren] versucht] wurde noch nie
 [_{VP} [the tractor-Acc to repair] tried] was yet never
 ‘What has never happened before was that they tried to repair the tractor.’

In these examples, the adverbial *noch nie* ‘never before’ is our reference point. It is adjoined to the matrix *vP* and modifies the matrix verb *versuchen*. In all the examples (with the exception of (53c)), the embedded object *Traktor* ‘tractor’ has been scrambled out of the infinitival clause and the matrix *vP* to somewhere in the matrix clause. Subsequently, the matrix VP (along with the infinitival clause in it) has been topicalized. The pattern produced by this operation is quite telling: In (52), we have restructuring infinitives as indicated by the nominative case on *Traktor(en)* and the fact that it agrees with the auxiliary: The matrix verb *versuchen* is passivized and *Traktor(en)* cannot receive accusative case in the embedded clause. It raises to the subject position of the matrix clause for nominative case. In (53), on the other hand, we have non-restructuring infinitives judging by the accusative case on *Traktor(en)* and the fact it does not agree with the auxiliary: The passivization of *versuchen* does not affect accusative case assignment in the embedded clause. Now, while the examples in (52) allow the scrambling of *Traktor* out of them, those in (53) disallow it. (Example (53c) shows that the ungrammaticality is not due to the topicalization of the matrix VP: *Traktor* has not been scrambled out of it.) This shows that the infinitival clauses in (52) are ‘transparent’, while those in (53) are not, as predicted. From this perspective, then, restructuring does indeed look optional.

When we consider Turkish restructuring configurations in the light of the optionality of restructuring under Wurmbrand (2001), we predict there to be two versions of a given sentence with a restructuring verb like *iste*: a restructuring and a non-restructuring one, the first without *v* in the embedded clause, and the other with. The first would disallow an accusative object in the infinitival clause under passivization—because *v* in that clause would be dependent on the matrix—and the other would allow it—because it would be independent of the matrix by virtue of having its own *v* to assign accusative case.²¹ The outcome under this conflicting situation is that the derivation that allows accusative case on the embedded object would always win. In other words, (54) should be fully grammatical, contrary to fact.

- (54) (?)[Türkçe-yi öğren-mek] iste-n-iyor.
 [Turkish-Acc learn-Inf] want-Pass-Prog.3sg
 ‘It is wanted to learn Turkish.’

The only way to account for (54) is to assume that even when *v* is present in a non-restructuring variant of the derivation, *v* is defective and dependent on the matrix clause

²¹A single passive is not enough for the embedded object to raise to the matrix clause in Turkish. So, the only expected effect is an ungrammatical accusative.

for accusative case assignment. I consider this to be another argument in favor of my theory.

4.1.2.4 Ruling out an alternative

It is theoretically possible that the passivization effect on infinitival complements ((45)) is related primarily to specificity rather than case assignment. (This option was discussed and discarded for the non-finiteness effect in section 4.1.1.) So, it behooves me to rule out that possibility. I will do this by adapting to this section the evidence I have used in section 4.1.1 to argue against the theoretical possibility in question. Consider, first, the data in (55).

- (55) a. Cem [[kitap-lar-ın herhangi iki-sin]-i al-mak] iste-di.
 Cem [[book-pl-Gen any two-3sg]-Acc buy-Inf] want-Past.3sg
 ‘Cem wanted to buy any one of the books.’
 bʔ(?) [[kitap-lar-ın herhangi iki-sin]-i al-mak] iste-n-di.
 [[book-pl-Gen any two-3sg]-Acc buy-Inf] want-Pass-Past.3sg
 ‘It was wanted to buy any two of the books.’

These examples involve partitive phrases that are obligatorily case-marked for purely formal reasons unrelated to specificity. The ungrammaticality of the occurrence of a phrase of this kind in (55b) shows that the unavailability of accusative case in infinitival complements when the matrix verb is passivized is due to reasons entirely related to case assignment. The same observation can be made for noun phrases like language names, brand names and so forth: Language names are always specific and the accusative marking they bear has no relevance for specificity. Thus, the marginality of accusative marking on *Türkçe* ‘Turkish’ in (56b) can only be due to a problem with the case assignment mechanism.

- (56) a. [Az da olsa Türkiye’ye yerleşen bazı yabancılar
 [Even though it’s rare some foreigners who settle in Turkey
 [Türkçe(-yi) öğren-mek] isti-yor] ama yapı-sı-nın
 [Turkish(-Acc) learn-Inf] want-Pros.3sg] but structure-3sg-Gen
 karmaşıklık-ı bun-lar-ı da caydır-ıyor.
 complexity-3sg these-pl-Acc too deter-Prog.3sg
 ‘Even though it’s rare, some foreigners who settle in Turkey want to learn Turkish, but the complexity of its structure deters these people away.’
 b. [Az da olsa Türkiye’ye yerleşen bazı yabancılar tarafından
 [Even though it’s rare by some foreigners who settle in Turkey
 [Türkçe^(?)(-yi) öğren-mek] iste-n-iyor] ama
 [Turkish^(?)(-Acc) learn-Inf] want-Pass-Pros.3sg] but
 yapı-sı-nın karmaşıklık-ı bun-lar-ı da caydır-ıyor.
 structure-3sg-Gen complexity-3sg these-pl-Acc too deter-Prog.3sg
 Lit. ‘Even though it’s rare, it is wanted to learn Turkish by some foreigners who settle in Turkey, but the complexity of its structure deters these people away.’

Finally, consider the examples in (57).

- (57) a. Mafya [Cem-e saldır-mak] iste-di.
 mafia [Cem-Dat attack-Inf] want-Past.3sg
 ‘The mafia wanted to attack Cem.’
 b. Expl [Cem-e saldır-mak] iste-n-di.
 Expl [Cem-Dat attack-Inf] want-Pass-Past.3sg
 ‘It is wanted to attack Cem.’

Inherently case-marked objects can be specific in the syntactic environment under discussion even when the matrix verb is passivized ((57b)). This implies that the passivization effect is not an effect on specificity but rather accusative case assignment.

4.1.3 Sensitivity effects in Turkmen

In this section, I turn to the distribution of non-finite subject clauses in Turkmen, a language very closely related to Turkish. I argue that this distribution can be explained by recourse to the JuSH. My central claim is that, as in Turkish, v in Turkmen cannot assign accusative case unless it is jump-started by a higher functional category with φ -features. This is the primary factor that determines the distribution of non-finite subject clauses in this language.

4.1.3.1 The core data

Turkic languages of the Oghuz group (i.e. Turkish, Azerbaijani, Turkmen, Gagauz, etc.) have several kinds of non-finite nominalization (see also chapter 1 section 1.2.3).²² Of these, two, namely the infinitive in *-mAK* and the non-finite action nominal in *-mA*, are very similar to each other in terms of function and distribution. We have seen Turkish examples of these above. There are some differences between the properties of these nominalizations among the Oghuz languages, though. For instance, in Turkmen, it is *-mAK* that can be inflected for person and number, and *-mA* that is always non-finite ((58a)). In other words, these markers show an opposite behaviour to that of their Turkish counterparts in this respect ((58b)).

- (58) a. Mongol-lar-yn Hitaý-y zabt et-meg-i²³/*et-me-si
 Mongol-pl-Gen China-Acc invasion do-Inf-3sg/*do-ANom-3sg
 biz-i gorkuz-dy.
 1pl-Acc scare-Past.3sg
 ‘Mongols’ invading China scared us.’ (Turkmen)
 b. Moğol-lar-ın Çin-i istila et-me-si/*et-meğ-i
 Mongol-pl-Gen China-Acc invasion do-ANom-3sg/*do-Inf-3sg
 biz-i korkut-tu.
 1pl-Acc scare-Past.3sg
 ‘Mongols’ invading China scared us.’ (Turkish)

²²See chapter 1 section 1.2 for more information on the Oghuz group.

²³As in Turkish, number agreement with third person plural animate subjects is optional in Turkmen. See chapter 1 section 1.2.4 for more information.

One intriguing property of *-mAK* and *-mA* across the Oghuz group is their distribution. When they are non-finite, both kinds can be subjects, but only under very well defined syntactic conditions. By contrast, they seem to be interchangeable in the complement position. The constraints governing the distribution of non-finite *-mAK* and *-mA* in each language are different. I will now turn to the distribution of these nominals in Turkmen. I will take up the Turkish pattern in section 4.2.1 below. Consider, first, (59).

- (59) a. [Ukla-mak] gowy-dyr.
[sleep-Inf] good-EpCop
'To sleep is good.'
- b. [Ukla-ma] gowy-dyr.
[sleep-ANom] good-EpCop
'Sleeping is good.'
- c. [[Ukla-mag]-yň gowy-lyg-yn]-y aýd-ty.
[[sleep-Inf]-Gen good-lik-3sg]-Acc say-Past.3sg
'He said that to sleep is good.'
- d. [[Ukla-ma]-nyň gowy-lyg-yn]-y aýd-ty.
[[sleep-ANom]-Gen good-lik-3sg]-Acc say-Past.3sg
'He said that sleeping is good.'

Here, we have non-finite infinitivals ((59a) and (59c)) and non-finite action nominals ((59b) and (59d)) as subject. The predicate of these subject nominals is the intransitive verb *ukla* 'sleep'. Both the infinitive and the action nominal have a free distribution: In (59a)-(59b), we have a sentence as the matrix domain, and both the infinitive and the action nominal can be the subject. The same goes for (59c)-(59d), where we have a nominalization as the matrix environment. We do not observe any differences in distribution here.

The pattern is exactly the same in (60). No differences in distribution can be observed. This time the predicate of the subject nominals is the transitive verb *oka* 'read'. Its object *kitap* 'book' is caseless.

- (60) a. [Kitap oka-mak] gowy-dyr.
[book read-Inf] good-EpCop
'To read books is good.'
- b. [Kitap oka-ma] gowy-dyr.
[book read-ANom] good-EpCop
'Reading books is good.'
- c. [[Kitap oka-mag]-yň gowy-lyg-yn]-y aýd-ty.
[[book read-Inf]-Gen good-lik-3sg]-Acc say-Past.3sg
'He said that to read books is good.'
- d. [[Kitap oka-ma]-nyň gowy-lyg-yn]-y aýd-ty.
[[book read-ANom]-Gen good-lik-3sg]-Acc say-Past.3sg
'He said that reading books is good.'

However, there is a marked difference in distribution when the object is accusative-marked: In (61), the predicate of the subject nominals is the transitive *gör* 'see' and its object *Cem* is marked in the accusative. Note that in (61b) and (61d), the action

nominal is barred from the subject position under these circumstances.

- (61) a. [Cem-i gör-mek] on-u begen-dir-di.
 [Cem-Acc see-Inf] 3sg-Acc rejoice-Caus-Past.3sg
 ‘To see Cem made him happy.’
- b. *[Cem-i gör-me] on-u begen-dir-di.
 [Cem-Acc see-ANom] 3sg-Acc rejoice-Caus-Past.3sg
 ‘Seeing Cem made him happy.’
- c. [[Cem-i gör-mek]-iň on-u begen-dir-dig-in]-i
 [[Cem-Acc see-Inf]-Gen 3sg-Acc rejoice-Caus-FNom-3sg]-Acc
 aýd-ty.
 say-Past.3sg
 ‘He said that to see Cem made him happy.’
- d. *[[Cem-i gör-me]-niň on-u begen-dir-dig-in]-i
 [[Cem-Acc see-ANom]-Gen 3sg-Acc rejoice-Caus-FNom-3sg]-Acc
 aýd-ty.
 say-Past.3sg
 ‘He said that seeing Cem made him happy.’

I call this sensitivity between a given structure and its syntactic environment the sensitivity effect. I express the observations in (59)-(61) as (62).

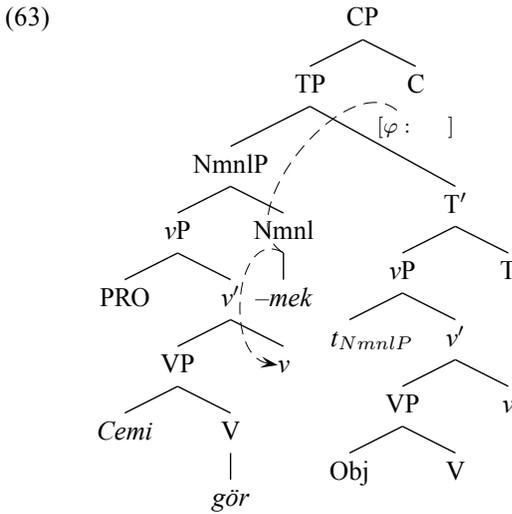
- (62) *The Matrix-Embedded Clause Sensitivity Effect (preliminary version)*
 A non-finite action nominal may not function as a subject if it contains a structurally case-marked object.

This is a first formulation. It is broad enough to cover only Turkmen data. I will return to it in section 4.2.1 and make it somewhat more general and flexible enough to subsume the manifestation of the sensitivity effect in Turkish.

4.1.3.2 *Jump-starting case assignment in Turkmen*

I propose to explain (62) using the JuSH.²⁴ The pattern in (59)-(61) would have a natural explanation if one supposed that it is not possible to assign accusative case to a direct object in a non-finite subject nominal in Turkmen, and that the subject nominal is dependent on its matrix environment for case, i.e. it needs to be jump-started. I show this with reference to the structure of example (61a) given in (63).

²⁴Interestingly, among the languages of the Turkic family, I have come across phenomena that could be covered by the JuSH only in the Oghuz group. This may, of course, be purely accidental, attributable to my survey of Turkic. But if it is not, then, this would mean that a change took place in the history of Turkic, possibly when Oghuz split off from the bulk of the Turkic family, that resulted in this state-of-affairs. It would not be unreasonable to expect that this difference correlates with other differences between Oghuz and non-Oghuz Turkic languages. The discovery of these correlations and the study of the phenomena they involve would no doubt shed light on the question of what triggered the change and aid in understanding it.



The source of φ -features in the matrix clause (i.e. C^0), jump-starts v (via $NmnI^0$, which is spelled out by the infinitive marker). By virtue of this, v can subsequently agree with and assign case to the object.

Note that, in (63), I analyse infinitival subject clauses in Turkmen as lacking a DP layer. I base this on the observation that these constructions do not obligatorily bear morphological case marking (in the object position for instance). I have argued in section 4.1.1 of the present chapter, as well as chapter 3 section 3.2.4, that agreement morphology on a nominal, and the DP layer that hosts it, require for there to be case marking on that nominal. I will transfer those claims to the present discussion. Thus, for instance, a finite action nominal in Turkish bears obligatory case marking ((64)).

- (64) [Cem [Deniz-in bisiklet-i onar-ma-sı]*(-nı) bekliyor].
 [Cem [Deniz-Gen bicycle-Acc mend-ANom-3sg]*(-Acc) wait:Prog.3sg]
 ‘Cem is waiting for Deniz to mend the bike.’
 Lit. ‘Cem is waiting for Deniz’s mending the bike.’

Likewise, non-finite action nominals in Turkish also bear accusative marking obligatorily ((65)).

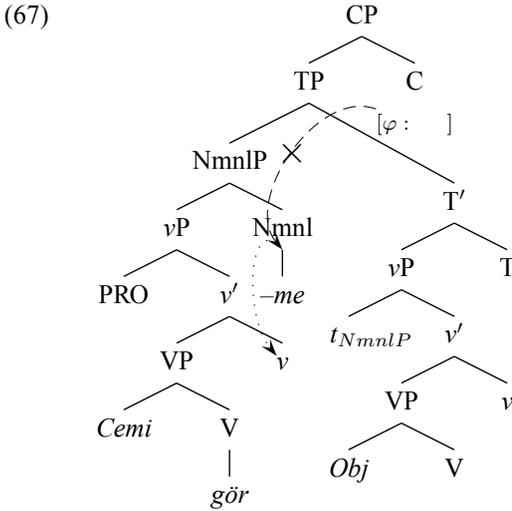
- (65) [Cem [bisiklet-i onar-ma]*(-yı) istiyor].
 [Cem [bicycle-Acc mend-ANom]*(-Acc) want:Prog.3sg]
 Lit. ‘Cem wants mending the bike’
 ‘Cem wants to mend the bike.’

From this, I conclude that the element that forces there to be accusative marking on a nominalization is present in non-finite as well as finite action nominals. This cannot be agreement morphology, but it is rather the DP layer that hosts it. In Turkmen, an infinitival clause may be inflected for person and number, in a way comparable to a Turkish action nominal. When it is inflected, the Turkmen infinitive bears obligatory case marking ((66a)). When it is uninflected, however, case marking is not obligatory

((66b)). From this, I conclude that the Turkmen infinitive does not have a DP layer when uninflected.

- (66) a. Men Cem-in kitap oka-mag-yn*(-y) isle-ýär-in.
 I Cem-Gen book read-Inf-3sg*(-Acc) want-Prog-1sg
 ‘I want Cem to read a book.’
 b. Men kitap oka-mag-y / oka-mak isle-ýär-in.
 I book read-Inf-Acc / read-Inf want-Prog-1sg
 ‘I want to read a book.’

I will now return to the discussion of (62). In contrast to (61a) (and its structure in (63)), *v* cannot be jump-started in (61b). I show this in (67).



I assume that the action nominal lacks a DP layer, simply because it never has agreement morphology (which corresponds to the DP layer). The source of φ -features in the matrix clause, C^0 , tries to jump-start *v*, again via $NmnI^0$, which, this time, is spelled out by the action nominal marker. This seems to have a significant effect, because $NmnI^0$ blocks Jump-start. Due to this, *v* cannot agree with and assign accusative case to the object.

4.1.3.3 The mixing of categorial features

Under this account, the Turkmen action nominals in (60b) and (61b) are no different from the non-finite offshoots of Turkish nominals, such as *lik*-phrases, that I have presented in section 4.1.1. They both block Jump-start and consequently can only have objects that are not accusative-marked. The important question is, of course, that of what these categories have in common, which causes them to block Jump-start.

I do not have a formally explicit answer to this question, but some concrete ideas as to where the answer may be sought. I suspect that one may attribute the blocking effects that certain syntactic heads induce to how lexical, as opposed to functional, they

are. I have hinted at this in section 4.1.1. In that section, I have attributed the blocking effect in *lik*-phrases to the nominal node that the morpheme *-IİK* occupies. I have proposed that this morpheme (and the related morphemes discussed in that section) have a mixed lexical and functional character (cf. Emonds 1985). As it is commonly assumed in generative linguistics that functional categories do and lexical categories do not agree, I have proposed that lexical categories refuse agreement features, inducing blocking effects during Jump-start. Then, to sum up, the lexical characteristics of *-IİK* cause it to block Jump-start.²⁵

As for *-mA*, in non-Oghuz Turkic languages, it is used as a deverbal suffix that forms nouns of various sorts, as in *bölme* (separate-mA) ‘room’ (Kazakh) and *utyрма* (sit-mA) ‘get-together’ (Tatar). It descends from the Old Turkic deverbal suffix *-mA* used to form adjectives, e.g. *kesme aş* (cut-mA food) ‘minced food’. It is also found in this use in pre-modern Turkic languages such as the classical language Chagatai, e.g. *egme* (bend-mA) ‘bent’ (Öner 1998). This use of *-mA* has survived in Turkish, as can be seen in examples like *dökme kurşun* (pour-mA lead) ‘cast lead’ or *süzme yoğurt* (strain-mA yogurt) ‘strained yogurt’.

In Oghuz, the properties of *-mA* have expanded, allowing it to be used to derived nominalizations (and as a general deverbal suffix) (see e.g. Timurtaş 2005: 98), which, depending on the language, may be inflected for person and number. Now, among the Oghuz varieties, Turkmen is one which has been influenced by the neighboring non-Oghuz Turkic languages, notably Chagatai, the ancestor of Uzbek and Uighur (Boeschoten and Vandamme 1998). Then, one could imagine that, under this influence, *-mA* in Turkmen has preserved its nominal character to a larger extent than Turkish *-mA* and induces a blocking effect on Jump-start, by rejecting φ -features, just like *-IİK*. Turkish *-mA* does not induce an across the board blocking effect but a selective one, as I will show in section 4.2, allowing it to pass on φ -features under the right conditions. This suggests that it has a more functional character than Turkmen *-mA*.

I concede that the core idea of this account—that categories like *Nmnl* (as well as the node that *-IİK* and the related morphemes correspond to) have a composite structure—has limited popularity in the research tradition which I have adopted (Chomsky 1981, 1995, 2000, i.a.), although it has attracted attention in various other frameworks (see for instance Borsley and Kornfilt 2000 which discusses Turkish). In the generative framework, the mixed properties of a gerund, for instance, are delegated to various syntactic projections. I do not reject such an idea; in fact that is an approach that I have assumed here. What I am doing is to entertain the idea that the two approaches may need to be blended for a better understanding of the issues involved in nominalizations.

In my belief, a mixed category is not at all an implausible idea when viewed in the light of Turkish nominalizations. Take the factive nominalization marker *-DIK* for instance. It clearly has nominal character. But, additionally, it has the (limited)

²⁵Presumably, the lexical traits of *-IİK* (and the related morphemes discussed in section 4.1.1) are more dominant than their functional traits, so that these block Jump-start. But one cannot assume this dominance to be so strong that the morphemes in question block head movement as well, due to a Li’s Generalization violation. I have also discussed the role of Li’s Generalization in section 4.1.1. This issue of the precise manner in which lexical and functional features are mixed is one that I cannot further elaborate on in this work. I refer the reader to by N. Corver and van Riemsdijk (2001).

matrix v does not show this effect. Finally, I have focused on non-finite subject clauses in Turkmen and discussed a phenomenon that I have called the sensitivity effect: A non-finite action nominal cannot be a subject if there is an accusative-marked object in it. I have accounted for all three of these effects by invoking the Jump-start Hypothesis (JuSH), which is the central hypothesis of this book. According to the JuSH, in a finite domain, a single source of φ -features activates the agreement—and the potentially ensuing assignment of case—capability of each agreeing functional head.

4.2 Subject case

In this section, I turn to case assignment to the subject. I argue that T—or whichever other functional category is responsible for subject case in a particular syntactic domain—is dependent on another functional category for case assignment, just like v is for accusative case assignment. In section 4.2.1, I focus on sensitivity effects in Turkish: As in Turkmen, non-finite subject clauses have a distribution that is non-free in Turkish, although the precise pattern is different from that in Turkmen. In section 4.2.2, I will discuss non-restructuring infinitival complements. These show a variant of the passivization effect that I have presented in section 4.1.2.2. In both sections, I will make use of the JuSH to explain the data presented.

4.2.1 Sensitivity effects in Turkish

4.2.1.1 The core data

As I have shown in section 4.1.3, the Turkmen infinitive and action nominal have an intriguing distribution: The action nominal is banned from the subject position when accusative case assignment takes place inside it. Otherwise, the infinitive and the action nominal are interchangeable. I have called this sensitivity between a given structure and the syntactic environment it is found in, the sensitivity effect.

Turkish non-finite subject clauses also show sensitivity effects, albeit in a different way: Infinitives can be the subjects of clauses but not of nominals, but non-finite action nominalizations, in contrast, can be the subjects of nominals but not of clauses. I show this distribution in (70).

- (70) a. [CP [Inf Bisiklet-i onar-mak] Cem-i yor-du]
 [CP [Inf bicycle-Acc mend-Inf] Cem-Acc tire-Past.3sg]
 ‘To mend the bike made Cem tired.’
- b. *[ANom [Inf bisiklet-i onar-mağ]-ın Cem-i yor-ma-sı]
 [ANom [Inf bicycle-Acc mend-Inf]-Gen Cem-Acc tire-ANom-3sg]
 Lit. ‘To mend the bike’s making Cem tired (upset us.)’
- c. *[CP [ANom Bisiklet-i onar-ma] Cem-i yor-du]
 [CP [ANom bicycle-Acc mend-ANom] Cem-Acc tire-Past.3sg]
 ‘Mending the bike made Cem tired.’

- d. [ANom [ANom bisiklet-i onar-ma]-nın Cem-i yor-ma-sı]
 [ANom [ANom bicycle-Acc mend-ANom]-Gen Cem-Acc tire-ANom-3sg]
 ‘The fact that mending the bike made Cem tired (upset us.)’
 Lit. ‘Mending the bike’s making Cem tired (upset us.)’

(71) reduces example (70) to more manageable proportions.

- (71) [Sent [Inf ...] Obj V]
 *[Nmnl [Inf ...] Obj V]
 *[Sent [ANom ...] Obj V]
 [Nmnl [ANom ...] Obj V]

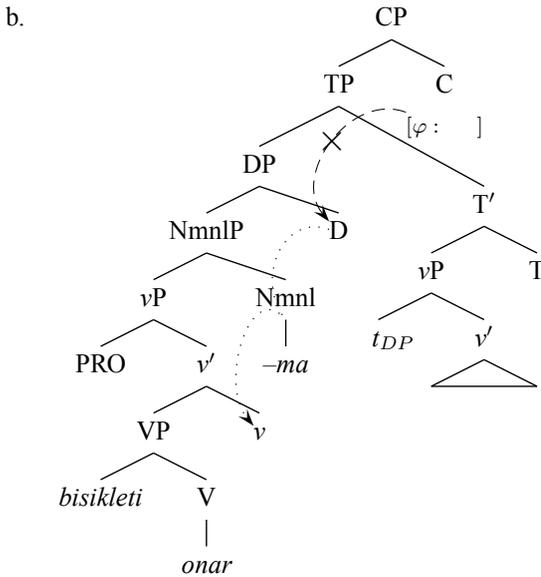
Intuitively, the action nominal in *-mA* and the infinitive in *-mA* are very similar in function and meaning. Grammars of Turkish (e.g. Underhill 1976, Lewis 1967, Kornfilt 1997, Göksel and Kerslake 2005) treat them together. So, the pattern in (70) emerges as a surprising contrast between the two nominals. An explanation is pending.

4.2.1.2 A JuSH aided diagnosis of the problem

It is quite clear that the pattern in (70) is akin to the pattern of sensitivity effects in Turkmen given in (61) in section 4.1.3. So, I propose that the account of sensitivity effects in Turkmen I have advanced in that section be extended to sensitivity effects in Turkish.²⁷ I will not transfer my account in section 4.1.3 verbatim to the pattern I discuss here, but the essence is the same: I attribute sensitivity effects to a categorial incompatibility that arises in the process of Jump-start. Let me make this more concrete by, first, showing the derivations that I have in mind for (70a) and (70c) ((72)).

- (72) a.
-

²⁷The Turkmen data also rule out a morphological account of sensitivity effects in Turkish, where the infinitive cannot receive genitive case, and the action nominal the nominative due to some morphological quirk.



In the first derivation in (72), the source of φ -features in the matrix clause (i.e. C^0) jump-starts $NmnI^0$ —spelled out by the infinitive marker *-mA*—and v . By virtue of this, structural case can be assigned to arguments that require it. In the second derivation, however, there is an additional DP layer. D^0 , the head of this projection blocks Jump-start. Due to this, $NmnI^0$ —spelled out by the action nominal marker *-mA*—and v cannot be jump-started. This has the consequence that arguments that require case will not receive it, which leads to ill-formedness.

Let me make a remark on my treatment of the non-finite action nominal as a DP and the infinitive as an $NmnIP$ in these structures.²⁸ The justification for this analysis is as follows: In 4.1.3.2, I have noted that the DP layer in a nominal makes case marking obligatory on that nominal, and that the action nominal in Turkish bears obligatory case marking. I have concluded on that basis that the action nominal is a DP. Now note that the infinitive need not bear case marking, as shown in (73). I take this to mean that the infinitive is a bare $NmnIP$.

- (73) Cem [bisiklet-i onar-mağ](-i) istiyor.
 Cem [bicycle-Acc mend-Inf](-Acc) want:Prog.3sg
 ‘Cem wants to mend the bike’

The analysis I have proposed in (72) clearly hinges on this treatment of the action nominal versus the infinitive. The infinitive and the action nominal are minimally different. The action nominal shares the portion of the structure below its DP layer with

²⁸Longobardi (1994) observes that most nominals must appear with a determiner in order to be used as an argument in English and the Romance languages. Thus, it has widely been assumed that even in languages that seem to lack overt determiners, such as Turkish, covert determiners help introduce nominals as arguments. From this perspective, it is problematic for an infinitive to lack a DP layer, if it is to function as an argument. However, there are alternative proposals with which my analysis is not at odds, such as Chierchia (1998), Baker (2003) and Öztürk (2005). According to these, an N/NP can also be an argument.

the infinitive and the infinitive and the matrix CP are compatible. This suggests that the sensitivity between the action nominal and the matrix CP in (70c) probably involves the DP layer in the action nominal. The rest of the structure is in all likelihood irrelevant in this.

In this connection, *prima facie* evidence from Turkish for the Jump-start-based analysis I have proposed in (72) comes from another contrast involving the DP layer in action nominals. Unlike sentences with non-finite action nominal subjects, sentences with finite action nominal subjects do not show a sensitivity effect. As shown in (74), a finite action nominal may be the subject of a sentence, as well the subject of an action nominal.

- (74) a. [_{CP} [_{ANom} Deniz-in bisiklet-i onar-ma-sı] Cem-i
 [_{CP} [_{ANom} Deniz-Gen bicycle-Acc mend-ANom-3sg] Cem-Acc
 yor-du]
 tire-Past.3sg]
 ‘Deniz’s mending the bike made Cem tired.’
- b. [_{ANom} [_{ANom} Deniz-in bisiklet-i onar-ma-sı]-nın Cem-i
 [_{ANom} [_{ANom} Deniz-Gen bicycle-Acc mend-ANom-3sg]-Gen Cem-Acc
 yor-ma-sı]
 tire-ANom-3sg]
 Lit. ‘Deniz’s mending the bike’s making Cem tired (upset us.)’
 ‘The fact that Deniz’s mending the bike made Cem tired (upset us.)’

The DP layer of a finite action nominal is minimally different from that of a non-finite action nominal in terms of the φ -features that it has. This suggests that the sensitivity effect in (70b) is linked to the absence of φ -features at D⁰. The necessity to provide those missing φ -features, then, presents itself as a probable cause for sensitivity effects.²⁹

4.2.1.3 *The placement of subject clauses*

I will now turn to examples (70b) and (70d). The first issue that needs to be clarified about these is where the clausal subject of a nominalization is positioned when Jump-start begins. (Note that the matrix clauses are nominalizations in these examples.) As I have stipulated in chapter 3 section 3.4.2.2, every argument that requires structural case has to be in the specifier of a functional head when Jump-start begins. This is how a category to be jump-started is identified. So we have to establish what that position is for subject nominalizations as elements in need of case. However, another issue hinges on our choice: The subjects of nominalizations are generally assumed to be in the specifier of the DP (see e.g. Abney 1987, i.a.). But, if we assumed that subject clauses are in the specifier of DP, this would mean that D, the source of φ -features in a nominalization, cannot c-command, and consequently, cannot jump-start a functional head inside a clausal subject. The only way to solve this problem seems to be to assume

²⁹By extension, we might conclude that the portion of the structure relevant for sensitivity effects in the matrix CP is the CP layer. First the head of the CP, C⁰, is a locus of φ -features in a clause; second, it is the counterpart of the DP in a nominalization, in the sense that they both are projections of phase heads, C one and D the other. More specifically the sensitivity effect in (70c) must somehow involve the φ -features at C⁰.

that NmnIP projects a specifier and that the clausal subject is in that specifier, in the c-command domain of D. (By this account, NmnI is the functional category that assigns case to the clausal subject.) Below, I present two arguments for this assumption.

The first argument is from relativization. Relativization involves a movement operation that targets the specifier of CP in a sentence. The analogous position in a nominalization seems to be the specifier of DP. This is suggested by the data in (75) and (76).

- (75) a. [Sauron-un kale-yi feth-i] biz-den gizle-n-di.
 [Sauron-Gen fortress-Acc conquest-3sg] 1pl-Abl hide-Pass-Past.3sg
 ‘Sauron’s conquest of the fortress was hidden from us.’
 b.*?? [[Sauron-un t_i feth-i] biz-den gizle-n-en] kale_i
 [[Sauron-Gen t conquest-3sg] 1pl-Abl hide-Pass-SR] fortress-Acc
 ‘the fortress Sauron’s conquest of which was hidden from us’

Example (75a) is a sentence with a VNC as subject. I have shown in chapter 3 section 3.3 that the subject of the VNC is in the specifier of DP. Now note that it is impossible to relativize *kale* ‘fortress’ out of the VNC, as shown in (75b). In contrast to this, extraction of the object from an action nominal is possible ((76)).³⁰

- (76) a. [Koma Rewshen-in şarkı-yı çal-ma-sı]
 [Koma Rewshen-Gen song-Acc play-ANom-3sg]
 bekle-n-iyor.
 expect-Pass-Prog.3sg
 ‘Koma Rewshen’s playing the song is expected.’
 b. [[Koma Rewshen-in t_i çal-ma-sı] bekle-n-en] şarkı_i
 [[Koma Rewshen-Gen t play-ANom-3sg] expect-Pass-SR] song
 ‘the song that Koma Rewshen’s playing is expected’

Example (76a) is a sentence with an action nominal subject. It is possible to relativize *şarkı* ‘song’ out of this environment. The contrast between (75) and (76) has a natural explanation if, one, relativization targets the specifier of DP in nominals, and two, the subject of an action nominal, here *Koma Rewshen*, is not in the specifier of DP. The specifier of NmnIP is the most likely position where the subject is. I have shown this in the simplified structural representation in (77).

- (77) [... [DP t_i [NmnIP *Koma Rewshenin* t_i *çalma*] –sı] *beklenen*] *şarkı*_i

An ordinary noun phrase subject of a nominalization may be lower than the specifier of DP, but subject clauses need not be. Indeed, Koster (1978) claims that clausal subjects of sentences are not positioned in the specifier of TP, but in the specifier of CP. The same proposal could be extended to subject nominalizations, where the subject position reserved for them could be assumed to be the specifier of DP. One of the arguments Koster uses is built on the impossibility of subject–auxiliary inversion in sentences with subject clauses ((78)).

³⁰The extraction of the subject out of nominalizations is always possible due to the presence of a silent resumptive pronoun identified by agreement morphology (Kornfilt 2000).

- (78) a. *Did [that John showed up] please you?
 b. *What does [that he will come] prove?

Subject–auxiliary inversion is the movement of an auxiliary into C^0 past the subject found in the specifier of TP. It typically occurs in questions like (78). Koster argues that the ill-formedness of subject–auxiliary inversion is a sign that the subject is in the topmost position available in a sentence, i.e. the specifier of CP. Koster’s arguments do not carry over to Turkish due to the lack of comparable phenomena to build those arguments on. But, adopting his line of thinking, it is possible to give the following argument from Turkish against the adoption of his proposal for the clausal subjects of nominalizations.

If a subject clause occupies the specifier of DP in a nominalization, it should be impossible to relativize anything out of that nominalization. This is due to the fact that the target position of relativization is occupied. This prediction is not borne out ((79)).

- (79) a. [Cem-in git-me-si] adam-ı üz-dü.
 [Cem-Gen go-ANom-3sg] man-Acc sadden-Past.3sg
 ‘Cem’s leaving saddened the man.’
 b. [[Cem-in git-me-si]-nin t üz-düğ-ü] adam
 [[Cem-Gen go-ANom-3sg]-Gen t sadden-NSR-3sg] man
 ‘The man that Cem’s leaving saddened’

The example in (79a) is a sentence with an action nominal as subject. When the object *adam* ‘man’ is relativized out of it, as in (79b), the outcome is grammatical. Now, the crucial thing about object relativization in Turkish is that an object relative clause is a nominal expression (note the genitive marking on the subject clause and nominal agreement on *üz* ‘sadden’). In other words, the extraction in (79b) is made from out of a nominalized clause rather than the source sentence (79a). This object relative clause is a DP like all nominalizations with subject agreement morphology. Then, (79b) shows that the specifier of DP in the relative clause is vacant for the relativization-related movement operation. In other words, the subject clause could not be in the specifier of DP in the relative clause, but lower, in the specifier of NmnIP.³¹ I have shown this in the simplified structural representation in (80).

- (80) [DP t_i [NmnIP [DP *Cemin gitmesi*] -nin t_i üzdüğ] -ü] *adam_i*

Then, going back to the discussion of the pattern in (70), suppose that the derivation of (70b) and (70d) are as in (81).

³¹Clearly, there is no guarantee that this argument can be generalized to sentences. However, I will assume the same analysis for the clausal subject of sentences. I have already done that implicitly in (70a) and (70c).

works that I take as basis for my assumption that nominalizations are DPs and that nominal agreement markers are at D^0 (see chapter 2 section 2.2.3.2). Baker (2005) argues for this position on the basis of Peruvian Quechua data analysed in the light of his theory of lexical categories in Baker (2003) which is a work crucial for my analysis of the verbal noun construction in chapter 3. A fundamental claim of Baker (2003) is that a noun is a lexical category that introduces a referential index, i.e. broadly speaking, that refers. A consequence of this is that a noun can function as an argument and receive θ -roles. Another essential ingredient in Baker's (2003) theory is the reference–predication constraint ((82)):

- (82) *The Reference-Predication Constraint*
 No syntactic node can have both a specifier and a referential index.

Then, the reference–predication constraint implies that a noun cannot have a specifier position in syntax.

Now, Baker (2005) notes that in Peruvian Quechua agreement with the possessor appears as a suffix on the head noun, as in (83):

- (83) a. Xwan-pa wasi-n
 Juan-Gen house-3sg.Poss
 'Juan's house'
 b. puklla-na-y
 toy-?-1sg.Poss
 'my toy' (Baker 2005: (43))

Due to the reference–predication constraint, one cannot analyse these structures as the possessor being in the specifier of the noun and the noun agreeing with the possessor. The most elegant way of capturing constructions like (83) is to assume that there is another projection on top of the maximal projection of the noun. This higher projection both hosts the possessor in its specifier and agrees with the possessor. Baker, then, writes the following:

–*n*/–*y* here is not mere agreement, but rather an agreeing form of the possessive determiner, which is a distinct head syntactically. . . in Quechua the noun combines with the agreeing determiner to form a single word, just as the verb combines with the agreeing Infl to form a single word. (This can be accomplished by N to D movement, or an equivalent mechanism.)

Baker generalizes this conclusion to nominalized structures. In nominalizations, the nominalization head (i.e. N_{mn}l here) bears the referential index, which means that it cannot project a specifier and the subject is positioned in the specifier projected by DP. This is where my analysis in (81) is at odd with Baker (2005) and more crucially with Baker (2003).

There are two ways out of this conflict. The first is the following: I have proposed in section 4.1.3.3 that N_{mn}l is a composite category that is formed by N and T. I could assume that the referential index is borne by N in N_{mn}l while T in N_{mn}l projects the specifier and agrees with the subject. This option has some appeal considering that an infinitival clause, which does not have a DP layer and has N_{mn}lP as the only nominal

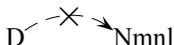
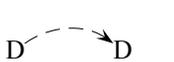
projection, can function as an argument and, hence, has to be able to bear a referential index, as well as, possibly, project a specifier should the PRO subject have to raise. The second way of avoiding the conflict (which is not mutually exclusive with the first) is to assume that the referential index in a nominalization could be borne by either one of the two nominal projections: D or N_{mn}l. Whichever head does not bear the referential index projects a specifier position.

The advantage of these solutions is to enable me to avoid conflict with Baker (2003). But the drawback is the consequence that they weaken the contribution of Baker (2005) as an argument for assuming a DP analysis for Turkish nominalizations. This is because there is no longer any necessity for the agreement marking to appear on D, or more generally, on a node other than N_{mn}l. However, Baker's analysis would still be valid for noun constructions like (83), where there is no composite category like N_{mn}l that could both bear a referential index and project a specifier.

One interesting consequence of this discussion is a parallelism between nominalizations and sentences. N_{mn}l projects a specifier for the subject and agrees with it. Furthermore, there is still good reason to assume that nominal agreement is associated with D⁰. The combination of these two ideas presents a derivation where the agreement features of N_{mn}l are derived from D. This establishes an interesting parallelism with the sentential domain where the agreement features of T are derived from C by feature inheritance (Chomsky to appear, 2005; see chapter 2 section 2.2.2.3 for discussion). In other words, the DP phase and the CP phase behave in parallel fashion with respect to φ -feature inheritance.

4.2.1.4 *Categorial incompatibility*

An important question that the analyses in (72) and (81) raises is why, for instance, in the second derivation in (72), D resists being jump-started by C. There is comparable resistance in (81) between N_{mn}l and D. In (84), I provide a schematized list of these configurations.

- (84) a. 
- b. 
- c. 
- d. 

Some aspects of the account of sensitivity effects in Turkmen I have advanced in section 4.1.3.3 may be adopted to provide an explanation for the effects in (84). Suppose, as above, that N_{mn}l is a composite category formed by the interlacing of N and T. N, by virtue of being a lexical category, rejects φ -features, but T can host them. So, T in N_{mn}l should be thought of as the receiver of φ -features. Then, the sensitivity between D and N_{mn}l in (84b) is reduced to a sensitivity between D and T. With this reduction, there seems to emerge a neat divide between categories. On the one hand, we have C and T, on the other, D. Neither party accepts φ -features from the other. This

looks to me like a sentential–nominal split. I express this in (85).

(85) *The Categorical Condition on Jump-start*

Jump-start proceeds from x to y only if x and y are either both sentential or both nominal.

This condition seems to be related to another categorial requirement that, according to Grimshaw (1991), underlies syntactic structure. In that work, Grimshaw advances the idea of ‘extended projection’, which involves an extended notion of an X-bar theoretic projection. In this theory of syntactic structure, noun-headed constituents and verb-headed constituents each form projections, which include the projection of their lexical heads and the functional layers above the lexical projection. The central hypothesis of Grimshaw (1991) is that the formation of such projections depends on identity of category: N and the functional heads which occur above it, such as D, have feature complexes which are all designated as [nominal]. Similarly, V and C have feature complexes designated as [verbal]. This categorial identity is what qualifies the projections in question as ‘extended’.³² From this perspective, (85) seems justifiable.

One important qualification needs to be made at this stage. Note that the structure of an action nominal involves syntactic categories of different types, i.e. D, which is nominal, and T/Nmnl and v , which are sentential (see for instance (72)). If there were sensitivity between these in an action nominal, it would never be possible to jump-start v and hence assign accusative to an object in this environment, contrary to fact. Then, there must be something that helps circumvent the categorial condition. I propose that this is head movement ((86)).

(86) *Facilitating circumstance for the categorial condition*

Head movement through a category lifts the categorial condition on that category.

Then, in an action nominal, the lexical verb moves to D⁰ passing through v^0 and T/Nmnl⁰. This helps override the categorial condition. I first demonstrated the importance of head movement in Jump-start in chapter 3 section 3.4.2, and invoked this idea again in section 4.1.1.2 of this chapter. The structure that is relevant here is entirely comparable to the structures discussed in section 4.1.1.2.

4.2.1.5 Case assignment to PRO

In the preceding discussion, I have intentionally left one issue vague. I have left open the question of which argument or arguments require case. I will now return to that.

³²One apparent exception to this idea is nominalizations, which involve a mixing of sentential and nominal projections. Grimshaw (1991) resolves this by proposing that nominalization heads (i.e. elements like Nmnl here) be taken as neutral between two categories. Thus, they may, in principle, form an extended projection with elements of more than one category. I cannot adopt this view here. This is because that would predict that there should be no sensitivity between D and Nmnl. That is simply not borne out. There is, however, a second option that Grimshaw mentions but does not pursue. This the possibility that nominalizations do not constitute a single extended projection, but nominal lexical heads with verbal complements. This is closer to my interlacing idea with the difference that it does not seem to assume a fusion of projections. It may be possible to reconcile my idea of interlacing with the idea of extended projection.

The picture in Turkmen is rather clear. Sensitivity effects can rather naturally be tied to case assignment to the object. The pattern in Turkish, however, is less easy to interpret. Due to its similarity to the Turkmen pattern, it seems clear to me that it can be pinned down to case assignment, but to which argument? The determining factor cannot be case assignment to the object in Turkish because sensitivity effects can be observed between intransitive subject nominals and their matrix domains ((87)).

- (87) a. [_{CP} [_{Inf} Sev-il-mek] Cem-i sevin-dir-di]
 [_{CP} [_{Inf} love-Pass-Inf] Cem-Acc rejoice-Caus-Past.3sg]
 ‘To be loved made Cem happy.’
- b. * [_{ANom} [_{Inf} sev-il-meğ]-in Cem-i sevin-dir-me-si]
 [_{ANom} [_{Inf} love-Pass-Inf]-Gen Cem-Acc rejoice-Caus-ANom-3sg]
 Lit. ‘To be loved’s making Cem happy’
- c. * [_{CP} [_{ANom} Sev-il-me] Cem-i sevin-dir-di]
 [_{CP} [_{ANom} love-Pass-ANom] Cem-Acc rejoice-Caus-Past.3sg]
 ‘Being loved made Cem happy.’
- d. [_{ANom} [_{ANom} sev-il-me]-nin Cem-i sevin-dir-me-si]
 [_{ANom} [_{ANom} love-Pass-ANom]-Gen Cem-Acc rejoice-Caus-ANom-3sg]
 Lit. ‘Being loved’s making Cem happy’

However, there is another argument in these subject nominals, the covert subject PRO. So, I claim here that sensitivity effects in Turkish are induced when Jump-start is triggered to license case to PRO. If the subject clause is transitive, a direct object it might contain may additionally be involved in this, by virtue of its accusative case requirement, without having any immediately observable effect on the pattern under consideration.³³

Generative literature on the case of PRO is divided. It has standardly been assumed since Chomsky (1981) that PRO is caseless.³⁴ Some recent proposals diverge from the standard account: Chomsky and Lasnik (1995) argue that PRO has a special case, ‘null case’, and works such as Sigurðsson (1991), Tóth (2000) and Landau (2004) argue that PRO is just like any other noun phrase with respect to case assignment. Let me present

³³Alternatively, it might be possible to account for the data in (87) by recourse to Legate (2003a). Legate first identifies evidence for the (strong) phasehood of a category from reconstruction effects, quantifier raising in antecedent-contained deletion, parasitic gaps and nuclear stress rule. The behavior of transitive *v*Ps with respect to these grammatical phenomena diagnose them as phases. Second, she shows that the diagnostic tests in question also identify passive and unaccusative *v*Ps as phases. Chomsky (2000, 106-107) states that elements lacking φ -features are not phase heads: “A phase is CP or *v*P, but not ... a verbal phrase headed by H lacking phi-features and therefore not entering into Case/agreement checking.” One strategy to reconcile this and the evidence that intransitive *v*Ps are also phases is to assume they also have φ -features. This is the strategy that Legate (2003b) adopts. Following this, it is possible to assume that an intransitive *v* is a receiver of φ -features as much as a transitive *v*. Then, in a passive subject nominal, PRO starts off in the complement position and the intransitive *v* is jump-started by the next functional head up. *v* probes, but as assumed above, PRO does not have case. This seems to imply that it does not enter into an Agree relation. Hence, the φ -features of intransitive *v* are valued by default. Default φ -feature valuing may also be thought to take place in subject nominals with inherently case-marked objects. This is the explanation that I provide for sensitivity effects in Keskin (to appear)

³⁴Alternative approaches to control, such as Hornstein (1999) assume that in non-obligatory control configurations, i.e. the non-finite subject nominals that are under discussion here, another covert category, *pro*, is present. This *pro* does not require case, like the PRO of the standard account. I will not adopt this account for reasons that should become clear during the discussion.

one argument from Sigurðsson (1991). Consider the examples in (88).

- (88) a. Strákarnir vonast til [að PRO vanta ekki alla í
the boys.Nom hope for [to PRO.Acc lack not all.Acc in
skólann].
the school]
'The boys hope not to be all absent from school.'
- b. Strákarnir vonast til [að PRO leiðast ekki öllum í skóla].
the boys.Nom hope for [to PRO.Dat bore not all.Dat in school]
'The boys hope not to be all bored in school.'
- c. Strákarnir vonast til [að PRO verða allra getið í
the boys.Nom hope for [to PRO.Gen be all.Gen mentioned in
ræðnnie].
the speech]
'The boys hope to be all mentioned in the speech.'

Here, we have the control verb *vona* 'hope' as the matrix verb. It selects infinitival complements with PRO subjects, as is standardly believed to be the case for control verbs. The embedded clauses are headed by predicates that take quirky subjects—subject that have cases other than the nominative. This is precisely why the quantifier *allur* 'all' associated with PRO is marked in various cases other than the nominative. Crucially, Sigurðsson shows that, in Icelandic, "any morphological case on a non-NP must be licensed by an identical NP case". In other words, the cases on *allur* must be licensed by a noun phrase, which cannot be the matrix subject, due to the difference in case. This implies that there must be a noun phrase in the embedded clause that licenses the case of *allur*. PRO is the only candidate in this environment. This suggests that PRO must have a case identical to the case of *allur* in all these examples, i.e. PRO has case. I will take a stance along with Sigurðsson (1991), Tóth (2000) and Landau (2004) for the Turkish examples in (70) and (87). PRO is the sole argument of the non-finite intransitive subjects nominals in (87). If sensitivity effects are about case assignment at all, (87) suggests it involves case assignment to PRO.³⁵ Then, I propose the following more general version of the sensitivity effect first formulated in (62) in section 4.1.3 ((89)):

- (89) *The Matrix–Embedded Clause Sensitivity Effect (final version)*
A non-finite subject nominal has restricted distribution as a subject if it contains a structural case requiring argument.

Note, however, the assumption about the case of PRO cannot be extended to Turkish. This is because in that language sensitivity effects revolve around case assignment to the object, seeming entirely immune to the effects of case assignment to PRO.

³⁵The conclusion as to the determining role of PRO in sensitivity effects in Turkish is corroborated by another fact: One can observe the same sensitivity effect pattern with subject nominals that have inherently case-marked objects or non-specific direct objects. Inherently case-marked objects and non-specific objects do not enter into Agree relations, hence do not receive structural case (see chapter 2 section 2.3), so one cannot attribute sensitivity effects to case assignment to these arguments. This leaves case assignment to PRO as the only possible factor determining sensitivity effects.

Then, in Turkmen, I have to assume that PRO is caseless in non-finite subject nominals. This does not seem to me, however, to be an issue of linguistic parametrization: Recall that the patterns I have presented during the discussion of *lik*-phrases and similar nominals in Turkish in section 4.1.1 are all linked to case assignment to the object in those nominals. The presence of PRO would be standardly assumed in the non-finite structures studied there. Then, in order to be able account for the relevant patterns, I have to assume that PRO does not require case in those structures either. Thus, there is no linguistic divide in whether PRO requires case or not, but possibly a partition that revolves around the syntactic environments that PRO may be found in.

The upshot of the foregoing discussion is the following: It is possible to explain the contrasts in (70) by recourse to the JuSH. Non-finite subject nominals are dependent on their matrix environments for case assignment to their null subjects. The functional category responsible for case assignment to subjects is typically T (see chapter 2 section 2.2.2.3). Then, it must be that T in the composite N_{nmnl} node of a non-finite subject nominal is dependent on a source of φ -features in the matrix clause. This is analogous to v being dependent on a higher v or C for case assignment to the object. Sensitivity effects arise selectively when φ -features are being transferred from the matrix to the embedded clause.

4.2.1.6 *The evidence*

I have provided preliminary evidence as to the probable cause of sensitivity effects in Turkish from the fact that the sensitivity effects in Turkmen are linked to accusative case assignment and the data suggesting a link to the absence of φ -features. In addition to these, there is some evidence in Azerbaijani and Turkish which supports the analysis I have advanced. The first piece of evidence is as follows: Sensitivity effects in South Azerbaijani constitute a bridge between Turkmen and Turkish sensitivity effects, suggesting that in all three languages sensitivity effects are a by-product of the same phenomenon. As sensitivity effects are triggered during case assignment in Turkmen, they must be triggered during case assignment in South Azerbaijani and Turkish. I present this in section 4.2.1.6.1. Second, action nominals come in two varieties, as complex event nominals and as simple event nominals (cf. Grimshaw 1990). The former take arguments and induce sensitivity effects, the latter do not take arguments and do not induce sensitivity effects. I present this evidence in section 4.2.1.6.2. Third, the locus of the problem and the relation that is involved in inducing the pattern in (70): Data shows that sensitivity effects disappear when subject nominals are finite, i.e. have agreement features. This role of agreement features suggests that the operation Agree is involved in the generation of sensitivity effects. There appear to be three theoretically possible phenomena that could play a role in non-finite subject nominals and involve Agree: First, PRO could be obligatorily controlled; second, tense features of the subject nominal could be interpreted relative to the tense of the matrix clause, i.e. sequence of tense; third, the objects in the subject nominal are assigned case. Data rules out the first two, consequently supporting the last. I present this evidence in section 4.2.1.6.3.

4.2.1.6.1 *Sensitivity effects in South Azerbaijani* South Azerbaijani, another Oghuz language, has two main kinds of non-finite nominalization, like other Oghuz languages: the infinitive *-mAK* and the non-finite action nominal *-mA*. Similarly to Turkmen and Turkish, non-finite nominalizations in this language show sensitivity effects. I will use the pattern of sensitivity effects in this language to argue for my account of sensitivity effects in Turkish that I have presented above. In particular, I will argue that the assumption that PRO requires case—which I have adopted for Turkish—is a plausible one.

The precise pattern of sensitivity effects in South Azerbaijani is different from the sensitivity effect pattern in both Turkmen and Turkish: A non-finite action nominalization cannot be a subject (of neither a sentence nor a nominal expression). I show this below in (90)–(95).

- (90) a. [Doçerxan-i tamir eyle-max] biz-i yor-di.
 [bicycle-Acc repair-Inf] 1pl-Acc make tired-Past.3sg
 ‘To repair the bicycle made us tired.’
 b. *[Doçerxan-i tamir eyle-ma] biz-i yor-di.
 [bicycle-Acc repair-ANom] 1pl-Acc make tired-Past.3sg
 ‘Repairing the bicycle made us tired.’
- (91) a. [[Doçerxan-i tamir eyle-mağ]-in zaman-i] gel-di.
 [[bicycle-Acc repair-Inf]-Gen time-3sg] come-Past.3sg
 ‘The time to repair the bicycle has come.’
 b. *[[Doçerxan-i tamir eyle-ma]-nin zaman-i] gel-di.
 [[bicycle-Acc repair-ANom]-Gen time-3sg] come-Past.3sg
 ‘The time for repairing the bicycle has come.’
- (92) a. [Kitap oxu-max] biz-i yor-di.
 [book read-Inf] 1pl-Acc make tired-Past.3sg
 ‘To read books made us tired.’
 b. *[Kitap oxu-ma] biz-i yor-di.
 [book read-ANom] 1pl-Acc make tired-Past.3sg
 ‘Reading books made us tired.’
- (93) a. [[Kitap oxu-mağ]-in zaman-i] gel-di.
 [[book read-Inf]-Gen time-3sg] come-Past.3sg
 ‘The time to read books has come.’
 b. *[[Kitap oxu-ma]-nin zaman-i] gel-di.
 [[book read-ANom]-Gen time-3sg] come-Past.3sg
 ‘The time for reading books has come.’
- (94) a. [Yuxla-max] güzel-dir.
 [sleep-Inf] nice-EpCop
 ‘To sleep is nice.’
 b. *[Yuxla-ma] güzel-dir.
 [sleep-ANom] nice-EpCop
 ‘Sleeping is nice.’

- (95) a. [[Yuxla-mağ]-in zaman-i] gel-di.
 [[sleep-Inf]-Gen time-3sg] come-Past.3sg
 ‘Time to sleep has come.’
- b. * [[Yuxla-ma]-nin zaman-i] gel-di.
 [[sleep-ANom]-Gen time-3sg] come-Past.3sg
 ‘Time for sleeping has come.’

I explain this distribution as follows: Recall that in Turkmen, an action nominal is barred from the subject position if it contains a structurally case-marked object, and in Turkish it cannot be the subject of a sentence regardless of its transitivity status (due to the presence of a PRO subject which requires structural case, as I have proposed). The pattern in (90)-(95) can be explained by blending these properties of Turkmen and Turkish. First, suppose that PRO requires case in South Azerbaijani, as I have assumed above for Turkish. Second, suppose also that the treatment of the action nominal in South Azerbaijani is the same as in Turkmen: An action nominal is barred from the subject position if it contains an argument that requires structural case, i.e. if it needs to be jump-started. The coupling of these two factors will yield a pattern where an action nominal will be barred from the subject position whenever it contains a PRO. Now crucially, the non-finite subject clauses in (90)-(95) would be standardly analysed as having PRO subjects. This would imply that a non-finite action nominal should be barred from the subject position as in (90)-(95).

Thus, South Azerbaijani, as a language that is in between Turkish and Turkmen in the Oghuz dialect continuum that extends from Gagauz in the west to Turkmen in the east, seems to combine some properties of Turkish, on the one hand, and Turkmen, on the other. The usefulness of my JuSH-based account and the assumption that PRO requires case in bringing out this feature of South Azerbaijani gives these some support.

4.2.1.6.2 *Complex and simple event nominals* sensitivity effects disappear with nominals that seem to be action nominalizations that do not take arguments. This suggests that sensitivity effects are related to an essential requirement of those arguments, case being the prime candidate.

Various eventive nominals can be derived by attaching the action nominal affix *-mA* to the verb roots, such as *okuma* ‘reading’, *betimleme* ‘description’, *tanımlama* ‘definition’, *kaplama* ‘covering’, etc., from *oku* ‘read’, *betimle* ‘describe’, *tanımla* ‘define’ and *kapla* ‘cover’, respectively. As I will demonstrate below, these nominals show the same behavior that simple event nominals (in the sense of Grimshaw 1990) do. The crucial property of simple event nominals is that they do not license arguments (Grimshaw 1990: 45).

Grimshaw (1990) focuses on argument taking properties of various kinds of nominals, such as derived nominals like *destruction*, *invention*, etc., and gerunds. Prima facie, these look as if they take arguments optionally. For instance, *invention* has a prepositional phrase argument in (96a), but no arguments in (96b).

- (96) a. [The invention of the internal combustion engine] contributed to the downfall of human civilization.
- b. [This invention] saved the earth from destruction.

However, Grimshaw shows that upon closer study, several differences surface between sentences like (96a), on the one hand, and sentences like (96b), on the other. Then, she concludes that what seems to be optionality of arguments in (96) only disguises fundamental differences in behaviour between what in reality are two separate classes of nominal: complex event nominals, which take arguments ((96b)), and simple event nominals, which do not ((96a)). Of the tests Grimshaw (1990: 54) uses to support her proposal, I adopt three to show that some action nominals, those mentioned immediately above, behave like simple event nominals and, so, do not have any arguments.³⁶

First, simple event nominals can be modified by demonstratives, indefinite articles, etc., whereas complex event nominals only allow modification by a definite determiner. In (97a) we see that when an action nominal is modified by a demonstrative, it cannot take an object. Second, complex event nominals cannot occur predicatively; simple event nominals can. In (97b), we see that an action nominal that functions as a predicate cannot take an object. Finally, complex event nominals allow control into a purpose clause; simple event nominals disallow it. A purpose clause is in principle possible in an action nominal, but in (97c) it is disallowed because the presence of the demonstrative enforces the simple event nominal reading.

- (97) a. [Bu [(*olgu-yu) tanımla-ma]]-nın modern
 [This [(*phenomenon-Acc) define-ANom]]-Gen modern
 mimarlığ-ın temel kavram-ları-nın doğuş-un-u
 architecture-Gen fundamental concept-pl-Gen birth-3sg-Acc
 sergile-me-si
 exhibit-ANom-3sg
 ‘The fact that this definition exhibits the birth of the fundamental concepts of modern architecture’
- b. Bu [kabul edilen bir (*olgu-yu) tanımla-ma]
 This [accepted one (*phenomenon-Acc) define-ANom]
 i-di.
 Cop-Past.3sg
 ‘This was an accepted definition.’
- c. [Bu [(*[derinlemesine bir bakış elde etmek için]
 [This [(*[to gain a deeper look]
 (*olgu-yu) tanımla-ma]]-nın modern mimarlığ-ın
 (*phenomenon-Acc) define-ANom]]-Gen modern architecture-Gen
 temel kavram-ları-nın doğuş-un-u sergile-me-si
 basic concept-pl-Gen birth-3sg-Acc exhibit-ANom-3sg
 ‘The fact that this definition (*to gain a deeper look) exhibits the birth of the fundamental concepts of modern architecture’

Then, we see that some action nominals do not take arguments. Note also that these nominals do not bear agreement morphology, just like the non-finite subject nominals involved in (70). So, we could substitute those non-finite subject nominals with the action nominals that do not take arguments and see what kind of a pattern that would

³⁶Incidentally, Grimshaw (1990: 56) notes that gerunds, which ‘normal’ action nominals can be compared to, behave like complex event nominals which do license arguments.

produce. If sensitivity effects are triggered in the process of case assignment, we would expect sensitivity effects to disappear with simple event nominals, because they lack the arguments to which case can be assigned. This seems to be correct: A simple event nominal can be the subject of a clause ((98))—while a non-finite action nominal which selects arguments cannot ((70c) and (87c)).

- (98) [Bu tanımla-ma] modern mimarlık-ın temel kavram-ları-nın
 [This define-ANom] modern architecture-Gen basic concept-pl-Gen
 doğ-uş-un-u sergile-yecek-tir.
 birth-3sg-Acc exhibit-Fut-EpCop
 ‘This definition will exhibit the birth of the fundamental concepts of modern architecture.’

I conclude from the foregoing discussion that sensitivity effects arise in the process of case assignment.

4.2.1.6.3 *Ruling out obligatory control and sequence of tense* Two relations that commonly obtain between a non-finite embedded clause and its matrix environment are obligatory control and sequence of tense. The presence of these relations might be the factors that induce the sensitivity effects in (70) rather than Jump-start. I will now argue against this.

Ruling out obligatory control. Consider (99):

- (99) I want [to go home].

This sentence is constituted of two clauses, a non-finite embedded clause and a finite main clause. There is a visible subject in the main clause, i.e. *I*. In the embedded clause, on the other hand, there is no visible subject, but there is intuitively a ‘goer’, an understood subject. As I have previously mentioned, these understood subjects have standardly been represented as PRO in generative literature. Often, PRO is interpreted as obligatorily coreferential with the subject of the matrix clause. In other words, the ‘wanter’ and the ‘goer’ are the same person in (99). Thus, we have (100) as the representation of (99), where coreferentiality is indicated by the use of indices.

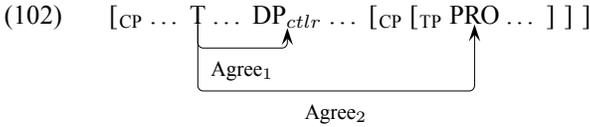
- (100) I_i want [PRO_{*i*} to go home].

Generative linguistic literature refers to this obligatory coreferentiality as obligatory control. The overt subject is said to control the understood subject. This type of control is distinguished from what is called non-obligatory control. In this type of control, coreferentiality is not imposed. In (101), for instance, the understood subject is not anyone in the matrix clause. In fact it is not even anyone in particular.

- (101) [PRO to steal the crown jewels and send them to Africa] might actually be a service to humanity.

Landau (1999) proposes a formalization of the obligatory control relation using the Agree operation. He proposes that in the Agree operation involved in obligatory con-

control the probe is the matrix functional head that agrees with the controller, e.g. T in (100). The goals are the controller and PRO. The functional head enters into two Agree relations, one with the controller and the other with PRO, as shown in (102).



PRO interpreted through non-obligatory control, on the other hand, is not licensed through a syntactic mechanism. It is a logophor, i.e. licensed by discourse factors such as focus, perspective and center of consciousness or communication (cf. Reinhart and Reuland 1993).

From this perspective, example (70a) above has the structure in (103), where there is a PRO in the non-finite subject nominal that indicates the understood agent of the action of mending the bike. The same analysis applies to all the other non-finite clauses in (70).

- (103) [PRO bisiklet-i onar-mak] Cem-i yor-du.
 [PRO bicycle-Acc mend-Inf] Cem-Acc tire-Past.3sg
 ‘To mend the bike made Cem tired.’

If the PRO in a non-finite subject nominal is obligatorily controlled by some other noun phrase in the matrix clause, and if that relation is established through an Agree relation that operates across the two domains, that may be what induces a sensitivity effect. If, on the other hand, this PRO is not obligatorily controlled by some other noun phrase in the matrix clause, there will be no control-based dependency obtaining between the matrix and the embedded domains which may be held responsible for sensitivity effects. Syntactic tests used to tease obligatory control and non-obligatory control apart show that the PRO in a non-finite subject nominal is not obligatorily controlled: This implies that sensitivity effects are not due to obligatory control. Let me now present these tests.

Arbitrary control involves cases where no argument in a sentence is interpreted as the controller of PRO. It is impossible in obligatory control, but possible in non-obligatory control. In (104a), PRO can only be interpreted as Cem. In (104b), on the other hand, PRO is not anyone in particular. This shows that the PRO in the non-finite subject clause (in (104b)) is not obligatorily controlled.

- (104) a. Cem_i [PRO_{i/*arb} kitap oku-mak] isti-yor.
 Cem_i [PRO_{i/*arb} book read-Inf] want-Prog.3sg
 ‘Cem wants to read a book.’

- b. [PRO_{arb} yanlarında sigara iç-mek] bebek-ler için
 [PRO_{arb} next to them cigarette smoke-Inf] baby-pl for
 zararlı-dır.
 harmful-EpCop
 ‘It is harmful for babies to smoke around them.’

Long-distance control is a control phenomenon where the controller is not an argument of the clause immediately containing the non-finite clause. It is impossible in obligatory control, but possible in non-obligatory control. In (105a), PRO cannot be interpreted as Deniz, which is two clauses above PRO, but only as Cem, which is in the next clause up from PRO. This interpretation is possible in (105b). This implies that the PRO in the non-finite subject clause (in (105b)) is not obligatorily controlled.

- (105) a. Deniz_i [Cem_j-in [PRO_{j/*i} kitap oku-mak] iste-diğ-in]-i
 Deniz_i [Cem_j-Gen [PRO_{j/*i} book read-Inf] want-FNom-3sg]-Acc
 söyle-di.
 say-Past.3sg
 ‘Deniz said that Cem wants to read a book.’
- b. Deniz_i [Cem_j-in [[PRO_{i/j} bisiklet-i onar-ma]-nın
 Deniz_i [Cem_j-Gen [[PRO_{i/j} bicycle-Acc mend-ANom]-Gen
 kendisin_{i/j}-i yor-acağ-in]-ı san-diğ-in]-ı
 him(self)_{i/j}-Acc tire-FNom-3sg]-Acc think-FNom-3sg]-Acc
 söyle-di.
 say-Past.3sg
 ‘Deniz said that Cem thought that mending the bike would make him tired.’

Another test involves sloppy versus strict reading of PRO. Sloppy identity is defined as follows (Kerstens et al. 2001):

[It] is an interpretive phenomenon found in deletion contexts. If part of a syntactic structure is not overtly realized, and has its interpretation determined as a copy of the interpretation of a constituent elsewhere in the structure or in the discourse, and if the structure whose interpretation is copied into the covert constituent contains an anaphoric element whose interpretation depends on an element not contained in the copied material, then the anaphor’s counterpart in the copy may either have the same reference as the original, or pick up an (anaphoric) reference independently. The former case is called “strict identity”, the latter case “sloppy identity”.

Strict reading of PRO is impossible in obligatory control, possible in non-obligatory control. Thus, in (106a) PRO in the deleted string (whose subject is Deniz) must be interpreted as controlled by Deniz. This is a sloppy reading: The deleted segment is interpreted as a copy of the overt material *kitap okumak istiyor* ‘wants to read a book’, but the interpretation of PRO is not the same as that in the overt material. The strict reading whereby PRO in the deleted segment would be interpreted as being controlled by Cem is impossible, i.e. Deniz does not want Cem to read. In contrast to this,

precisely this is among the possibilities in (106b): Deniz might be thinking that it is difficult *for Cem* to look after himself. Once again, the PRO in the non-finite subject clause (in (106b)) is not obligatorily controlled.

- (106) a. Cem [PRO kitap oku-mak] isti-yor, Deniz de.
 Cem [PRO book read-Inf] want-Prog.3sg Deniz too
 ‘Cem wants to read a book, Deniz too.’
- b. Cem [[PRO kendin-e bak-ma]-nın zor ol-acağ-ın
 Cem [[PRO himself-Dat look-ANom]-Gen difficult be-FNom-3sg
]-ı düşün-üyor, Deniz de.
]-Acc think-Prog.3sg Deniz too
 ‘Cem thinks that looking after himself will be difficult, Deniz too.’

So to repeat, in all the (b) examples in (104)-(106) where PRO is in a non-finite subject nominal, PRO is not obligatorily controlled. Now, note that sensitivity effects can be observed in all these examples, as shown in (107).

- (107) a. *[PRO_{arb} yanlarında sigara iç-me] bebek-ler için
 [PRO_{arb} next to them cigarette smoke-ANom] baby-pl for
 zararlı-dır.
 harmful-EpCop
 ‘It is harmful for babies to smoke around them.’
- b. *Cem_i [Deniz_j-in [[PRO_{i/j} bisiklet-i onar-mağ]-ın
 Cem_i [Deniz_j-Gen [[PRO_{i/j} bicycle-Acc mend-Inf]-Gen
 kendisin_{i/j}-i yor-acag-ın]-ı san-dığ-ın]-ı
 him_{i/j}-Acc tire-FNom-3sg]-Acc think-FNom-3sg]-Acc
 söyle-di.
 say-Past.3sg
 ‘Cem said that Deniz thought that to mend the bike would make him tired.’
- c. *Cem [[PRO kendin-e bak-mağ]-ın zor ol-acağ-ın]-ı
 Cem [[PRO himself-Dat look-Inf]-Gen difficult be-FNom-3sg]-Acc
 düşün-üyor, Deniz de.
 think-Prog.3sg Deniz too
 ‘Cem think that to look after himself will be difficult, Deniz too.’

An infinitival subject clause and a non-finite action nominal are not interchangeable here, just like in (70): A non-finite action nominal cannot be the subject of a sentence ((107a)) and an infinitival clause the subject of a nominalization ((107b)-(107c)).

The conclusion to be drawn from this discussion is that sensitivity effects are not due to obligatory control. I should note, however, that this does not imply that control is entirely orthogonal to sensitivity effects. As we will see in the appendix at the end of this chapter, obligatory control is linked to sensitivity effects, although not in inducing it but in neutralizing it.

Ruling out sequence of tense. Non-finite nominals such as those in (70), are not inflected for tense but they do seem to have a tense specification of some sort. In the

most common cases, they are interpreted in relation to the tense of the matrix clause. In other words, they are not independently tensed. The temporal modifiers that they allow show this ((108)).

- (108) a. [[[Dün / *Yarın bisiklet-i onar-ma]-nın
 [[[Yesterday / *Tomorrow bicycle-Acc mend-ANom]-Gen
 kendi-sin-e t_i o an ver-diğ-i] yorgunluğ_i]-u
 self-3sg-Dat t_i that instant give-NSR.Past-3sg] tiredness]-Acc
 Deniz anca yarın at-acak.
 Deniz only tomorrow throw-Fut.3sg
 ‘Only tomorrow will Deniz get over the tiredness that mending the bike
 yesterday gave him that instant.’
- b. [[[Yarın / *Dün bisiklet-i onar-ma]-nın
 [[[Tomorrow / *Yesterday bicycle-Acc mend-ANom]-Gen
 kendi-sin-e t_i o an ver-eceğ-i] yorgunluk_i]-tan Deniz
 self-3sg-Dat t_i that instant give-NSR.Fut-3sg] tiredness]-Abl Deniz
 şimdiden kork-tu.
 already fear-Past.3sg
 ‘Deniz already fears the tiredness that mending the bike tomorrow will
 give him at that instant.’

In (108a), there are two tensed clauses: the relative clause headed by *ver* ‘give’ that has past tense and the main clause headed by *at* ‘throw’ that has future tense. The temporal modifiers that the non-finite subject clause headed by *onar* ‘mend’ allows show that the tense specification of this clause is the same as that of the clause that immediately contains it, namely the relative clause. Example (108b) shows that when the relative clause and the main clause exchange their tense properties, so to speak, the temporal modifiers in the non-finite clause have to change to match the tense of the relative clause.

These observations can be subsumed under the phenomenon of sequence of tense. Sequence of tense refers to the interpretation of tenses in embedded clauses with respect to the tenses in matrix clauses. For instance, one could think of (109a) as a paraphrase of ‘John said “Mary is pregnant”.’ In other words, the past tense in the embedded clause can be interpreted as simultaneous with the past tense in the matrix clause. Compare this with (109b), where the only available reading is one where the winning occurs before John’s taking about it.

- (109) a. John said that Mary was pregnant.
 b. John said that Mary won the race.

There are two ways of capturing this behaviour with a formalism: Replacing the value of the embedded tense with the value of the matrix tense (cf. Ladusaw 1977; Comrie 1986), or deleting the embedded tense so that it is interpreted as simultaneous to the matrix tense (cf. Ogihara 1989; von Stechow 2003) (explanation and examples from Khomitsevich 2007).

Now, von Stechow’s (2003) implementation relies crucially on feature agreement—including the agreement in φ -features—between the locus of the embedded tense fea-

ture that is being deleted and the locus of matrix tense. Furthermore, he proposes that infinitives have present tense by default. This would mean that, in (70), present tense will be deleted in the non-finite subject nominals to obtain a reading of tense that matches the matrix clause. From this perspective, one may conjecture that the fact that the subject nominals in (108) lack φ -features would necessitate the importation of φ -features, presumably from the matrix clause, so that this sequence of tense mechanism can work. This might be inducing the sensitivity effects in (70).³⁷

We can rule out this option by showing that sensitivity effects obtain even with clauses that are simply not interpreted for tense, or better yet, with clauses that do not have relative but indexical/absolute tenses. An indexical tense must be interpreted with respect to utterance time, the point in time at which the sentence is uttered, and may not be interpreted as relative to the matrix tense, meaning that sequence of tense cannot be applying there.

I show in example (110) that sensitivity effects obtain even with clauses that are not interpreted for tense.

- (110) a. [[(*yarın / *dün / *bugün) uzay-ın öbür uc-un-a
 [[(*tomorrow / *yesterday / *today) space-Gen other end-3sg-Dat
 git-me]-nin insan-ın akıl sağlığın-a tesir-i]
 go-ANom]-Gen human-Gen mental health-Dat effect-3sg]
 Turist Ömer dünyaya dönünce ortaya çıkacak.
 when Tourist Ömer returns to Earth will be revealed
 ‘The effect of going to the other end of space on the mental health of
 humans will be revealed when Tourist Ömer returns to Earth.’
- b. *[[uzay-ın öbür uc-un-a git-meğ]-in insan-ın
 [[space-Gen other end-3sg-Dat go-Inf]-Gen human-Gen
 akıl sağlığın-a tesir-i] Turist Ömer dünyaya dönünce
 mental health-Dat effect-3sg] when Tourist Ömer returns to Earth
 ortaya çıkacak.
 will be revealed
 ‘The effect of going to the other end of space on the mental health of
 humans will be revealed when Tourist Ömer returns to Earth.’

In (110a), the non-finite action nominal is the subject of another nominal (a VNC) headed by *tesir* ‘effect’. The non-finite action nominal disallows temporal modifiers, suggesting that it has no tense features. Example (110b) shows that it is not possible to replace that action nominal with an infinitive, an instance of the sensitivity effect between infinitives as nominal domains. This shows the independence of this sensitivity effect from tense.

Example (111) which involves a non-finite clause with indexical tense is more complicated.

³⁷This was pointed out to me by Øystein Nilsen.

- (111) [İklim-in iki gün önce-ki [gelecek yüzyıl ortalama üç derece
 [climate-Gen two day before-Rel [next century on average three degree
 ısın-ma/*-mak] ihtimal-i] bugün-kü-nün yarısı
 warm up-ANom/*-Inf] probability-3sg] today-Rel-Gen half-3sg
 kadar-dı.
 as much-Past.3sg
 ‘The probability two days ago that climate will be on average three degrees
 warmer next century was half as much as today.’

Here, we have a complex nominal expression as the subject of a sentence. The lexical head of this nominal, *ihtimal* ‘probability’, has as complement a non-finite action nominal headed by *ısın* ‘warm up’. The tense of this non-finite action nominal is future, as brought out by the temporal adverbial *gelecek yüzyıl* ‘next century’. To show that this future tense is indexical, I need to show its behaviour in the environment of a higher tense. This higher tense is the tense of *ihtimal*: Note that even though it is a noun, *ihtimal* allows temporal modifiers such as *iki gün önceki* ‘two days ago’.³⁸ Now crucially, first, the tense of the action nominal is interpreted to be one hundred years from *the utterance time* and not one hundred years from two days ago, the time of *ihtimal*. This means that the tense of the action nominal is indexical/absolute. Second, it is impossible to have an infinitive in place of this non-finite action nominal complement, an instance of the sensitivity effect between an infinitive and a nominal environment. Then, given that sensitivity effects obtain within this complex nominal between two domains that are not related temporally, I conclude that sensitivity effects cannot be due to sequence of tense.

I conclude from the foregoing discussion that the two relations that commonly obtain between a non-finite embedded clause and its matrix environment, namely obligatory control and sequence of tense, cannot be the factors that induce the sensitivity effects in (70). This leaves a JuSH-based account of the pattern in (70) as the only explanation.

4.2.1.7 Conclusion

In this section, I have shown that the sensitivity effects seen in Turkmen subject clauses have analogues in Turkish and South Azerbaijani. In all three languages, the distribution of non-finite clauses is restricted. I have explained this restricted distribution by using a JuSH-based account, where the presence of an argument that needs structural case in a non-finite subject nominal is given a central role. The differences between the distribution of subject clauses in the three languages may be attributed to which argument requires case (PRO or the direct object) and the nominal nature of nominalization heads (in Turkmen and South Azerbaijani) or a categorial compatibility condition (in Turkish).

³⁸The fact that nouns can be modified by temporal modifiers and may even take tense markers is a subject that has attracted considerable attention in linguistic literature. I refer the reader to Enç (1986) and Lecarme (1996, 2004) for discussion.

4.2.2 Non-restructuring infinitival complements

In section 4.1.2, I have proposed an analysis of a pattern of data produced by passivizing restructuring verbs with infinitival complement clauses. The pattern was the following: When the matrix verb selects a low infinitival clause (i.e. one that is inside the verb phrase), the passivization of the matrix verb yields a marginally acceptable sentence if there is an accusative object inside the embedded clause. On the other hand, when the matrix verb selects a high infinitival clause (i.e. one that is outside the verb phrase), the passivization of the matrix verb does not effect the grammaticality status of the sentence. I have called this the passivization effect ((45)). I have argued that the passivization effect is brought about by the interplay of the defectiveness of the embedded *v*, accusative case assignment to the object and the accessibility of φ -features found on some functional head in the matrix clause. In other words, I have explained the effect in question by invoking the JuSH. There is another set of Turkish data that exhibits a pattern reminiscent of the passivization effect and, hence, that could be explained by applying the JuSH, with some auxiliary premises. This is what I turn to next.

4.2.2.1 The core data

Consider the data in (112)-(113).

- (112) a. Doktor-lar başı ağrıyanlara [Novalgin iç-meğ]-i
 doctor-pl to those who have a headache [Novalgin drink-Inf]-Acc
 öner-iyor.
 recommend-Prog.3sg
 ‘Doctors recommend people who have a headache to take Novalgin.’
- b.?(?)Başı ağrıyanlara (doktorlar tarafından) [Novalgin
 to those who have a headache (by doctors) [Novalgin
 iç-mek] öner-il-iyor.
 drink-Inf] recommend-Pass-Prog.3sg
 ‘People who have a headache are recommended (by doctors) to take
 Novalgin.’
- (113) a. Politikacı-lar kesinlikle [insan-lar-ın duygu-lar-ın-a hitap
 politician-pl definitely [people-pl-Gen feeling-pl-3sg-Dat address
 et-meğ]-i yeğli-yor.
 do-Inf]-Acc prefer-Prog.3sg
 ‘Politicians definitely prefer to address people’s feelings.’
- b.?(?)(Politikacı-lar tarafından) kesinlikle [insan-lar-ın
 (by politicians) definitely [people-pl-Gen
 duygu-lar-ın-a hitap et-mek] yeğle-n-iyor.
 feeling-pl-3sg-Dat address do-Inf] prefer-Pass-Prog.3sg
 ‘It is definitely preferred (by politicians) to address the feeling’s of peo-
 ple.’

Here, we have the non-restructuring verbs *öner* ‘suggest’ and *yeğle* ‘prefer’ taking infinitival complements. In (112b) and (113b), the matrix verbs are passivized, yielding

marginal sentences. Compare these examples with the sentences in (37). In (37), passivization was unproblematic so long as the object in the embedded sentence is not marked in accusative case. In contrast to those examples, here, when the matrix verbs are passivized, the sentences become degraded regardless of the case assigned to the object. In (112b), the embedded verb selects a bare direct object (*Novalgin*), and in (113b) a dative object (*insanların duygularına* ‘people’s feelings’). In fact, even an infinitival complement clause headed by an intransitive verb is bad in such a sentence ((114)).

- (114) a. Doktor-lar başı ağrıyanlara [uyu-mağ]-ı
 doctor-pl to those who have a headache [sleep-Inf]-Acc
 öner-iyor.
 recommend-Prog.3sg
 ‘Doctors recommend people who have a headache to sleep.’
- b.?(?)Başı ağrıyanlara (doktorlar tarafından) [uyu-mak]
 to those who have a headache (by doctors) [sleep-Inf]
 öner-il-iyor.
 recommend-Pass-Prog.3sg
 ‘People who have a headache are recommended (by doctors) to take Novalgin.’

There is an important similarity between (37) and the present examples: In all these cases the embedded clause is inside the verb phrase. Example (115) (versus (112b)) shows that nothing can intervene between the complement clause and the verb. This suggests that the complement clause has not left its base position, i.e. the sister of V^0 .

- (115) *Başı ağrıyanlara [Novalgin iç-mek] (doktorlar tarafından)
 to those who have a headache [Novalgin drink-Inf] (by doctors)
 öner-il-iyor.
 recommend-Pass-Prog.3sg
 ‘People who have a headache are recommended (by doctors) to take Novalgin.’

The same thing is shown by the positioning of the adverb *kesinlikle* in (116) (versus (113b)).

- (116) *(Politikacı-lar tarafından) [insan-lar-ın duygu-lar-ın-a hitap
 (by politicians) [people-pl-Gen feeling-pl-3sg-Dat address
 et-mek] kesinlikle yeğle-n-iyor.
 do-Inf] definitely prefer-Pass-Prog.3sg
 ‘It is definitely preferred (by politicians) to address the feeling’s of people.’

Recall that (37) has an important counterpart, namely (44). In those examples, passivization of the matrix verb has no effect on grammaticality, and crucially, the infinitival clause is outside the verb phrase. In a parallel fashion, the examples in (112)-(113) have counterparts that are similar to (44). These are in (117)-(118).

- (117) a. Amerikalı-lar [McCain-e oy ver-mek]-ten hemen
 American-pl [McCain-Dat vote give-Inf]-Abl immediately
 vazgeç-ti.
 give up-Past.3sg
 ‘The Americans immediately decided not to vote for McCain.’
- b. [McCain-e oy ver-mek]-ten hemen vazgeç-il-di.
 [McCain-Dat vote give-Inf]-Abl immediately give up-Pass-Past.3sg
 ‘It was immediately decided not to vote for McCain.’
- (118) a. Amerikalı-lar [Obama-ya oy ver-mek]-te hiç acele
 American-pl [Obama-Dat vote give-Inf]-Loc never haste
 et-me-meli-dir.
 do-Neg-Nec-EpCop
 ‘The Americans should never rush to vote for Obama.’
- b. [Obama-ya oy ver-mek]-te hiç acele ed-il-me-meli-dir.
 [Obama-Dat vote give-Inf]-Loc never haste do-Pass-Neg-Nec-EpCop
 ‘It should never be rushed to vote for Obama.’

Just like in (44), these sentences allow the matrix verbs to be passivized without any adverse effects on grammaticality ((117b)-(118b)). Furthermore, as in (44), the infinitival complements are positioned outside the verb phrase: They are to the left of the verb phrase adverbs, *hemen* ‘immediately’ and *hiç* ‘never’.³⁹

I can explain the pattern in (112)-(113) and (117)-(118) elegantly using my theory. To be able to do that, first, I will assume, as I have done above in section 4.2.1.5, that PRO requires case. Second, I need to revise an assumption that I have previously adopted: In section 4.1.2, I have assumed, following usual practice, that a PRO subject is present in non-finite embedded clauses (of the relevant type). Now, in the light of my assumption about the case of PRO, it is quite surprising that the phenomenon discussed in that section should revolve around the case of the object and not the case of PRO. In other words, if PRO is found in all restructuring infinitival clauses and if PRO does require case, why does a sentence involving a restructuring infinitive not become degraded whenever the matrix verb is passivized, but only in the presence of an accusative embedded object? It is as if the derivation is immune to the effects of the case requirement of PRO in a restructuring configuration. To my benefit, the assumption that PRO is present in restructuring infinitives is debatable. I will now present some of the arguments advanced by Wurmbrand (2001) to support the thesis that restructuring infinitives lack PRO subjects.⁴⁰

³⁹There are some non-restructuring verbs, such as *yasakla* ‘prohibit’, which take accusative-marked infinitival clauses like those in (112) and (113), but do allow passivization. It seems that these verbs allow the infinitival clause to raise to the subject position when passivized, creating a configuration comparable to those in (117) and (118), in terms of complement clause ‘height’. The non-restructuring verbs that prevent the embedded clause from raising to subject under passivization seem to be reduced non-restructuring verbs, while the others full non-restructuring verbs. (See Wurmbrand 2001:265 ff. for a discussion of the grades of (non-)restructuring.)

⁴⁰I refer the reader to Wurmbrand (2001: 246 ff.) for a theory of control that accounts for the interpretation of understood subjects in the absence of syntactic PRO subjects.

4.2.2.2 The distribution of PRO

Wurmbrand (2001) proposes that non-restructuring control infinitives have (covert) subjects (represented as PRO), whereas restructuring infinitives do not. One of the arguments Wurmbrand uses to argue for her position is from binding. Binding is a relation in which the reference of a certain element (such as the anaphor *himself*) is dependent on the reference of another element, the antecedent. In (119), for instance, *himself* has to refer to *Cem* and not, say, another male person, *John*.⁴¹

(119) Cem_i saw himself_{i/*j} in the mirror.

A defining property of anaphors is that they must be bound. Thus, they require a suitable antecedent for the binding relation to occur. Wurmbrand shows that in German, the implicit agent of a passive cannot be a suitable antecedent for a reflexive pronoun ((120)).

- (120) a. Frederik hat sich ein Haus gekauft.
 Frederic has self a house bought
 ‘Frederic bought himself a house.
 b. Ein haus wurde (*zich) gekauft.
 A house was (*self) bought
 ‘A house was bought (*oneself)

In (120a), the anaphor *sich* ‘(him)self’ is bound by *Frederik*. When this sentence is passivized, as in (120b), *Frederik* becomes the implicit agent of the passive and can no longer bind *sich*.

A clear and important contrast emerges at this point between restructuring ((121a)) and non-restructuring ((121b)) infinitival clauses.

- (121) a. *weil {sich} der Fisch {sich} vorzustellen versucht wurde.
 since {self} the fish-Nom {self} to imagine tried was
 ‘since they tried to recall the image of the fish’
 b. Es wurde beschlossen PRO_i sich_i den Fisch mit Streifen
 it was decided PRO_i self_i the fish with stripes-Acc
 vorzustellen.
 to imagine
 ‘They decided to imagine what the fish would look like with stripes.’

Example (121a) is a complex sentence with the restructuring verb *versuchen* ‘try’ heading the main clause and *sich vorstellen* ‘imagine’ heading the non-finite embedded clause. *Sich vorstellen* is an inherently reflexive verb. The reflexive pronoun *sich* that forms part of the verb must be bound. Thus, (121a) is ungrammatical in a way that is comparable to (120b). The implicit agent of the passive fails to bind *sich* and there is no other suitable antecedent noun phrase in the sentence. In contrast, passivizing a non-restructuring matrix verb, such as *beschließen* ‘decide’ in (121b), that selects a non-finite embedded clause headed by *sich vorstellen* does not produce an ungrammatical result. It must be that there is a suitable antecedent in this sentence to bind *sich*.

⁴¹In syntactic notation, The coreference between these two elements is usually indicated by co-indexation.

Wurmbrand proposes that this antecedent is the covert subject of the infinitival clause, PRO. The restructuring infinitival clause in (121a) must then lack a PRO subject.

The same effects are possible to replicate in Turkish. As in German, implicit agents of passives do not make good antecedents ((122)).

- (122) a. Cem kendin-e bir ev al-dı.
Cem self.3sg-Dat a house buy-Past.3sg
'Cem bought himself a house.'
b. *Kendin-e bir ev al-ın-dı.
self.3sg-Dat a house buy-Pass-Past.3sg
'A house was bought himself.'

Furthermore, the contrast observed in German in (121) can also be seen in Turkish, albeit in a less pronounced way ((123)).⁴²

- (123) a. ?Toplantı sırasında öncelikle [birbirin-e rest çek-mek
As a first priority during the meeting [each other-Dat stake it all-Inf
]-ten vazgeç-il-di.
]-Abl give up-Pass-Past.3sg
Lit. 'As a first priority during the meeting, it was stopped staking it
all against each other (i.e. setting forth their opinion to each other in
uncompromising terms).'
- b. *??Toplantı başlar başlamaz [birbirin-e rest çek-meğ]-e
As soon as the meeting started [each other-Dat stake it all-Inf]-Dat
çalış-il-di.
try-Pass-Past.3sg
Lit. 'As soon as the meeting started, it was tried staking it all against
each other (i.e. setting forth their opinion to each other in uncompro-
mising terms).'

Example (123a) involves an infinitival clause selected by the non-restructuring verb *vazgeç* 'give up'. Passivizing the matrix verb has a minimal effect on the grammaticality of the sentence.⁴³ Example (123b), by contrast, is a restructuring environment, with *çalış* 'try' as matrix verb. Passivizing *çalış* makes the sentence ungrammatical. This

⁴²It is important to note that a non-generic context be chosen to demonstrate these effects (Wurmbrand 2001). In generic contexts, implicit agents can be antecedents to some degree ((i)).

- (i) a. (??)En zor zamanlarda bile kendin-e özen göster-il-meli-dir.
Even in the most difficult of times self.3sg-Dat care show-Pass-Nec-EpCop
'One must take care of oneself even in the most difficult of times.'
b. (??)Olaylar çığırından çıktığında bile kendin-e hâkim ol-un-malıdır.
Even when events get out of control self.3sg-Dat control be-Pass-Nec-EpCop
'One must be in control of oneself even when events get out of control.'

This has the effect that reflexives are not always totally ungrammatical in passive sentences with non-finite complement clauses, due possibly to 'leakage' from a generic interpretation. This in turn decreases the contrasts that obtain between restructuring non-restructuring environments.

⁴³(123a) is slightly degraded seemingly because PRO has a third person feature. Consider the following contrast ((i)):

pattern is analogous to that seen in (121). Then, I conclude that Wurmbrand's proposal also applies to Turkish: While there is a PRO in non-restructuring infinitival clauses, restructuring infinitival clauses lack PRO.

To sum up, when sentences with non-restructuring infinitival complements are passivized, they exhibit a pattern analogous to the pattern produced when sentences with restructuring infinitival complements are passivized. The differences in the two cases arises from the fact that the pattern in a restructuring environment is influenced by the case requirements of direct objects, whereas in a non-restructuring environment comparable influence is exerted by the case requirements of PRO. This implies that the effects of passivizing the matrix verb in both environments can be subsumed under the same heading. So, in the light of the preceding discussion, I will revise the passivization effect that I have formulated in (45) to subsume (112)-(113) and (117)-(118). This re-worked version is given in (124).

(124) *The Passivization Effect on Infinitival Complements (final version)*

A passive sentence with a low infinitival complement has reduced grammaticality, if this complement contains a structurally case-marked argument.

Then, as with restructuring infinitives, I can explain the pattern induced in non-restructuring infinitives by recourse to the JuSH and its implementation, the Jump-start operation. This is what I turn to next.

4.2.2.3 *Jump-starting subject case assignment*

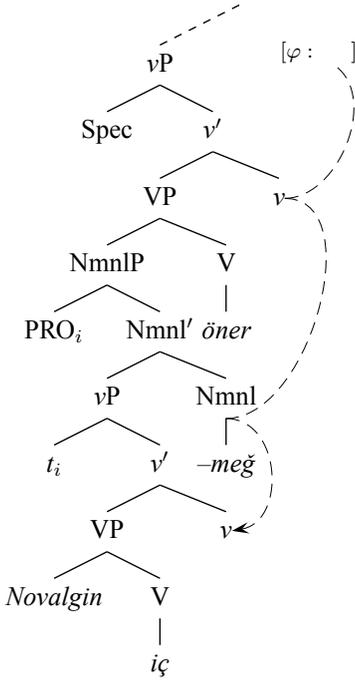
Now, suppose that the functional head that assigns case to the subject is defective, just like the functional head that assigns case to the object. A non-finite clause does not have any local φ -features so it will have to import them from the matrix clause, if structural case is to be assigned to a subject noun phrase (or a direct object, for that matter). Under these assumptions, the derivations of (112a)-(113a) versus (112b)-(113b) would be as in (125).

-
- (i) a. ?[PRO_i kendin_i-i öv-mek] Cem_i-in vazgeç-e-me-diğ-i birşey-dir.
 [PRO_i self.3sg_i-Acc praise-Inf] Cem-Gen give up-Abil-Neg-NSR-3sg something-EpCop
 'Praising himself is something that Cem cannot give up.'
- b. [PRO_i kendi_i-m-i öv-mek] ben-im vazgeç-e-me-diğ-im birşey-dir.
 [PRO_i self_i-1sg-Acc praise-Inf] 1sg_i-Gen give up-Abil-Neg-NSR-1sg something-EpCop
 'Praising myself is something that I cannot give up.'

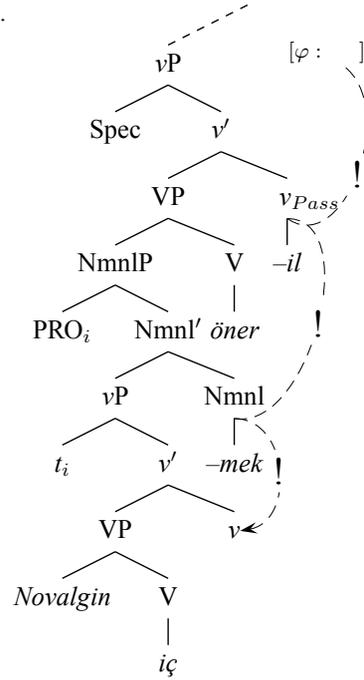
Only an antecedent with the same person and number (and gender) features can bind a reflexive. This suggests that PRO has third person singular features in (ia) and first person singular features in (ib). And the control of the third person PRO yields a slightly degraded outcome.

(125)

a.



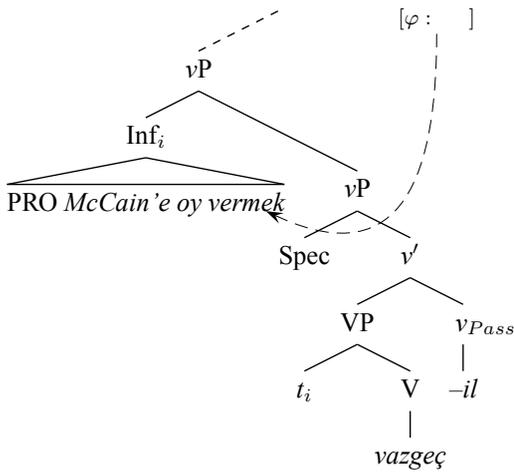
b.



As shown in the first diagram in (125), when the matrix verb is active in (112a)-(113a), φ -features can trickle down, as it were, from C^0 in the matrix clause down to the functional head that assigns case to PRO, namely $NmnI^0$, passing through each functional head on the way. When the matrix clause is passivized, however, as in (112b)-(113b), the matrix v which is now passive, hampers the passage of φ -features. I show this in the second diagram in (125). This yields the outcome that $NmnI^0$ receives its φ -features at a cost, so to speak, and the sentence will be degraded. This, mutatis mutandis, is essentially the same explanation as the one I have provided for the pattern in (37). There the pattern revolved around case assignment to the object because there is no PRO, here it revolves around the subject.

In (117)-(118), by contrast, case assignment to PRO is unaffected, as schematized in (126).

(126)



The non-finite clause is above the vP , judging from its positioning to the left of the adverbs *hemen* and *hiç*. Thus, passivized v cannot prevent the non-finite clause from obtaining φ -features from the matrix clause, and PRO receives its case. This is, in turn, *mutatis mutandis*, the explanation provided for (44).

4.2.2.4 Non-finite complements of verbal nouns

In chapter 3, I showed that non-finite VNCs disallow accusative case assignment ((127)).

- (127) *[Anadolu-yu mahv] Moğol-lar-ı tatmin et-me-di.
 [Anatolia-Acc devastation] Mongol-pl-Acc satisfaction do-Neg-Past.3.g
 Lit. 'The devastation Anatolia did not satisfy the Mongols.'

This is an instance of the non-finiteness effect brought up in section 4.1.1. In chapter 3 section 3.4.2.2.1, I have argued that the badness of accusative case in a non-finite VNC is due to the blocking effect of $Pred^0$ on Jump-start.

There is a prediction that can be derived from this explanation. Now, there are some VNCs that select infinitival complements. Under my theory, we would expect that an effect similar to the passivization effect ((124)) should be seen in these environments: They should be ungrammatical when the VNC is non-finite. This is because $Pred^0$ would block the importing of φ -features into the embedded infinitival complement. (This, in turn, is due to the lack of head movement that connects the non-finite VNC and the source of φ -features in the matrix, thereby eliminating the blocking effect of $Pred^0$.) As a result, no noun phrase that requires case could receive it, particularly PRO within the context of the present section. This prediction is borne out. Consider (128).

- (128) a. [Cem-in [PRO olay-in intikam-ın-ı al-mağ]-a
 [Cem-Gen [PRO incident-Gen revenge-3sg-Acc take-Inf]-Dat
 yemin-i] polisi alarma geçirdi.
 oath-3sg] alarmed the police.
 'Cem's oath to take revenge of the incident alarmed the police.'

- b. *[[PRO olay-in intikam-in-ı al-mağ]-a yemin]
 [[PRO incident-Gen revenge-3sg-Acc take-Inf]-Dat oath]
 Cemi hapse götürdü.
 sent Cem to jail.
 ‘The oath to take revenge of the incident sent Cem to jail.’
- c. *[[PRO adam öldür-meğ]-e yemin] insanı hapse götürür.
 [[PRO man kill-Inf]-Dat oath] would send a person to jail.
 ‘The oath to kill a man would send a person to jail.’

In (128a), the VNC is finite (see the agreement marker on the VN *yemin* ‘oath’). Head movement connects the VN and the local source of φ -features, namely D, passing through Pred. Thanks to this, Pred does not block Jump-start, and φ -features can be imported into the infinitival complement clause from D. PRO, as well as the direct object *olayın intikamı* ‘revenge of the incident’, can thus be assigned case. In (128b) and (128c), however, the VNC is non-finite (note the lack of an agreement marker on *yemin*). The structure is ungrammatical regardless of whether the direct object needs accusative case or not. This is because of the presence of PRO which also requires structural case (independently of whether the object requires structural case or not). Due to the blocking effect of Pred, φ -features cannot be brought in to assign case to PRO. This is analogous to the case of non-restructuring infinitives discussed in this section, with the difference that the blocking category in this instance is Pred. Pred apparently induces a more pronounced blocking effect on Jump-start than passive *v*, resulting in sharper contrasts in (128) than those that obtain in (112)–(113) between active–passive pairs.

The only acceptable examples of these structures that I could construct involve adjuncts ((129)). In other words, they are simply not good in argument positions.

- (129) Cem [[cumhurbaşkanın-ı öldür-meğ]-e teşebbüs]-ten
 Cem [[president of the republic-Acc kill-Inf]-Dat attempt]-Abl
 tutuklandı.
 was arrested
 Lit. ‘Cem was arrested for attempt to kill the president of the republic.’

My guess is that the reason these structures are good as adjuncts is because of a possible obligatory control relation into the non-finite complement of the VNC. As I show in the appendix to this chapter, the presence of an obligatory control relation eliminates categorial condition effects. It might also have a similar effect on the blocking effect induced by a syntactic head. This implies that, in the subject and object positions, VNCs with non-finite complements disallow obligatory control. Non-finite subject clauses generally do disallow obligatory control, but this should not be the case with non-finite object clauses. All I can say at this stage is that this might be connected to the general unavailability of obligatory control into some non-finite VNCs similar to those under discussion here (see chapter 3 section 3.2.3.4.2).

The only instances when non-finite VNCs with non-finite complements are fine in argument positions involve compounds ((130))

- (130) a. [[[Cumhurbaşkanı-ı öldür-meğ]-e teşebbüs]
 [[[president of the republic-Acc kill-Inf]-Dat attempt]
 suç-u] ağır bir ceza gerektirir.
 crime-CmpM] requires a heavy penalty
 Lit. ‘The crime of attempt to kill the president of the republic requires
 a heavy penalty.’
- b. Devlet [[[cumhurbaşkanını-ı öldür-meğ]-e teşebbüs]
 state [[[president of the republic-Acc kill-Inf]-Dat attempt]
 suç-un]-u affetmiyor.
 crime-CmpM]-Acc does not pardon
 Lit. ‘The state does not pardon the crime of attempt to kill the president
 of the republic.’

I show in chapter 3 section 3.4.2.2.1 that, in compounds involving non-finite VNCs and nouns that select these, the non-finite VNC has a silent DP layer with a PRO subject. This DP layer mediates the passage of φ -features from a higher source down to PredP. As the VN moves through Pred into the head of this intermediary DP projection, Pred does not block φ -features. This account seems to apply here as well. The final destination of φ -features in this case is the non-finite complement of the non-finite VNC, but these features do pass through Pred⁰. The presence of a silent DP projection above PredP that the VN moves to, passing through Pred, forces Pred to let φ -features through down to the complement clause. In (131), I show the structure of the relevant parts of the examples in (130).⁴⁴

- (131) [LinkP [NP [DP PRO_j [PredP [NP [NmnlP PRO_j cumhurbaşkanını öldürmeğe] t_i
] t_i] teşebbüs_i] t_j] suç_u_j]

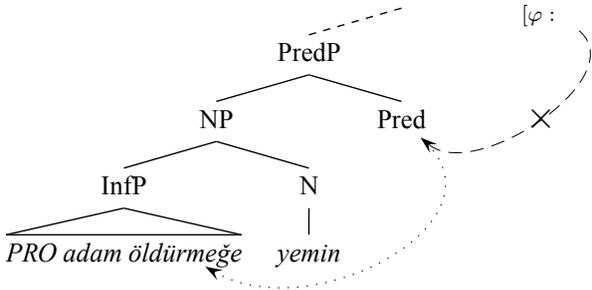
I assume that a possible control relation between the higher PRO and the lower PRO eliminates a possible categorial condition effect between the Nmnl head in the non-finite complement clause and Pred.

One difference between the non-finite clausal complements of VNs and the non-finite clausal complements of verbs emerges in this discussion. Note that the complement clauses in (128) are inherently case-marked. Inherently case-marked clausal complements of both restructuring and non-restructuring verbs are outside the verb phrase (see for instance (44) and (117)). That is how they avoid the passivization effect. The complement clauses here, by contrast, behave like the verb phrase-internal clausal objects of restructuring and non-restructuring verbs in being affected by blocking effects (like (37) and (112)). Being inherently case-marked per se has no effect on

⁴⁴I assume that the compound marker (which is identical to the third person singular nominal agreement marker) spells out the head of a linker phrase (LinkP). I borrow the term from den Dikken and Singhapreecha (2004). den Dikken and Singhapreecha show that complex noun phrases cross-linguistically contain functional elements—that they term linkers—whose purpose is to link the complements to the head noun. Mandarin Chinese *de*, the Persian *ezāfe* construction, French *de*, English *of* and Japanese *no* constitute examples. The morpheme *-(s)I* found in some Turkish compounds seems to be that kind of an element. (Note, incidentally, that N-N-CmpM structures in Turkish are sometimes called the *izâfet* construction, by analogy with the Persian construction (see e.g. Lewis 1967: 42-43).) I do not assume that these structures are DPs, with *-(s)I* occupying D⁰, because of the fact that they can be non-specific, unlike nominal structures with nominal agreement (see also fn. 47 and the discussion of examples (95)-(98) in chapter 3 section 3.2.4.2).

whether a complement is inside or outside the verb phrase, as I have shown in chapter 2 section 2.3.2.1, but the contrast is intriguing. I propose that the non-finite clausal complements of VNC are generated as complements of the VN and remain there throughout the derivation. Due to this, they cannot avoid the blocking effects of Pred. I schematize this for (128c) in (132).

(132)



The analysis in (132) might *prima facie* look at odds with the proposal in chapter 3 section 3.3 for where objects are positioned in the VNC. There, I have shown that the objects must be positioned in the specifier of PredP, and not as complements of VN. My proposal that the non-finite clausal objects of VNs are directly generated as the complements of VN, rather than being licensed via PredP, seems to contradict this. The conflict is only apparent, however, as it is theoretically possible that a noun phrase occupies the complement position of the maximal projection of the VN. It may be that clausal objects of the VNC fill this position whereas ordinary noun phrase objects are in the specifier of PredP. Baker (2003)—from which I have adopted the PredP analysis for the VNC—makes use of this possibility within the system. Baker (2003: 36) notes the existence of nouns and adjectives in English that have to be analysed in a way parallel to (132) ((133)).

- (133) a. *The announcement makes* [_{PredP} *it* Pred [_{AP} *likely* [_{that prices will go down}]]].
 b. *I consider* [_{PredP} *it* Pred [_{NP} *a cinch* [_{that Chris will win}]]].

When Pred turns a noun or adjective into a predicate, one of the things that it does is to make a θ -marking category out of them. The precise θ -role that the noun/adjective assigns is a function of its lexical meaning. Baker conjectures that the lexical semantics of the APs and NPs in (133) is such that Pred does not activate a θ -role for them, even though it does make them into predicates. The specifier of PredP is then filled with an expletive *it* and the clausal complement is directly generated as the complement of the noun/adjective. An explanation along these lines is applicable to the VNC.

It is difficult to find empirical evidence for (132) from Turkish data, however. This is because the test that I use in chapter 3 section 3.3 to bring out the position of the object in the VNC is difficult to replicate here. In that section, I had shown that adjectives modifying the VN cannot be positioned to the left of the object ((134)):

- (134) siz-in (ansızın / *ani) Rohan-ı (ansızın / ani) istila-nız
 2pl-Gen (suddenly / *sudden) Rohan-Acc (suddenly / sudden) invasion-2pl
 ‘your sudden invasion of Rohan’

Given that the adjective *ani* ‘sudden’ targets the maximal projection of the VN, *Rohan* must be outside that maximal projection. The analysis in (132), by contrast, predicts an order where an adjective modifying the VN is fine to the left of the clausal object, in (128a) for instance. I show this in (135).

- (135) [DP *Cemin* [_{PreDP} Adv/Adj [_{NP} [*olayın intikamını almağa*] *yemin*] -i]

However, the problem is that in (128a) the positioning to the left of the clausal object of any kind of modifier targeting the VN yields a bad result due to the ‘heaviness’ of the clausal object.

To sum up, a JuSH-based account helps identify and provides a unified analysis for the uniform behaviour that non-finite complement clauses exhibit in highly divergent syntactic contexts such as restructuring and non-restructuring configurations, on the one hand, and non-finite VNCs, on the other. This provides a well-grounded support for my theory.

4.2.3 Conclusion

In this section, I have shown that the functional category that assigns case to the subject needs to be jump-started just like the functional category that assigns case to the object, namely *v*. This is a manifestation of C-T φ -feature transmission (Chomsky to appear, 2005) but on a grander scale and with different conditions of application. This dependency can be seen in the sensitivity effects that arise between non-finite subject nominals and their matrix environments. Another phenomenon that I have discussed was the passivization effect in non-restructuring infinitival complements: Structural case assignment in low infinitives is adversely affected by the passivization of matrix *v*. No such effect is seen with high infinitival complements. I have also explained this by recourse to the JuSH.

4.3 Conclusion

In this chapter, I have shown that the JuSH is not suited to just explaining the case assignment patterns in the VNC, but can also be invoked to explain several other phenomena in Turkish grammar (and some phenomena in the closely related Turkmen and Azerbaijani). I have, first, focused on accusative case assignment and demonstrated the dependence of *v* on a higher functional category (D, C or another *v*) for case assignment to the direct object. I have done this with data from various offshoots of nominalization, restructuring infinitival complements, and the distribution of non-finite subject clauses in Turkmen. Next, I have turned to case assignment to the subject and shown that T—or whichever other functional category is responsible for subject case in a particular syntactic domain—may also be dependent on another functional cate-

gory for case assignment. During the discussion, I have first studied the distribution of non-finite subject clauses in Turkish, then I have turned to non-restructuring infinitival complements.

4.3.1 Some theoretical implications of the JuSH

Within this context, some issues arise that have a bearing on theoretical matters.

The first issue involves the nature of the verbal domain and the extent of Jump-start in Turkish. As I have noted previously, in the current stage of generative syntactic theory, which I have adopted, it is assumed that clause derivation proceeds in successive chunks called phases, the three main phases being transitive vP , CP, and DP (Chomsky 2000, et seq.). My theory is at odds with phase theory in some important respects.

The first point of conflict is the following: One property of the syntactic elements that head phases, i.e. v , C and D, is that they do not lack φ -features (Chomsky 2000, to appear), contrary to what I have proposed for v : v is unable to assign accusative case due to its lack of φ -features, and needs to be enabled for case assignment by the operation Jump-start, a means of putting φ -features on the verb.

Furthermore, an important property of the dependency that the JuSH introduces (and hence, of the Jump-start operation that implements it) is that it is potentially unbounded within a finite clause: Sentences may be complex, made up of several clauses, one embedded in the other. If accusative case is not assigned to a noun phrase until the φ -feature bearing element is inserted and v is jump-started, this seems to imply that Jump-start is insensitive to the depth of embedding of the vP that contains them. Indeed, in the data that I have discussed so far, I have not observed any sensitivity to the depth of embedding of the item to be jump-started. In the light of this, consider two conditions that phases have to satisfy.

The first condition is what may be called the cyclicity condition (Chomsky 2000) given in (136).

(136) *Cyclicity Condition*

The head of a phase is “inert” after the phase is completed, triggering no further operations.

This is clearly in contradiction to my proposal which requires a v to remain ‘active’ until the CP or DP phase is completed, and not become inert when the vP has been constructed. Thus, accusative case can only be assigned to an argument after the vP is completed, possibly long after.

The second relevant condition on phases is the impenetrability condition (Chomsky 2000). This is given in (137) (where the domain of H is the complement of H, and the edge of H is its specifier(s)).

(137) *Phase-Impenetrability Condition*

In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

This condition implies that the complement of v should be inaccessible to the outside. This is also at odds with the central claims of my theory: If a vP is a phase, how can

a head in the complement of νP be jump-started from the outside, regardless of how deep that head is embedded? In a given structure, all the νP s, all the way up to CP or DP level, have to remain accessible until C or D provides the φ -features necessary for Jump-start.

All these three points of conflict strongly suggest that at least some transitive νP s are not phases in Turkish. One question that arises at this stage is whether *all* νP s are non-phases in Turkish. In other words, does Jump-start occur whenever there is accusative case assignment? The null hypothesis seems to be just that. The data that I have presented demonstrates the presence of feature transmission within embedded clauses and between matrix and embedded clauses. These data suggest that (at least) environments with some nominal character select ν without φ -features. I would propose Jump-start happens in all transitive νP s across the board.

The picture of Jump-start that emerges from this discussion is that of a very pervasive operation. Chomsky (to appear, 2005) proposes that the syntactic element that agrees with the subject and assigns case to it in a sentence, namely T, receives its φ -features from C. This is very similar Jump-start which is also a mechanism that passes on φ -features from one syntactic element to the other. I have discussed this in chapter 2 section 2.2.2.3. So, there is reason to assume that Jump-start or some such feature transmission process always occurs in structural case assignment to the subject. The whole discussion in section 4.2, is entirely in line with this proposal. Furthermore, Chomsky (to appear) conjectures that the C-to-T φ -feature transmission also occurs in the νP between ν and V, the lexical verb. In other words, according to him, this feature transmission takes place between a phase head and the syntactic element it selects. Then, one may conjecture that the presence of another phase boundary stops this transmission. Thus, C transfers features to T and stops if the νP below it is a phase; feature transfer goes on if it is not. So, feature transmission is potentially unbounded within a finite clause.

The second issue is the following: I assume that non-specific arguments receive a non-structural general case under adjacency to their predicate (see chapter 2 section 2.3.2.2). If that option is available, why is an operation like Jump-start necessary? An argument can always receive case by remaining adjacent to its predicate. My answer is along the following lines: Baker (2003) proposes that nouns are categories that can refer to things. This property is reflected in syntax by the referential indices nouns bear (see chapter 2 section 2.2.3.2). Then, suppose that these indices are assigned to nouns as they enter a sentence derivation if and only if they are to be interpreted as referential. (I have shown in various places in this book (notably chapter 2 section 2.3.2) that non-specific noun phrases are not referential and are found inside the νP . Specific noun phrases, by contrast, are referential and are outside the νP .) Suppose further that this interpretation is associated with certain syntactic positions (Diesing 1992, Chomsky 2001). Nouns with referential indices move to these positions to satisfy an EPP feature of the heads that have projected those positions (see chapter 2 section 2.3.2). Now, those nouns that have moved away from their predicates will no longer have the option of receiving case through adjacency—unless, of course, we are talking about string adjacency here. Thus, these noun phrases will have to be assigned case by other means, i.e. through Agree. Because case probes look upward in Turkish, a moved noun phrase enters the search domain of a probe, either T or ν (see chapter 2 section 2.3.2.1). This

functional head lacks φ -features. So, unless φ -features are given to the functional head for an Agree operation, the noun phrase will not receive case and the derivation will be ill-formed. Only a derivation where the functional head in question is jump-started will converge. Thus, ‘interpretive pressure’ brings about a chain reaction that results in Jump-start. This is plausible in so far as syntax is driven to meet the demands of the semantic component of grammar (cf. Chomsky 2000, et seq.).

Appendix: Object and adjunct nominals

At the end of the discussion on control in section 4.2.1.6.3, I have mentioned that obligatory control is instrumental in neutralizing sensitivity effects. One can observe this effect of obligatory control in non-finite nominals that function as objects and adjuncts. I show this is in (138) for object nominals (cf. (70)).⁴⁵

- (138) a. [CP Cem [_{Inf} bisiklet-i onar-mağ]-1 isti-yor].
 [CP Cem [_{Inf} bicycle-Acc mend-Inf]-Acc want-Prog.3sg]
 ‘Cem wants to mend the bicycle’
- b. [_{ANom} Cem-in [_{Inf} bisiklet-i onar-mağ]-1 iste-me-si]
 [_{ANom} Cem-Gen [_{Inf} bicycle-Acc mend-Inf]-Acc want-ANom-3sg]
 ‘Cem’s wanting to mend the bicycle’
- c. [CP Cem [_{ANom} bisiklet-i onar-ma]-y1 isti-yor].
 [CP Cem [_{ANom} bicycle-Acc mend-ANom]-Acc want-Prog.3sg]
 ‘Cem wants mending the bicycle’
- d. [_{ANom} Cem-in [_{ANom} bisiklet-i onar-ma]-y1
 [_{ANom} Cem-Gen [_{ANom} bicycle-Acc mend-ANom]-Acc
 iste-me-si]
 want-ANom-3sg]
 ‘Cem’s wanting mending the bicycle’

Let me now show that these nominals do involve obligatory control. In the syntactic tests I had done above to show that non-finite subject nominals involve non-obligatory control, I had compared them with non-finite object nominals. I had diagnosed these latter as involving obligatory control. To repeat, the three observations that constitute the basis for these tests are that arbitrary control is impossible in obligatory control; long-distance control is impossible in obligatory control; and the strict reading of the implicit subject is impossible in obligatory control. I repeat the relevant examples here as (139).⁴⁶

- (139) a. Cem_i [*e_i/*arb* kitap oku-mak] isti-yor.
 Cem_i [*e_i/*arb* book read-Inf] want-Prog.3sg
 ‘Cem wants to read a book.’

⁴⁵So as not to make the discussion unnecessarily long, I will only use object nominals in the examples, but I assure the reader that the same observations are also valid for adjunct nominals.

⁴⁶As I have argued in section 4.2.2.2 that restructuring complements do not contain PRO subjects, I indicate the implicit subject of these syntactic contexts by *e*. That does not mean I assume that the implicit subject is syntactically represented. I have simply adopted this method for ease of exposition.

- b. Deniz_i [Cem_j-in [e_{j/*i} kitap oku-mak] iste-dig-in]-i
 Deniz_i [Cem_j-Gen [e_{j/*i} book read-Inf] want-FNom-3sg]-Acc
 söyle-di.
 say-Past.3sg
 ‘Deniz said that Cem wants to read a book.’
- c. Cem [e kitap oku-mak] isti-yor, Deniz de.
 Cem [e book read-Inf] want-Prog.3sg, Deniz too
 ‘Cem wants to read a book, Deniz too.’ (sloppy reading)

Now note that in these contexts the infinitive is interchangeable with the action nominal, as in (140) (with the difference that accusative marking on the nominalization is obligatory in the case of action nominals, optional with infinitives for reasons discussed above). (I have omitted the counterpart of example (139b) with an action nominal for the simple reason that the example already involves an infinitive as the object of a nominalization, showing that no sensitivity effect arises in that context.)

- (140) a. Cem_i [e_{i/*arb} kitap oku-ma]-y₁ isti-yor.
 Cem_i [e_{i/*arb} book read-ANom]-Acc want-Prog.3sg
 ‘Cem wants to read a book.’
- b. Cem [e kitap oku-ma]-y₁ isti-yor, Deniz de.
 Cem [e book read-ANom]-Acc want-Prog.3sg, Deniz too
 ‘Cem wants to read a book, Deniz too.’ (sloppy reading)

What tells us that it is the presence of a control relation neutralizes sensitivity effects though? There may well be a third factor that both enables an obligatory control relation to obtain in complement clauses and neutralizes sensitivity effects. For instance, Landau (1999) proposes that non-obligatory control takes place in subject clauses, due to the fact that these domains are islands. The Agree relation cannot penetrate islands to establish obligatory control, leaving non-obligatory control as the only option. It may well be that islandhood correlates with sensitivity effects as well as non-obligatory control, explaining the presence and absence of sensitivity effects. Interestingly, in Turkish, islandhood (tested by the possibility of relativizing out of a domain) correlates neither with non-obligatory control nor sensitivity effects. Table (141) shows the pattern:

(141)

Subject nominal	Object nominal	Adjunct nominal
non-obligatory control	obligatory control	obligatory control
sensitivity effect	no sensitivity effect	no sensitivity effect
sometimes island	never island	sometimes island

Example (142) shows that it is possible to extract from subject nominals which are both non-obligatory control domains and potentially show a sensitivity effect.

- (142) a. [[PRO_{arb} t_i gir-me]-nin yasakla-n-dıĝ-ı] bina_i
 [[PRO_{arb} t_i enter-ANom]-Gen forbid-Pass-FNom/RC-3sg] building_i
 ‘The building that is forbidden to enter’

- b. *[[PRO_{arb} t_i gir-meğ]-in yasakla-n-diğ-1] bina_i
 [[PRO_{arb} t_i enter-Inf]-Gen forbid-Pass-FNom/RC-3sg] building_i
 ‘The building that is forbidden to enter’

In (142a), no argument in the relative clause is interpreted as the controller of the PRO in the non-finite action nominal, i.e. an instance of arbitrary control. It is impossible to substitute this action nominal with an infinitive ((142b)), an instance of the sensitivity effect between infinitival clauses and nominal environments. In addition to showing that Landau’s (1999) island-based account of non-obligatory control versus obligatory control cannot be entirely correct, this shows islandhood is not the factor that neutralizes sensitivity effects.

In order to show definitively that the neutralizing factor behind sensitivity effects is obligatory control, we need a non-finite nominal that does not involve control. Either accusative plus infinitive constructions (AIC) or raising configurations fit this definition. AIC refers to configuration where the subject of a non-finite clause is assigned accusative case by the matrix verb. In the analysis in (143a), the accusative subject is taken to be positioned in the embedded clause. This is the ‘exceptional case marking’ analysis of AIC. In raising structures, in contrast, the subject of the non-finite clause raises to the subject position of the matrix clause and bears nominative case ((143b)).

- (143) a. I had believed [them to have actually landed on the moon].
 b. They_i appear [t_i to have reached Nirvana].

These constructions are typically associated with two classes of predicates, namely AIC verbs, such as *believe* and *want*, and raising verbs and adjectives, such as *seem*, *appear*, *likely* and *reluctant*. Now, nouns are commonly claimed to not be among such predicates (cf. Chomsky 1970, Abney 1987). Thus, (144a), an AIC configuration with the noun *believe*, and (144b) that involves raising out of the clausal complement of the noun *appearance*, are ungrammatical.

- (144) a. *[my belief [them to have actually landed on the moon]]
 b. *[their_i appearance [t_i to have reached Nirvana]]

In stark contrast to this, however, Turkish has nouns that seem to be just that. These nouns can appear in configurations that could be labelled raising or exceptional case marking, as shown in (145).

- (145) a. Ben-im I Ching-i sev-me neden-im
 1sg-Gen I Ching-Acc like-ANom reason-1sg
 Lit. ‘my reason liking the I Ching’,
 ‘the reason for me to like the I Ching’
 b. Ben-im I Ching-i oku-ma isteğ-im
 1sg-Gen I Ching-Acc read-ANom desire-1sg
 Lit. ‘my desire reading the I Ching’,
 ‘my desire to read the I Ching’

Note that in these examples, the first person arguments, which agree with the nouns *neden* ‘reason’ and *istek* ‘desire’, are also associated semantically with the predicates

of the clausal complements, i.e. the verbs *sev* ‘like’ and *oku* ‘read’. This the same as the situation in (143b), where *they* both agrees with *appear* and is associated semantically with the lower predicate *reach*. Thus, the first person arguments could be thought to be positioned outside the complement nominals, in the DP layer of the structure headed by the first person singular agreement morphology. These examples could also be seen as analogous to the AIC (under some analyses of AIC), in that the first person arguments could be thought to be situated inside the complement nominals and D^0 assigning them genitive case from outside the embedded nominals. This would be the same configuration as (144a).

Then, there are two issues that I need to untangle here. First, cross-linguistically, raising configurations are easily confused with control structures. So, for theoretical purposes, they need to be distinguished by means of syntactic tests. In other words, I have to make sure that I am not dealing with control structures in (145). The second issue is that I have to show whether I am dealing with exceptional case marking or raising. This second issue is much less important than the first because it does not matter whether we have an exceptional case marking or a raising configuration for the thrust of the argument; what we need is a non-finite nominalization that does not involve control. I will address this issue for the sake of completeness. As it turns out, the structure in (145a) is a raising construction, and the structure in (145b) is a control construction.

One common test used to tease control and raising apart involves the use of what are called idiom chunks. The reason for this choice of terminology resides in the fact that idioms have to remain as chunks to be interpreted as idioms. Once broken up they lose their idiomatic meaning. Take the idiom ‘the cat is out of the bag’, for instance. In (146b), the idiomatic meaning ‘the secret is revealed’ is lost.

- (146) a. The cat is out of the bag.
 b. The cat is dreaming that he is out of the bag.

Now, consider (147).

- (147) a. The cat seems to be out of the bag.
 b. The cat wants to be out of the bag.

In (147a), a raising construction, the idiomatic reading is preserved. This means that there must be a point in the derivation where *the cat* constitutes a chunk with *out of the bag*. This suggests the cat has raised from inside the embedded clause. On the other hand, (147b), a control construction, is literal. Then, the representations of these two sentences are as in (148).

- (148) a. The cat_i seems [t_i to be out of the bag].
 b. The cat_i wants [e_i to be out of the bag].

The possibility of using an idiom chunk with *neden* (and preserving the idiomatic reading) ((149a)) and not with *istek* ((149b)) tells us that the former is not a control noun, whereas the latter is.

- (149) a. [Kiyamet-in kop-ma neden-i] belli-dir.
 [Doomsday-Gen snap-ANom reason-3sg] evident-EpCop
 Lit. ‘Doomsday’s reason to come is evident.’
 ‘The reason for doomsday to come is evident.’
 (i.e. ,‘It is evident why hell broke loose.’)
- b. #[Kiyamet-in kop-ma isteğ-i] belli-dir.
 [Doomsday-Gen snap-ANom desire-3sg] evident-EpCop
 Lit. ‘Doomsday’s desire to come is evident.’
 ‘It is evident hell wants to break loose.’

Now, I will run a diagnostic test to see whether *neden* is an exceptional case marking noun or a raising noun. I will use a very simple test. Consider (150).

- (150) Ben-im çok merak edilen [Illuminati-ye katıl-ma]
 1sg-Gen that people are very curious about [Illuminati-Dat join-ANom]
 neden-im
 reason-1sg
 Lit. ‘my reason joining the Illuminati that people are very curious about’

In this example, the relative clause *çok merak edilen* ‘that people are very curious about’ modifies *neden*. Its position cannot be changed. Note that the subject *ben* ‘I’ is to the left of the relative clause. This suggests it has raised out of the non-finite action nominal. If *ben* were inside the action nominal, it would have been positioned to the right of the relative clause. Then, we can analyse (145a) as below ((151)).

- (151) [_{DP} Benim_i [_{ANom} t_i I Ching-i sev-me] neden-im]

Let us now get back to our original concern, that of whether the lack of sensitivity effects can be directly linked to obligatory control. (152) shows us that a sensitivity effect arises when an infinitive is embedded under a D head, as the complement of a raising nominal, i.e. when there is no control relation.

- (152) *ben-im I Ching-i sev-mek neden-im
 1sg-Gen I Ching-Acc like-Inf reason-1sg
 ‘my reason to read this book’

One may attribute the ungrammaticality in (152) to the impossibility of raising from infinitives, of course. Then, in a final remark, note that raising from infinitives is possible, as shown in (37), repeated below as (153).

- (153) a. mafya-nın [adam(-ı) öldür-mek] iste-me-si
 mafia-Gen [man(-Acc) kill-Inf] want-ANom-3sg
 ‘the mafia’s wanting to kill the/a man’
- b. adam_i-ın [t_i öldür-ül-mek] iste-n-me-si
 man_i-Gen [t_i kill-Pass-Inf] want-Pass-ANom-3sg
 Lit. ‘a man’s being wanted to be killed’

In (153a), *adam* ‘man’ receives accusative case from the embedded verb. When that verb is passivized in (153b), the accusative is no longer available and *adam* raises to the

matrix domain to receive genitive case. The positioning of this noun phrase is indicated by its case. Genitive case could only have been assigned by the D head in the finite matrix clause. because probes look upwards in Turkish, *adam* must have raised to the matrix domain in the second example.⁴⁷

To conclude, sensitivity effects emerge in raising configurations between an infinitival clause and the matrix nominal domain. By contrast, no sensitivity effects can be observed between a non-finite action nominal and the matrix sentential domain where there is an obligatory control relation between the two. This, shows that the presence of an obligatory control relation neutralizes sensitivity effects.

⁴⁷ Another kind of nominal that is relevant here is the following:

- (i) a. [[Cumhurişkanın-ı gör-me] ihtimal-i] bizi
 [[president of the republic-Acc see-ANom] possibility-CmpM] excited us.
 heyecanlandırdı.
 ‘The possibility of seeing the president of the republic excited us.’
- b. [[Cumhurişkanın-ı kaçır-ma] plan-ı] yaptık.
 [[president of the republic-Acc kidnap-ANom] plan-CmpM] we made
 ‘We made a plan to kidnap the president of the republic.’

These are made up of a complement clause and what appears to be a raising or a control noun that selects it. The head noun bears a compound marker. I will analyse these as LinkP along with (130) (cf. (131)). The compound marker that spells out Link⁰ is identical to the third person singular form of nominal agreement. It is may well be an agreement morpheme, spelling out agreement with an expletive element in the specifier of LinkP. The φ -features necessary for the accusative case inside the complement clause in this structure is possibly derived from this. Assuming that the PRO inside the complement clause is non-obligatorily controlled, this seems to predict a sensitivity effect, if the complement clause were an infinitive, between NmnI of the infinitive and Link. This seems to be correct ((ii)):

- (ii) a. ??[[Cumhurişkanın-ı gör-mek] ihtimal-i] bizi heyecanlandırdı.
 [[president of the republic-Acc see-Inf] possibility-CmpM] excited us.
 ‘The possibility of seeing the president of the republic excited us.’
- b. *[[Cumhurişkanın-ı kaçır-mak] plan-ı] yaptık.
 [[president of the republic-Acc kidnap-Inf] plan-CmpM] we made
 ‘We made a plan to kidnap the president of the republic.’

An infinitive cannot be the complement of these raising and control nouns.

Cross-linguistic manifestations

In chapters 3 and 4, I have revealed three phenomena in Turkish and the related Oghuz languages of the Turkic family. First, in certain kinds of nominalization, I have observed a link between subject agreement and accusative case ((1)) (see chapter 3 section 3.4 and chapter 4 section 4.1.1).

- (1) *The Non-finiteness Effect on Accusative Case*
(In certain constructions) when subject agreement is absent, accusative case is barred.

Second, I have also noted that, in non-finite embedded clauses, the passivization of the matrix verb hampers structural case assignment to the direct object and to the covert subject PRO ((2)) (see chapter 4 sections 4.1.2 and 4.2.2).

- (2) *The Passivization Effect on Infinitival Complements*
A passive sentence with a low infinitival complement has reduced grammaticality, if this complement contains a structurally case-marked argument.

Finally, I have shown that non-finite subject clauses have an intriguing distribution brought about by structural case assignment to an object (in Turkmen) or to a PRO subject (in Turkish) that they contain ((3)) (see chapter 4 sections 4.1.3 and 4.2.1).

- (3) *The Matrix-Embedded Clause Sensitivity Effect*
A non-finite subject nominal has restricted distribution as a subject if it contains a structural case requiring argument.

I have accounted for these observations by what I have called the Jump-start Hypothesis, given in (4).

(4) *The Jump-start Hypothesis (JuSH)*

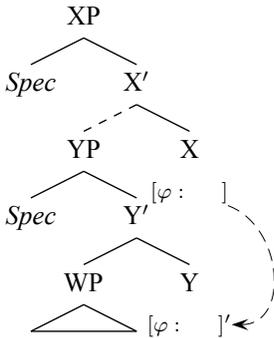
In a finite domain, the agreement capability of each agreeing functional head—and the potentially ensuing assignment of case—is activated by a single source of φ -features.

I have proposed that this activation is achieved by cloning unvalued agreement features from a functional head found higher up in the hierarchical structure of the clause and pasting them onto a lower functional head.^{1,2} I have called this operation Jump-start ((5)). It can be schematized as in (6).

(5) *Jump-start*

Clone the unvalued φ -feature set of functional head x and paste it onto functional head y .

(6)



I have also proposed the constraints in (7) on Jump-start.

- (7) x jump-starts y only if,
- x c-commands y , (the c-command condition)
 - there is no functional head z with an unvalued φ -feature set such that x c-commands z and z c-commands y , (the intervention condition)
 - an active argument occupies the specifier of y , (the activity condition)
 - there is no blocking category z such that x c-commands z and z c-commands y . (the blocking condition)

Furthermore, Jump-start operates in a successive fashion ((8a)) between compatible categories ((8b)).

- (8) Jump-starts proceeds from x to y only if,
- a projection of x is the immediately dominating functional category of the phrase headed by y , (the successiveness condition)

¹This reliance on unvalued agreement features is due to the fact that the framework that I have adopted for this work proposes that an argument is assigned case by the element that agrees with it. Agreement is construed as the valuation of a set of person, number (and possibly gender) features (φ -features). I refer the reader to chapter 2 for a detailed discussion.

²Most of the technical terms used in this chapter have been defined in chapters 1 and 2.

- b. x and y are either both sentential or both nominal.
(the categorial condition)

Finally, I have shown that the presence of head movement in a locality where Jump-start operates has a beneficial effect on Jump-start ((9)):

(9) *Facilitating circumstances for Jump-start*

- a. Head movement through a category neutralizes the blocking effect of that category.
b. Head movement through a category lifts the categorial condition on that category.

In this chapter, I take a look at the languages of the world to try to show that the phenomena that could be subsumed under the JuSH are not an exotic selection reserved for Oghuz, but are far more widespread than one might think. For this purpose, I focus mostly on syntactic structures where I believe the effects of Jump-start are readily observable—if Jump-start is at work in the given language—such as clauses without subject agreement morphology that contain direct objects, transitive infinitives being a prime example. Because I use morphology as a reference point, I mostly study languages that morphologically mark accusative case and agreement with the subject. I show the selected languages, in the order of treatment, in (10), indicating their genealogical affiliation and distribution.³

(10)

German	Indo-European, Germanic, West spoken in Germany, Austria, Switzerland, etc.
Japanese	Altaic ⁴ , Japanese spoken in Japan
Finnish	Uralic, Finno-Ugric, Finnic spoken in Finland, Sweden, Norway, etc.
Yukaghir (Kolyma)	Yukaghir spoken in the Sakha Republic and the Magadan Oblast in eastern Siberia, Russia
Quechua (Cuzco)	Quechuan, Quechua II, Southern spoken in southern Peru
Mangarayi	Australian, Gunwinguan, Mangarayic spoken in northern Australia
Koasati	Muskogean, Eastern spoken in Louisiana and Texas, USA

I should note one thing that for some might be stating the obvious: In chapter 4, I have discussed a range of phenomena that I have claimed to be associated with Jump-start in Turkish. I do not claim that an exact replica of these should be found in all languages where the effects of Jump-start appear to emerge. As I have shown in

³Some of these languages were suggested to me by Mark Baker.

⁴The genealogical affiliation of Japanese is not clear. See section 5.1.

that chapter, even languages most closely related to Turkish differ from Turkish in the exact patterns of phenomena that are linked to Jump-start. Thus, a language that does have Jump-start will possibly have this process in interaction with different processes internal to that language, to varying extents and in different domains of its grammar, yielding a different pattern of data.

In the discussion that follows, I will mostly tackle languages where theme arguments (i.e. potential direct objects) cannot be assigned accusative case under certain circumstances. These languages are German, Finnish, Kolyma Yukaghir, Cuzco Quechua and Mangarayi. The arguments in question are, then, either left in the object position as bare direct objects or assigned a default case as a last resort or moved to another position where they can receive another case.

Grammars sometimes write that direct objects that are left bare in fact have accusative case with phonologically null marking. For instance, Sulkala and Karjalainen (1992: 221) use the term “nominative-like accusative” for the case that bare objects have in Finnish. In many instances, I could find no principled reason in these grammars for me to accept the characterization of bare direct objects as having (null) accusative case. In some others, recent literature on the topic contested this designation (see for instance Kiparsky 2001 for Finnish).

Here, I will adopt the assumption that direct objects morphologically unmarked for case do not have accusative case in any shape or form. In chapter 2 section 2.3.2.2, I have discussed precisely this issue from the perspective of Turkish. There, I have concluded that there is no substantial evidence indicating that bare direct objects bear null accusative case. So, I have adopted the assumption that all non-specific arguments in Turkish (bare subjects as well as bare objects) receive a morphologically unmarked general case assigned under some ‘proximity’ configuration (e.g. incorporation, adjunction, etc.) between a verb and an argument (see also Baker and Vinokurova (2008)). Such configurations have been shown by Baker (1988:106-124) to satisfy the case requirement of noun phrases in many other languages. I have contended that this general case is unlikely to be a structural case as Kornfilt (2003a) assumes, due to the link between structural case and agreement demonstrated in chapter 2 section 2.2 and the fact that non-specific arguments do not agree. I will extend this assumption to the relevant cases and languages I discuss in this chapter.

Note that the issue here is not an optional absence of morphological accusative marking in the languages listed above, but bare objects in well defined syntactic environments in languages that otherwise have morphological accusative marking. From this perspective, in my view, it makes all the more sense to adopt the assumption that these objects do not have accusative case.

The chapter is organized as follows:

The discussion of case assignment to theme arguments takes up sections 5.1 through to 5.4. In section 5.1, I discuss restructuring constructions in German and Japanese. I deal with Japanese in this context even though the case assignment pattern in this languages does not match the patterns in the other languages I will discuss. It is, nonetheless a related pattern. Section 5.2 begins with a discussion of the distribution of bare objects in Finnish. It ends with an analysis of first and second person imperatives in Finnish and Kolyma Yukaghir, and the status of direct objects in these contexts. In section 5.3, I discuss accusative case assignment in nominalized clauses in Cuzco

Quechua. Next, in section 5.4, I study some gerundive constructions in Mangarayi and discuss the unavailability of accusative case and the resulting genitive case assignment in these environments. Finally, in section 5.5, I move on to Koasati. The data I discuss come from negative stative verbs, which fail to show any agreement other than default agreement. Throughout, I show that effects comparable to the JuSH related effects that obtain in Turkic languages can also be observed in these genealogically unrelated languages. Section 5.6 concludes this chapter.

5.1 German and Japanese

In this section, I will be focusing on restructuring configurations. I will discuss a recent analysis of these structures by Wurmbrand (2001). Wurmbrand shows that in restructuring configurations the embedded clause depends on the matrix clause for accusative case assignment. She argues that restructuring verbs optionally select bare VP or ν P complements. In the cases where they select bare VP complements, a case dependency between the matrix and embedded clauses arises because of the lack of a ν P in the embedded clause—which is normally responsible for accusative case assignment. Non-restructuring verbs, on the other hand, select clausal complements with differing degrees of functional structure. Crucially, these complements always have a ν P layer. This explains their independence from the matrix clause in terms of accusative case assignment. I will argue against this claim, and show that, using the JuSH in conjunction with some auxiliary assumptions, it is possible to explain more elegantly the data that Wurmbrand presents. In my version of the story, restructuring verbs obligatorily select complements with a defective ν P layer, i.e. one incapable of licensing accusative case. The ν in these complements has to be jump-started by a functional head in the matrix clause. Non-restructuring verbs take complements with non-defective ν P layers. This means that they are ‘self-sufficient’ and need not be jump-started.

The data that the discussion revolves around come from German and Japanese.⁵ I discuss these two languages in tandem. German is a West Germanic language of the Indo-European family. It is spoken mainly in Germany, Austria and Switzerland. It is a so-called fusional language, where there is very productive suffixing. It allows agreement only with the agent argument. It has SVO constituent order in main clauses and SOV order in embedded clauses. Its non-finite embedded clauses form a fairly simple system compared to some of the languages being discussed in this work (see for instance Donaldson 2006).

The genealogical affiliation of Japanese is contested. It may be a member of the Japanese family of languages, which includes some twelve languages spoken on the various islands of Japan. Alternatively, it may belong to the Altaic family, along with Turkish (Johanson 2006). Japanese is an agglutinating language, with preference for suffixation. It has an SOV constituent order. It is a nominative-accusative language, and does not mark agreement (Hinds 1986). In this section, I will place the main focus on German, discussing Japanese in relation to German.

⁵In this section I also present some data from Italian, Spanish and French. These data suggest that the languages in question also make use of Jump-start to some degree. These data do not constitute a central part of the discussion, however.

5.1.1 Restructuring in the light of Wurmbrand (2001)

5.1.1.1 The core data

Restructuring configurations are constructions where a matrix clause and an embedded clause behave as if they constitute one clause. The most typical instances of these structures involve verbs such as *want* and *try* and the infinitival complement clauses these verbs select (see chapter 4 section 4.1.2.1 for a more lengthy exposition). German exhibits an interesting pattern in restructuring constructions. Wurmbrand (2001: 19-31) shows that in German restructuring infinitives do not have the capability to assign accusative case to their direct objects, and that the accusative case seen on the objects in these infinitives is dependent on the matrix verb. The strongest evidence she provides comes from “long” passives. In these constructions, the passivization of a restructuring verb, such as *versuchen* ‘try’, affects the argument structure of a non-finite clause embedded under it in such a way that the embedded object is found in the subject position of the passive matrix clause, is assigned nominative case and agrees with the matrix auxiliary. The illustrative examples are in (11) (all examples in section 5.1 from Wurmbrand 2000, 2001 unless indicated otherwise).

- (11) a. weil Hans den Traktor zu reparieren versuchte
 since John the tractor-Acc to repair tried
 ‘since John tried to repair the tractor’
 b. dass der Traktor zu reparieren versucht wurde
 that the Tractor-Nom to repair tried was
 ‘that they tried to repair the tractor’
 c. dass der Traktor und der Lastwagen zu reparieren versucht wurden
 that the tractor and the truck-Nom to repair tried were
 ‘that they tried to repair the the tractor and the truck’

Example (11a) is an active finite embedded clause with a non-finite complement clause.⁶ The theme argument of the non-finite clause, *Traktor* ‘tractor’, is marked in accusative case—indicated by the form of the definite article—and is found in the object position. By contrast, when the matrix verb *versuchen* ‘try’ is passivized, as in (11b), *Traktor* is marked in the nominative, even though its predicate, *reparieren* ‘repair’, is still active (i.e. should still have the capability to assign accusative case). The same pattern is seen in (11c) with a plural theme argument. Plural agreement on the passive auxiliary *wurden* ‘be, become’ in (11c)—as opposed to the singular agreement in (11b)—shows that the auxiliary agrees with the theme argument. This suggests that this argument has become the subject of the passivized matrix predicate.⁷ Wurmbrand (2001: 20) writes

⁶Wurmbrand uses SOV clauses following standard practice to control for the verb second effect in German.

⁷Wurmbrand (2001: 32) provides the same kind of data from Italian and Spanish (i) (examples from Cinque 2001):

- (i) a. Le nuove case furono iniziate a costruire negli anni '20.
 the new houses were started to build in the '20s
 ‘They started to build these houses in the '20s.’
 b. Estas paredes están siendo terminadas de pintar.
 these walls were being finished to paint

the following:

What is crucial about object movement of this sort is that in restructuring infinitives, the case assignment properties of the embedded verb are affected by passivization of the matrix verb; i.e., the suppression of structural case in the matrix case [...] causes the loss of accusative in the embedded complement.

Compare the examples in (11) with those in (12), which involve the non-restructuring verb *planen* ‘plan’ ((12a) mine).

- (12) a. dass Hans den Traktor zu reparieren plante
 since John the tractor-Acc to repair planned
 ‘since John planned to repair the tractor’
 b. *dass der Traktor zu reparieren geplant wurde
 that the Tractor-Nom to repair planned was
 ‘that they planned to repair the tractor’
 c. *dass die Traktoren zu reparieren geplant wurden
 that the Tractors to repair planned were
 ‘that they planned to repair the tractors’
 d. dass den Traktor zu reparieren geplant wurde
 that the Tractor-Acc to repair planned was
 ‘that they planned to repair the tractor’

In (12a) we have an active finite embedded clause with a non-finite complement clause. In (12b) and (12c), this embedded clause is passivized and the direct object of the non-finite clause is raised to subject, as in (11b) and (11c). This time, however, the result is ungrammatical. The only passive possible with a non-restructuring verb is an impersonal passive which requires accusative assignment to the embedded direct object, as in (12d).

The picture presented above is comparable to the passivization effect given in (2). Thus, it could be explained using the JuSH. Wurmbrand’s way of accounting for the dependency she observes between the embedded and the matrix clauses is quite different from my theory, however. This is what I turn to next. I present my theory in section 5.1.2.

‘They were finishing painting these walls.’

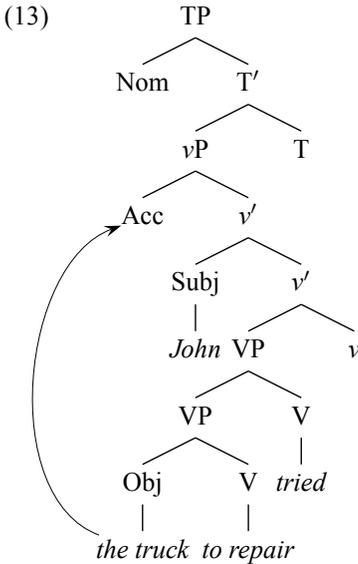
Furthermore, Wurmbrand (2001: 25-36) shows that that unaccusative verbs that take infinitives and the so-called *easy-to-please* construction also show the same pattern. French has the *easy-to-please* construction (Wurmbrand 2001: 32):

- (ii) Ce genre de livre serait difficile à lire.
 this kind of book would be difficult to read
 ‘This kind of book would be difficult to read.’

Here, *ce genre de livre* ‘this kind of book’, the object of the embedded predicate *lire* ‘read’, does not receive accusative from its predicate but raises to the matrix clause to receive nominative case there.

5.1.1.2 Wurmbrand's proposal

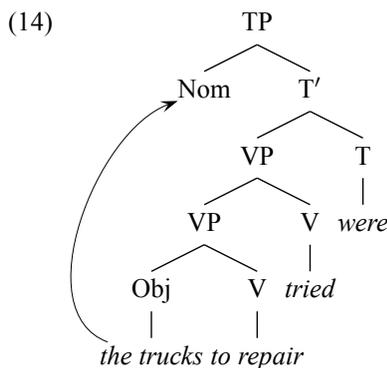
5.1.1.2.1 *German* In the theoretical framework adopted here, the verb phrase has a two-layered hierarchical structure (a vP on top of a VP), where the higher layer is responsible for accusative case assignment to the theme argument (Chomsky 1995, et seq.⁸). Undertaking her analysis within this same framework, Wurmbrand proposes that in complex clauses with active restructuring matrix verbs, such as (11a), the embedded clause is a bare VP , in other words incapable of assigning accusative case. The matrix vP is the projection that is responsible for the structural accusative case of the embedded object. Given this, the embedded object raises overtly (or covertly) to the matrix clause in order to have its accusative case licensed.⁹ I schematize this in (13), the structure proposed for (11a) (Wurmbrand 2001: 21).



The structure of a passive clause such as (11c) (and (11b)) is, then, as follows ((14)) (Wurmbrand 2001: 22):

⁸The mechanisms and configurations proposed to be central to case assignment have changed considerably since Chomsky (1995), but assumptions about the structure of the verb phrase and the role of the vP in accusative case assignment have remained the same.

⁹After Chomsky (1995), Wurmbrand assumes an approach to case licensing where an argument needs to move to the specifier position of a functional head in order for case licensing to take place.



Wurmbrand provides German data to support the analysis in (13) elsewhere, in Wurmbrand (2000). I will present the arguments in that work in section 5.1.1.3.3. In Wurmbrand (2001), she supports (13) by using data from Japanese.

5.1.1.2.2 Japanese Wurmbrand (2001: 7) reports that “there is a core of restructuring predicates that is not disputed and moreover found in all languages displaying restructuring effects.” Modal verbs (like *must*, *may*, *can*, *want* in English), motion verbs (*come*, *go*, *return*), aspectual verbs (*begin*, *continue*, *finish*), and causative verbs (*let*, *make*) typically select restructuring infinitives cross-linguistically. So, the Japanese data that she presents involve complex clauses with modal and aspectual verbs as matrix verbs. Interesting interclausal case dependencies can be observed in these environments (Wurmbrand 2001: 33-35).

In Japanese, the case that a direct object receives depends on the stativity of the verb. A stative verb assigns nominative case and a non-stative verb accusative case. I exemplify this in (15), with the non-stative verb *tabe* ‘eat’ and the stative verb *-deki-* ‘be capable’.

- (15) a. Emi-ga ringo {-o/*-ga} tabe-ta
 Emi-Nom apple {-Acc/*-Nom} eat-Past
 ‘Emi ate apples.’
- b. Emi-ga nihongo {-ga/*-o} deki-ru
 Emi-Nom Japanese {-Nom/*-Acc} be capable-Pres
 ‘Emi speaks Japanese.’ (modified from Koizumi 1995: 66)

When a stative restructuring verb selects a transitive verb, the object of the transitive verb can get nominative case even if the verb itself disallows nominative in root contexts ((16)).¹⁰

- (16) a. Emi-ga ringo-ga tabe-rare-ru
 Emi-Nom apple-Nom eat-can-Pres
 ‘Emi can eat apples.’

¹⁰Notice that, in Japanese, restructuring verbs and the embedded verbs that they select form a complex verb.

- b. Emi-ga nihongo-o deki-hazime-ta
 Emi-Nom Japanese-Acc be capable-begin-Pres
 ‘Emi began to be able to speak Japanese.’

In (16a), *ringo* ‘apple’, which is the object of the non-stative verb *tabe*, receives nominative even though this is disallowed in (15a). This is thanks to the stative matrix verb *-rare-* ‘can’. By the same token, a non-stative restructuring matrix verb can trigger accusative case on the embedded object, overriding the case property of the embedded verb. This is shown in (16b) (cf. (15b)) with the non-stative matrix verb *hazime* ‘begin’ and the stative embedded verb *-deki-*.

These Japanese examples clearly show that, there are environments where a matrix verb can assign case to an object found in a complement clause. However, these data support Wurmbrand’s proposal in (13) only in the light of the approach to case assignment that she adopts, i.e. one where an argument has to raise to the specifier position of a functional head to receive case. In this work, I have adopted a different approach, namely that proposed by Chomsky (2000) and the following works, laid out in some detail in chapter 2 section 2.3. Briefly, in this proposal, a functional head searches for a noun phrase in its c-command domain, agrees with that noun phrase upon finding it, this resulting in case assignment to the noun phrase. Subsequently, the noun phrase may raise to the specifier position of the maximal projection of the functional head in question or remain in situ. From this perspective, these Japanese data provide no evidence for Wurmbrand’s claim that the object raises, but only that the matrix verb may determine the case of the object, because it is not necessary that the noun phrase raise to the specifier of a functional head to receive case. The following discussion will provide the missing link.

5.1.1.3 The optionality of restructuring

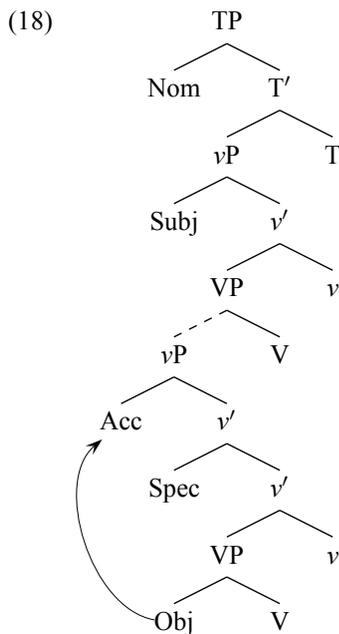
5.1.1.3.1 *German* An important property of restructuring that Wurmbrand (2001: 35-56) notes is its seeming optionality. Compare the passive German sentences in (11) with the passive sentence in (17).¹¹

- (17) dass versucht wurde / *wurden [den Traktor und den Lastwagen zu
 that tried was / *were [the tractor and the truck-Acc to
 reparieren]
 repair]
 ‘that they tried to repair the tractor and the truck’

Here, just like in (11c), the matrix verb *versuchen* is passivized, but in contrast to (11c) the theme argument, *den Traktor und den Lastwagen* ‘the Tractor and the truck’, preserves its accusative case. Furthermore, the fact that the auxiliary does not agree with this plural noun phrase (note the singular agreement on the auxiliary) shows that the noun phrase is not the subject of the matrix clause. This example is, then, comparable to the non-restructuring configuration in (12d).

¹¹This example is different from (11) in one other respect. It involves extraposition. There is no discussion of this difference in Wurmbrand (2001).

This *prima facie* looks like a counter-example to Wurmbrand's claim that the matrix verb in a restructuring configuration determines the case of the embedded object. However, Wurmbrand contends that this may look like a restructuring environment, judging from the verb *versuchen*, but it is not. Her claim is that restructuring is optional: A verb like *versuchen* may select a non-restructuring infinitive, as well as a restructuring one. While a restructuring infinitive is a bare VP as shown in (13), argues Wurmbrand, a non-restructuring infinitive has a vP layer of its own, as well as, possibly, higher clausal projections. The presence of this vP layer insures the independence of a non-restructuring infinitive from the matrix clause. In (18) is my schematic interpretation of Wurmbrand's claims.¹²



¹²Wurmbrand does not use the placement of objects with respect to verb phrase adverbs in German as a tool for showing where the embedded object is in (13) and (18). This is probably because it is difficult to reconcile the results of that test with the German data presented above. Consider (i) (my examples).

- (i) a. weil Hans {noch nie} den Traktor {noch nie} zu reparieren versuchte
 since John {yet never} the tractor-Acc {yet never} to repair tried
 'since never before did John try to repair the tractor'
 b. weil Hans {*noch nie} es {noch nie} zu reparieren versuchte
 since John {*yet never} it {yet never} to repair tried
 'since never before did John try to repair it'

A full noun phrase, such as *Traktor* in (ia), may be positioned on either side of an adverb that modifies the matrix verb and is adjoined to the matrix vP, such as *noch nie*. This goes rather well with Wurmbrand's idea that restructuring is optional. By contrast, however, a pronoun may only be positioned to the left of *noch nie*, as in (ib). This suggests the pronoun must be positioned in the matrix clause. This, in turn, suggests that the infinitival clause is obligatorily restructuring. This is clearly at odds with (ia) and the idea that restructuring is optional.

One would presume that there are some other observable differences between the restructuring ‘version’ of a sentence and its non-restructuring version, say between (11c) and (17) in other words. This seems to be correct. Wurmbrand shows that impersonal passives like (17) are systematically different from the long passives like (11). According to her, restructuring makes an embedded clause effectively an integral part of the matrix by eliminating the projections which may be called clause boundaries, such as the CP. Non-restructuring does not give rise to such “clause union”. This predicts that other syntactic processes that operate across clauses, comparable to the long passive, should also be unavailable in non-restructuring environments like (17). That is indeed the case. For instance, while restructuring passives allow remnant topicalization out of them, non-restructuring passives disallow this operation. Remnant topicalization is a movement operation that has two steps, as shown in (19). First, the phrase XP is scrambled out of the phrase YP. Next, YP is moved to the topic position.

(19) [CP [YP ... t_{XP} ...] C [XP ... t_{YP}]]

Extrapolating (19) to passives like (11c) and (17), let us identify YP with the VP that contains the infinitival clause. Then, XP would be the object inside the infinitival. In the light of this, consider what happens when the topicalization in (19) is applied to these two kinds of passives ((20)-(21)).

- (20) a. [VP [t_{Obj} Zu reparieren] versucht] wurde der Traktor noch nie
 [VP [t_{Obj} to repair] tried] was the tractor-Nom yet never
 ‘What has never happened before was that they tried to repair the tractor.’
 b. [VP [t_{Obj} Zu reparieren] versucht] wurden die Traktoren noch nie
 [VP [t_{Obj} to repair] tried] were the tractors yet never
 ‘What has never happened before was that they tried to repair the tractors.’
- (21) a. *[VP [t_{Obj} Zu reparieren] versucht] wurde den Traktor noch nie
 [VP [t_{Obj} to repair] tried] was the tractor-Acc yet never
 ‘What has never happened before was that they tried to repair the tractor.’
 b. *[VP [t_{Obj} Zu reparieren] versucht] wurde die Traktoren noch nie
 [VP [t_{Obj} to repair] tried] was the tractors yet never
 ‘What has never happened before was that they tried to repair the tractors.’
 c. [VP [Den Traktor zu reparieren] versucht] wurde noch nie
 [VP [the tractor-Acc to repair] tried] was yet never
 ‘What has never happened before was that they tried to repair the tractor.’

In these examples, the adverbial *noch nie* ‘never before’ is our reference point. It is adjoined to the matrix vP and modifies the matrix verb *versuchen*. In all the examples (with exception of (21c)), the embedded object *Traktor* has been scrambled out of the infinitival clause and the matrix vP to somewhere in the matrix clause. Subsequently, the matrix VP has been topicalized, carrying along the infinitival clause it contains. The pattern produced by this operation is quite telling: In (20), we have restructuring

infinitives as indicated by the nominative case on *Traktor(en)* and the fact it agrees with the auxiliary. In (21), on the other hand, we have non-restructuring infinitives judging by the accusative case on *Traktor(en)* and the fact it does not agree with the auxiliary. While the infinitives in (20) allow the scrambling of *Traktor* out of them, those in (21) disallow it. (21c) shows that the ungrammaticality is not due to the topicalization of the matrix VP. This shows that the infinitival clauses in (20), i.e. the restructuring ones, are ‘transparent’, while those in (21), i.e. the non-restructuring ones, are not, as predicted. From this perspective, then, restructuring does indeed look optional.

5.1.1.3.2 *Japanese* Let me now go back to Japanese to tie up the loose ends I had left there. The Japanese data is also a little more complex. In complex sentences with stative matrix verbs, accusative case, as well as the nominative, is possible on the object. Compare (16a) with (22).

- (22) Emi-ga ringo-o tabe-rare-ru
 Emi-Nom apple-Acc eat-can-Pres
 ‘Emi can eat apples.’

Note that, here, *ringo* ‘apples’ bears accusative case in the presence of *-rare-* ‘be capable’, a stative matrix verb. This is not simply some sort of optionality in case assignment. What is interesting is that, in these sentences, the scope properties of the nominative objects are different from those of the accusative objects (cf. Tada 1992, Tada 1993, Koizumi 1995). It is usually assumed that the scope interactions between two elements are a function of the syntactic positions of those elements: *x* takes scope over *y* if *x* c-commands *y* (see for instance May 1977, 1985). Consider (23) in the light of these remarks.

- (23) a. John-ga migime-dake-o tumur-e-ru
 John-Nom right eye-only-Acc close-can-Ind
 ‘John can close only his right eye.’ can > only, ??only > can
 b. John-ga migime-dake-ga tumur-e-ru
 John-Nom right eye-only-Nom close-can-Ind
 ‘John can close only his right eye.’ *can > only, only > can

Example (23a) means that John is able to close only his right eye (and to leave his left eye open). As this paraphrase suggests, this reading is obtained if the accusative-marked noun phrase, *migime-dake* ‘only his right eye’ is lower than the matrix verb *-e-* ‘can’. By contrast, (23b) means only his right eye is such that John can close it (in other words, he cannot close his left eye). As the paraphrase suggests, this time *migime-dake* is higher than *-e-*.

First, these data provide support for Wurmbrand’s claim that embedded objects in a restructuring environment (i.e. (23b)) raise to the matrix clause (cf. (13)). Second, in conjunction with German data (i.e. (11b) versus (17)), they may be interpreted as providing further support for the optionality of restructuring. This is precisely how Wurmbrand interprets them.

5.1.1.3.3 *Wurmbrand (2000)* I will now present the German data provided in Wurmbrand (2000) to support the analysis in (13), particularly the claim that the object in a restructuring infinitival clause raises to the matrix clause for accusative case licensing. In this work, Wurmbrand notes that it is complicated to show where the object is in active sentences like (11a) for which the analysis in (13) is intended. This is because restructuring is not obligatory and the object receives accusative case in both restructuring and non-restructuring infinitives. With the hope of bringing out the position of the object, Wurmbrand uses scope interactions between matrix verbs and quantified expressions that function as theme arguments of infinitival complement clauses. She gives the example in (24) (cf. Bayer and Kornfilt 1990, 1994).

- (24) weil Hans alle Fenster vergessen hat [t_{Obj} zu schließen]
 since John all windows-Acc forgotten has [t_{Obj} to shut]
 ‘since John forgot to close all the windows’
 $\forall >$ forget; *forget $>$ \forall

In this sentence we have an infinitival clause that has been extraposed. (This is to unmask the displacement of *alle Fenster* ‘all windows’ out of it.) *Alle Fenster*, marked in accusative case, has been moved out of the extraposed clause and takes scope over *vergessen*, meaning that it c-commands *vergessen*. It looks as if *alle Fenster* has raised to the edge of the matrix vP, to a position higher than *vergessen*, to receive accusative case there. In other words, the infinitival clause is restructured, unable to assign accusative case. However, the infinitive could just as well be a non-restructuring infinitive, and *alle Fenster* could have received accusative case there, later to be scrambled to a position above *vergessen*. In other words, further data is needed to eliminate either one of these two options. Wurmbrand provides the example in (25), ruling out the second option.

- (25) a. *weil Hans den Wagen_i ankündigte [t_i zu reparieren]
 since John the car_i-ACC announced [t_i to repair]
 ‘since John announced to repair the car’
 b. weil Hans den Wagen_i versuchte [t_i zu reparieren]
 since John the car_i-ACC tried [t_i to repair]
 ‘since John tried to repair the car’

The example in (25a) shows that movement from non-restructuring infinitives is prohibited: Here, we have a non-restructuring matrix verb, *ankündigen* ‘announce’ with an infinitival complement clause. The complement clause has been extraposed and the theme argument of that clause, *den Wagen* ‘the car’, has been moved out of it. The result is ungrammatical. In (25b), however, we have the restructuring verb *versuchen* ‘try’ as matrix verb in a similar configuration. The movement of *den Wagen* is allowed. Now, we know that configurations like (25b) are optionally restructuring, i.e. this sentence may well be a non-restructuring environment. But, because non-restructuring environments disallow movement out of them ((25a)), we have to conclude that (25b) is a restructuring environment, and that movement out of restructuring environments is licit. What this implies for the discussion of (24) is that this sentence has to be a restructuring configuration, and not a non-restructuring configuration involving scram-

bling. This, in turn, means that the object has raised to the matrix clause to receive accusative case there, and that the infinitival clause cannot license accusative case.

However, there is a problem associated with the data in (24) and (25). This stems from the implicit assumption adopted in analysis of these data that the embedded object *alle Fenster* or *den Wagen* has been moved out of an *already* extraposed embedded clause. This assumption contradicts another assumption that Wurmbrand (2001) adopts to explain a rather problematic sentence ((26)):

- (26) *??dass der Traktor_i versucht wurde [t_i zu reparieren]
 that the Tractor_i-Nom tried was [t_i to repair]
 ‘that they tried to repair the tractor’

This example shows that structures with extraposed infinitives disallow the long passive. This example is problematic because, as I have just shown on the basis of scrambling data in (25), an extraposed infinitive clause selected by a verb like *versuchen*—which is also the matrix verb in (26)—is a restructuring environment. So, it should allow the long passive. Then, there emerges a paradoxical situation given Wurmbrand’s theory: A restructuring environment behaving like a non-restructuring environment. Wurmbrand (2001: 293) does note the problematic status of examples like (26) and offer a solution: The raising of the subject in the passive takes place *before* the infinitive is extraposed, and extraposing the infinitive yields an at best marginal outcome due to some resistance to re-ordering prosodic phrases. (In other words, (26) actually allows the long passive, but is ruled out on the basis of prosodic markedness rather than syntactic constraints.) But this explanation gives rise to an inconsistency in Wurmbrand’s theory: The issue is not resolved as to whether arguments move out of an infinitive before or after the infinitive has been extraposed.

I will not undertake to resolve this contradiction. It might be possible to handle by scrapping one of the two conflicting assumptions, i.e. that the infinitival clause is extraposed either before or after the object is moved out of it. But jettisoning either one of the conflicting assumptions seems undesirable for Wurmbrand. This way one cannot explain the difference in grammaticality between (24) and (25b) versus (26) and/or one fails to solve the paradox that (26) creates. As an alternative solution to the conflict, one could provide an explanation of why the order of operations is different in (24) and (25) versus (26), and why the option of moving the noun phrase out of the embedded clause after it has been extraposed is not available in (26).

This conundrum is not enough to rule out Wurmbrand’s theory, but it clearly does undermine its empirical adequacy. In the next section, I will show that it is possible to account for all the German data presented in this section from the perspective of my theory without the pitfalls that Wurmbrand (2000, 2001) encounters. I will also show that Japanese data may also be treated using my proposal. Furthermore, I have argued in chapter 4 section 4.1.2 that Wurmbrand’s ideas cannot be used to explain the behaviour of restructuring infinitives in Turkish, whereas my theory can. Then, being able to subsume the German and Japanese data under my theory gives it a better empirical coverage over Wurmbrand’s.

5.1.2 Jump-starting German and Japanese restructuring clauses

5.1.2.1 *Setting the scene*

Let me start by adopting some features of the analysis in (14) that Wurmbrand proposes for long passive sentences like (11c) above (and (27a) and (28) below), particularly the assumption that the theme argument of the embedded clause raises to the matrix subject position. This argument is assigned nominative case by the matrix T^0 . Next, I will turn to an analysis of restructuring and non-restructuring passives provided by Wurmbrand (2000). Consider (27).

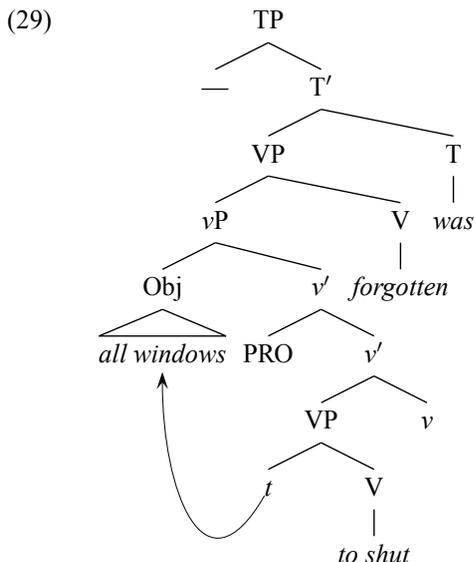
- (27) a. weil alle Fenster zu schließen vergessen wurden
 since all windows-Nom to close forgotten were
 $\forall > \text{forget}; * \text{forget} > \forall$
 no window got closed; *some windows got closed
- b. weil alle Fenster zu schließen vergessen wurde
 since all windows-Acc to close forgotten was
 forget $> \forall$
 not all windows got closed (possible)

These sentences involve two versions of a passive construction. (27a) is a long passive where *alle Fenster* ‘all windows’ is the subject (see the plural agreement on the auxiliary *wurden* ‘be’). (27b) is an impersonal passive. The visible difference between (27a) and (27b) is in agreement: In (27b), *alle Fenster* does not agree with *wurden* (note the singular agreement on *wurden*). This sentence is analogous to (28) (my example).

- (28) dass den Traktor und den Lastwagen zu reparieren versucht wurde
 that the.Acc Tractor and the.Acc truck to repair tried was
 ‘that they tried to repair the tractor and the truck’

In (28), the plural theme argument *den Traktor und den Lastwagen* ‘the tractor and the truck’ does not agree with the auxiliary, just like in (27b), and is marked in the accusative. Then, *alle Fenster* in (27b) must also be accusative-marked. Now, the only interpretation available for (27a) is that for all windows x , x was not closed. This implies that the quantified expression *alle Fenster* ‘all windows’ c-commands *vergessen* ‘forget’. In (27b), on the other hand, the reading where not all windows were closed is also available. This reading can only be obtained if *vergessen* c-commands the quantified expression *alle Fenster*. Then, (27a) has a structure identical to (14), and (27b) has the structure in (29) (Wurmbrand 2000).¹³

¹³The other possible interpretation of (27b), which is the same as the only interpretation of (27a), where the *alle Fenster* takes scope over *vergessen* is obtained via covert movement of *alle Fenster* to a position above *vergessen*.



While *alle Fenster* raises all the way up to the specifier of TP in (27a)/(14), it raises only up to a position below the matrix verb in (27b)/(29).

5.1.2.2 Revising Wurmbrand (2001)

I will now revise the analysis of (27b) given in (29) and use (27b) in my own account. First, note that the root clause equivalents of sentences like (27b) can have the infinitival clause in the subject position (or perhaps higher), as shown in (30) ((30a) and (30b) mine).

- (30)
- a. [den Traktor zu reparieren] wurde versucht.
[the tractor-Acc to repair] was tried
'They tried to repair the tractor.'
 - b. Es wurde [den Traktor zu reparieren] versucht.
it was [the tractor-Acc to repair] tried
'They tried to repair the tractor.'
 - c. Es wurde versucht [den Traktor zu reparieren].
it was tried [the tractor-Acc to repair]
'They tried to repair the tractor.'

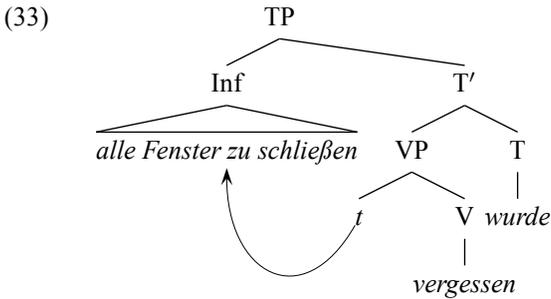
In (30a), the embedded clause has raised to the subject position (or higher), as attested by its being to the left of the auxiliary, which is at T^0 . Alternatively, the embedded clause may either be lower than the auxiliary, as in (30b), or be extraposed as in (30c). In these last two cases, the subject position is occupied by the expletive *es*. Similar options are available in embedded clauses implying that the infinitival clause may also raise to the subject position in embedded contexts ((31)). Note particularly that *es* is ruled out in (31b), suggesting that the infinitive is in the subject position (my examples).

- (31) a. dass es versucht wurde / *wurden den Traktor und den
 that it tried was / *were the.Acc Tractor and the.Acc
 Lastwagen zu reparieren
 truck to repair
 ‘that they tried to repair the tractor and the truck’
 b. dass (*es) den Traktor zu reparieren versucht wurde
 that (*it) the tractor-Acc to repair tried was
 ‘that they tried to repair the tractor.’

Moreover, Wurmbrand (2001: 39) notes that sentences like (27b) have to be pronounced with a pause (indicated by “#”) before and after the infinitive ((32)), providing further evidence that the infinitival clause is a subject in embedded contexts.

- (32) a. dass #den Traktor zu reparieren# versucht wurde
 that the.Acc tractor to repair tried was
 ‘that they tried to repair the tractor.’
 b. dass #die Traktoren zu reparieren# versucht wurde
 that the.Acc tractors to repair tried was
 ‘that they tried to repair the tractors.’

Then, the data in (30)-(32) suggest the analysis in (33) for (27b), where the infinitival clause raises to the subject position from the complement position of *vergessen*, as an alternative to Wurmbrand’s proposal in (29).^{14,15}



Recall that (27b) (of which (33) is the structure) has an ambiguous interpretation: One, in which the quantified expression scopes over *vergessen*, and the other, in which *vergessen* scopes over the quantified expression. The first reading can be obtained by the covert movement of the quantified expression *alle Fenster* to a position where it can c-command *vergessen*, presumably adjoined to the CP.¹⁶

¹⁴I suppress some details of the structure.

¹⁵This movement is presumably to satisfy the EPP feature of T. The EPP feature is a feature that is assumed, since Chomsky (1995), to trigger movement of an XP to the specifier of the maximal projection of a head that has that feature. Alternatively, it can be satisfied by the insertion of an expletive into the specifier position.

¹⁶Quantifier movement out of topicalized constituents is not possible (see e.g. Wurmbrand 2006, Bošković 2008, i.a.). Bošković (2008) argues that this is because operators in operator–variable chains (topicalization being an example) cannot undergo further operator movement due to Chomsky’s (2000,2001) activation condition. The movement of the infinitival clause in (33) is not a type of movement that creates an operator–

The second reading can be obtained if the infinitive reconstructs to its base position. Reconstruction is a ‘reverse’ movement operation of sorts that, since Chomsky (1977), is assumed to take a moved element back to its extraction site under certain circumstances. In (33), that would be the complement position of *vergessen*. Here, *vergessen* would c-command *alle Fenster*.¹⁷

Given Wurmbrand’s (2000) analysis in (29), it is puzzling why it should be impossible to simply fill the subject position in complex embedded clauses like (31b) with an expletive: The subject position in (29) is vacant. Expletives are in principle available in embedded clauses, as example (31a) shows. They are also available in root passives ((30b)). It is clear from empirical facts, however, that expletive insertion is never necessary in (31b) and the like: There is always some non-expletive element that is in the subject position, i.e. either the infinitival clause or its theme argument. (29) fails to capture this fact, while (33) does not.¹⁸

Let me now make my crucial theoretical addition to this empirical picture. This addition will enable me to effectively eliminate the claimed optionality of restructuring, and elegantly explain the case patterns observed in active and passive sentences with infinitival complements.

5.1.2.3 *Jump-starting infinitival complements*

To repeat, Wurmbrand claims that restructuring infinitives do not have a ν that can assign accusative case ((13)), non-restructuring infinitives do ((18)). However, I have argued in chapter 4 section 4.1.2 that these ideas of Wurmbrand can not be transferred to Turkish. In that section, I have demonstrated that a ν is always present in an infinitival clause in Turkish, restructuring or non-restructuring. This ν is always defective, i.e. unable to assign accusative case, which brings about a pattern that is partly similar to the pattern in German restructuring configurations. For instance, the passivization of the matrix verb makes accusative case on an embedded object marginal in some restructuring infinitives. In that section, I have shown that the Turkish pattern can only be explained by a JuSH-based account and not by Wurmbrand’s (2001) proposal. Then, if I can subsume the German and Japanese data under my theory, this would give it a better empirical coverage over Wurmbrand’s. I will, now, adopt this ‘strong’ stance and propose a re-interpretation of German and Japanese data that Wurmbrand presents.

Suppose, in the light of Turkish data presented in chapter 4 section 4.1.2, that restructuring does not have any impact on the presence of ν in an infinitive, contra Wurmbrand (2000, 2001). What happens in German is that a fully-functional ν (i.e. one capable of assigning accusative case) that one finds in non-restructuring infinitives, as well as all other non-restructuring structures, degrades into a defective ν in restructuring environments, unable to assign accusative. In other words, restructuring effects can be traced down to a property of ν . Suppose also that there is no optionality involved

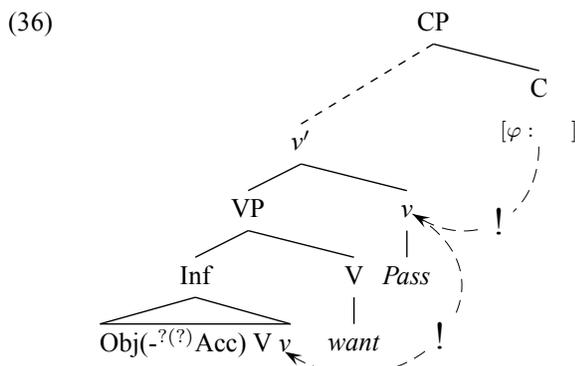
variable chain. As mentioned above, it is presumably an A-movement operation driven by an EPP feature on T. And scope freezing effects do not seem to hold for A-movement. Consequently, the quantifier should be able to move out of the infinitival.

¹⁷A-movement is commonly argued not to reconstruct. However, Sportiche (2006) argues that reconstruction effects are also found with A-movement, although “this is a more controversial conclusion”.

¹⁸As to, why either of these elements has to raise, that is another matter. It is a theoretical question for which I have no answer.

- c. Expl [adam-a saldır-mak] iste-n-me-si
 Expl [man-Dat attack-Inf] want-Pass-ANom-3sg
 'its being wanted to attack the man'

Note that in these examples, accusative case in an infinitival clause embedded under an active verb is grammatical ((35a)). This accusative becomes marginal when the matrix verb is passivized ((35b)). An inherent case (e.g. dative), by contrast, is unaffected ((35c)). According to my theory, this is because of the mild blocking effect of a passive v intervening between the infinitival v and the matrix C, which is the source of φ -features that would be used to jump-start the infinitival v . The infinitival v receives φ -features at a cost, so to speak, and agreement with and the subsequent accusative case assignment to the theme argument is dispreferred. I have schematized this in (36).

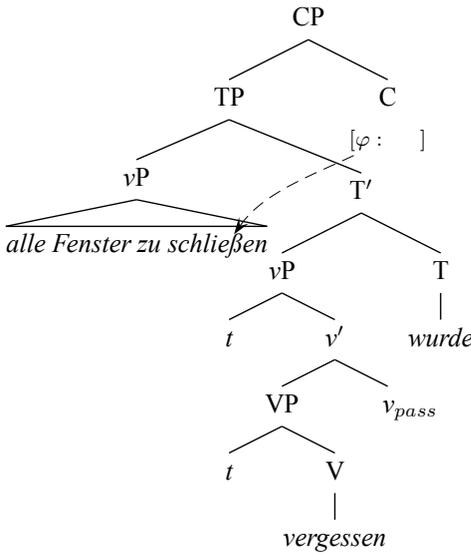


Suppose that the blocking effect of passive v is stronger in German. This has the consequence that, in (34), the only way that the theme argument can get case is the following: Jump-started T^0 probes, agrees with the embedded theme argument, assigning it nominative case. The theme then raises to the specifier position of TP.²⁰

I show the second alternative, which applies in sentences like (27b), in (37):

²⁰I assume after Baker (2008: 246 ff.) that probes may search downward in German, unlike in Turkish where they look up. The formulation of Jump-start that I have proposed in chapter 3 cannot be directly applied to languages like German where probes may look downward and assign case to a low goal. According to that formulation, for a functional head to be jump-started there needs to be an argument in its specifier. This exclusively applies to languages like Turkish. Suppose, then, that, in a language where probes may look down, the presence of an active noun phrase in the c-command domain of a functional head also leads to that functional head being jump-started. An active noun phrase is one that requires structural case but has not yet been assigned one.

(37)



Here, the infinitival clause raises to the specifier position of the TP, as I have argued above. Then, C can directly jump-start embedded v without any intervention. v can subsequently agree with the theme argument and assign it accusative case.

In addition to explaining the two kinds of passives seen with infinitival complements, this account also explains why the following examples are ungrammatical ((38), my examples):

- (38) a. *Der Traktor zu reparieren wurde versucht.
 the tractor.Nom to repair was tried
 ‘They tried to repair the tractor’
- b. *dass der Traktor und der Lastwagen zu reparieren versucht wurde
 that the tractor.Nom and the truck.Nom to repair tried was
 ‘that they tried to repair the tractor’

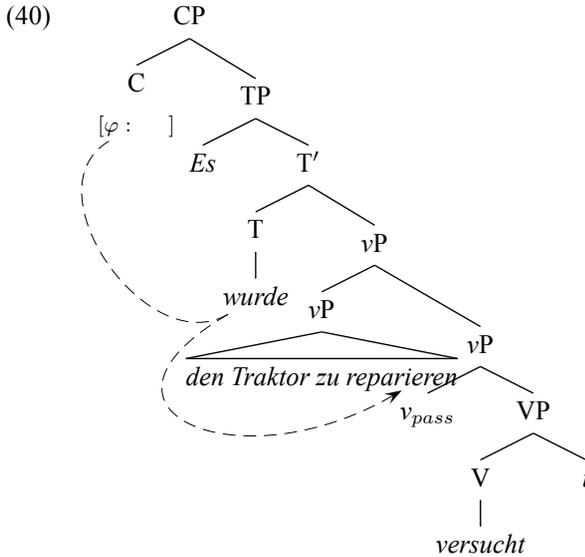
It is not possible to assign nominative to *Traktor* and *Lastwagen* in these examples because the infinitival clauses they are found in are in the specifier position of the TP. These theme arguments would not be visible to T in this position, due to the fact that they are out of the c-command domain of T. The only option is for them to be assigned accusative case. This gives us sentences like (30a) and (28), which contrast with (38a) and (38b), respectively. Were the infinitival clause lower than T, a long passive would, of course, have been an option. What would also have been an option is to assign nominative to the theme argument in situ—which would require a passive root clause as environment. This is the case in (39b) below, which I will presently turn to.

In passive root clauses, there are two more alternatives which are not available in embedded contexts, in addition to the long passive and the passive with the infinitival clause as subject. The first is the impersonal passive given in (30b), repeated here as (39a) (as well as the extraposed version of this in (30c)). The second is an impersonal passive where the theme argument remains in the embedded clause, receives nomina-

tive and an expletive is inserted into the matrix subject position ((39b), my examples).

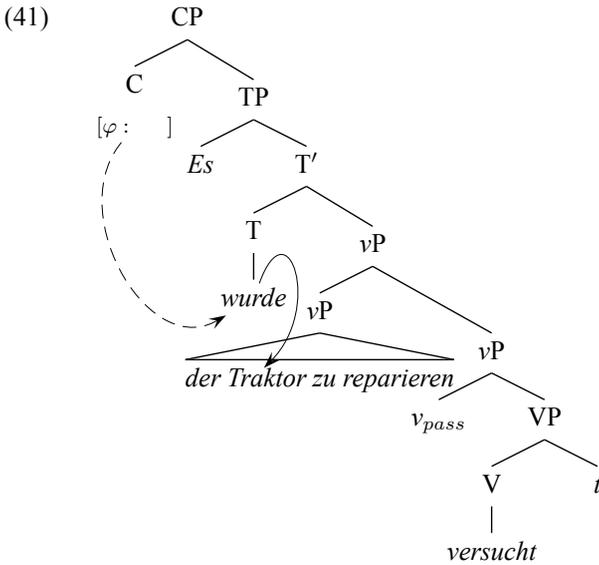
- (39) a. Es wurde [den Traktor zu reparieren] versucht.
 it was [the.Acc tractor to repair] tried
 ‘They tried to repair the tractor.’
 b. Es wurde [der Traktor zu reparieren] versucht.
 it was [the tractor.Nom to repair] tried
 ‘They tried to repair the tractor.’

I show the derivation I propose for (39a) in (40).



Here, the embedded clause is above the passive v , evading blocking effects. The active v inside the embedded clause can then be jump-started. Subsequently, v agrees with and assigns accusative case to the object. The vacant subject position of the TP is filled by an expletive.

I show the other possible passive derivation that yields (39b) in (41).



Here, Jump-start stops at T^0 not continuing till embedded v . T agrees with the theme argument of the embedded clause, assigning it nominative case.²¹ The theme remains in situ and the subject position of the TP is filled by an expletive.

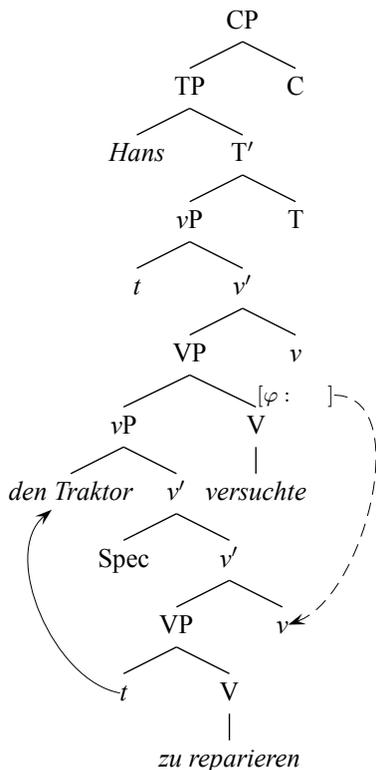
5.1.2.3.2 Actives Let me now turn to the derivation of active restructuring and non-restructuring sentences. Wurmbrand (2001) proposes that an embedded object receives accusative in a ‘low’ object position in a non-restructuring configuration ((13)), and in a ‘high’ object position in a restructuring configuration ((18)). In section 5.1.1.3.3, I showed that the argument that Wurmbrand (2000) provides to support this proposal is problematic. That does not go to say that accusative-marked themes cannot be associated with two different syntactic positions. The problem is that Wurmbrand’s (2001) way of handling the issue is not the best.

In my opinion, the two positions that themes in a complex clause seem to be occupying are not found in two different structures. As I showed in the preceding discussion on passives, it is perfectly possible to eliminate the claimed optionality of restructuring for infinitives selected by restructuring verbs like *versuchen*. This conception of restructuring configurations was what necessitated the postulation of two separate structures. Now, as I have done for passives above, I can ‘unite’ the active structures. Consider (42), the structures for an example like (11a).

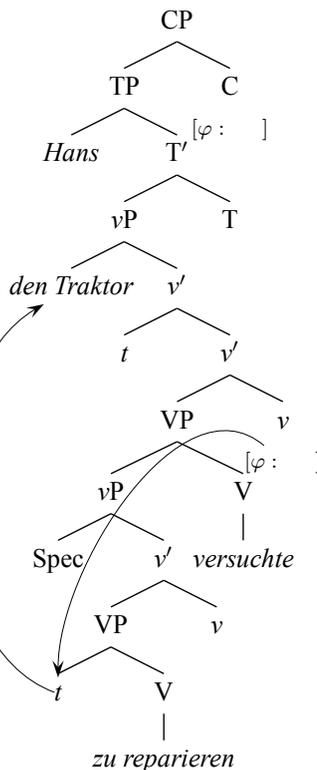
²¹Given the visibility condition, one may assume that expletives do not require case. So, the expletive in the specifier of TP does not receive case.

(42)

a.



b.



Here, the matrix v may jump-start the embedded v , as in the first derivation in (42). In this case, the theme is assigned case by the embedded v and the theme will raise to the edge of the embedded vP . Alternatively, the matrix v itself may agree with the theme and assign it case, as in the second derivation. In this case, the theme will raise to the edge of the matrix vP .

Finally, I turn to the complex clauses with extraposed infinitival complements in (25)-(26) which were problematic for Wurmbrand's (2001) theory. I repeat these in (43). I discuss the passive examples along with the active.

- (43) a. *weil Hans den Wagen_i ankündigte [t_i zu reparieren]
 since John the car_i-ACC announced [t_i to repair]
 'since John announced to repair the car'
 b. weil Hans den Wagen_i versuchte [t_i zu reparieren]
 since John the car_i-ACC tried [t_i to repair]
 'since John tried to repair the car'
 c.*??dass der Traktor_i versucht wurde [t_i zu reparieren]
 that the Tractor_i-Nom tried was [t_i to repair]
 'that they tried to repair the tractor'

There are two important components to my account: First, data suggests that the in-

finitival clause in these examples is extraposed as early as possible in the derivation, before Jump-start and subsequent case assignment to and movement of the arguments. Second, I propose that the accusative-marked theme in these examples (i.e. *Wagen*) is not moved out for case reasons but for scrambling.²²

Example (43a) involves a non-restructuring infinitive which does not need to be jump-started. The embedded clause is extraposed. Accusative case is assigned to the object that it contains, i.e. *Wagen*. The object is not allowed to scramble out because this is non-restructuring infinitive.

Example (43b), on the other hand, involves a restructuring infinitive that does need to be jump-started. So, *v* of the infinitive is jump-started after the embedded clause has been extraposed. Subsequently, this *v* assigns accusative case to *Wagen* which is in the embedded clause at that stage of the derivation. *Wagen* then scrambles out. Scrambling is possible because this is a restructuring infinitive. Attributing the movement of *Wagen* to scrambling rather than to case assignment is undesirable for Wurmbrand. This would be completely against her main proposal for the structure of restructuring infinitives ((13)).

As for (43c), this structure contains a restructuring infinitive that does need to be jump-started but is not. The infinitival clause is extraposed as the first thing. Consequently, it lands in a position out of the c-command domain of T. Thus, it becomes impossible for T to probe into the infinitive, assigning nominative case to the theme *Traktor*. Note that it is not even possible to leave the theme inside the infinitive, filling the specifier of TP with an expletive, as shown in (44) (my examples).

- (44) a. *dass es versucht wurde [der Traktor zu reparieren]
 that it tried was [the tractor.Nom to repair]
 ‘that they tried to repair the tractor’
- b. *dass es versucht wurden [der Traktor und der Lastwagen zu
 that it tried were [the tractor.Nom and the truck.Nom to
 reparieren]
 repair]
 ‘that they tried to repair the tractor and the truck’

In this sense, (44) is comparable to (45) (my examples) which involves an infinitive that is extraposed via the specifier position of TP (note that there is no *es* in this example) and thus lands in a position out of the c-command domain of T.

²²One piece of evidence that supports the second assumption is that these sentences allow parasitic gaps, which are used to diagnose scrambling in some languages:

- (i) ?weil Hans den Mann versuchte [*t* ins Gefängnis zu stecken] ohne verwart zu haben
 because John the Man.Acc tried [*t* in prison to put] without warned to have
 ‘because John tried to put the man in prison without warning him’

But note that there are works that argue that parasitic gaps cannot be used as tests in German, such as Haider (2006).

- (45) a. *dass versucht wurde [der Traktor zu reparieren]
 that tried was [the tractor.Nom to repair]
 ‘that they tried to repair the tractor’
- b. *dass versucht wurden [der Traktor und der Lastwagen zu
 that tried were [the tractor.Nom and the truck.Nom to
 reparieren]
 repair]
 ‘that they tried to repair the tractor and the truck’

Both (44) and (45) suggest that the problem in (43c) is indeed the incapability of T to probe into the infinitival clause and is not due to the displacement of *Traktor* out of the infinitive, as may be concluded from (43c). This seems to predict that, in an extraposed infinitive, the only option is to jump-start the v that it contains and assign accusative case to the embedded object. That is correct, as shown in (46) (my examples).

- (46) a. dass (es) versucht wurde [den Traktor zu reparieren]
 that (it) tried was [the.Acc Tractor to repair]
 ‘that they tried to repair the tractor’
- b. dass (es) versucht wurde [den Traktor und den Lastwagen zu
 that (it) tried was [the.Acc Tractor and the.Acc truck to
 reparieren]
 repair]
 ‘that they tried to repair the tractor and the truck’

Here, the optional use of *es* is indicative of the possibility of having either an expletive fill the specifier of TP or have the infinitive raise to that position before it is extraposed. We know that the raising of the infinitive to the specifier of TP precludes nominative assignment to the embedded theme ((38)), leaving accusative case as the only option ((27b) and (32)). So, it must be that in (46) the movement of the infinitive to the specifier of TP (i.e. in the derivation without *es*) happens before Jump-start is able to activate T for nominative assignment to the embedded theme. Extraposition may take place subsequently. This implies that, in the derivation with the expletive subject, the extraposed infinitive is away just on time from its base position and out of the c-command domain of T. In both scenarios in (46), the important point is that extraposition happens before Jump-start and the ensuing case assignment.

Another indication that the extraposed infinitive has passed through the subject position of the embedded clause (in the derivation without *es*) is the impossibility of scrambling the theme from out of the infinitive to what looks to be the subject position in (47) (from Wurmbrand 2001: 42): The trace of the extraposed infinitive blocks expletive insertion. This is a restructuring infinitive in my account and should in principle allow extraction out of it.

- (47) *dass den Traktor versucht wurde zu reparieren
 that the.Acc Tractor tried was to repair
 ‘that they tried to repair the tractor and the truck’

Wurmbrand considers this to be a non-restructuring infinitive, which is why it disal-

lows extraction: Non-restructuring infinitives are always non-transparent and disallow extraction out of them (see Wurmbrand 2001: 36-46 for a detailed discussion).

5.1.2.4 Japanese

One can also interpret Japanese data in a different light than Wurmbrand. It is perfectly possible to claim that the data in (23), repeated in (48), involves two alternative derivations of a restructuring construction, rather than a restructuring and a non-restructuring environment, (48a) being the non-restructuring and (48b) the restructuring. This would be made possible by the adoption of the Jump-start mechanism I have proposed.

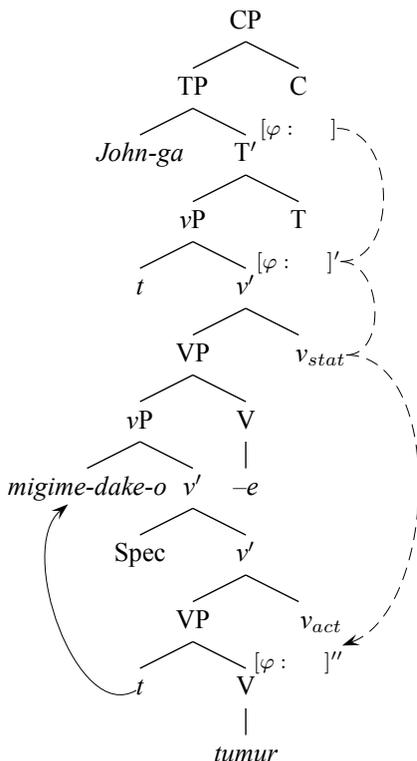
- (48) a. John-ga migime-dake-o tumur-e-ru
 John-Nom right eye-only-Acc close-can-Ind
 ‘John can close only his right eye.’ can > only, ??only > can
- b. John-ga migime-dake-ga tumur-e-ru
 John-Nom right eye-only-Nom close-can-Ind
 ‘John can close only his right eye.’ *can > only, only > can

I depict these alternative derivations in (49).²³

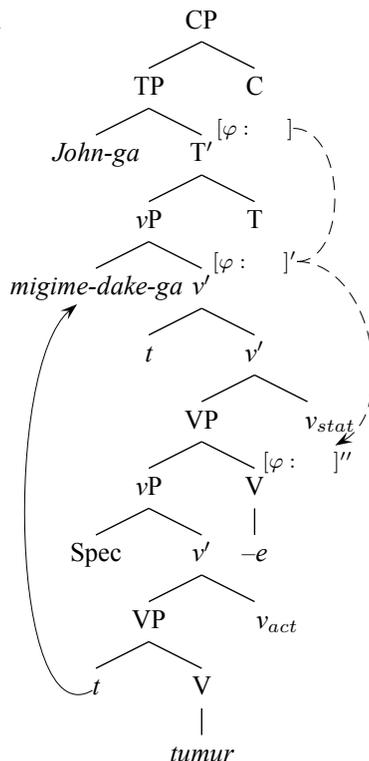
²³Functional heads whose specifiers host an argument have φ -features pasted onto them; others do not. I refer the reader to chapter 3 section 3.4.2.2 for a discussion.

(49)

a.



b.



Here, the object optionally raises to two separate positions in the very same structure, i.e. either the outer specifier of the embedded vP, as in the first diagram in (49), or the outer specifier of the matrix vP, as in the second diagram in (49). The functional head that houses the object gets jump-started by matrix C and the object receives either a nominative, if it is assigned case by the matrix stative v , or accusative case if it is assigned case by the embedded active v .²⁴

5.1.3 Conclusion

In this section, I have focused on restructuring configurations in German and Japanese. I have discussed a recent analysis of these structures by Wurmbrand (2001). Wurmbrand shows that in restructuring configurations the embedded clause depends on the matrix clause for accusative case assignment. She proposes that this is because restructuring verbs select bare VP complements. Non-restructuring verbs, on the other hand, select clausal complements with differing degrees of functional structure. Crucially, these complements always have a vP layer. This explains their independence from the

²⁴I tentatively assume that probes look up in Japanese (cf. chapter 2 section 2.3.2.1). So, the identification of a functional head to be jump-started depends on the presence of an active noun phrase in the specifier of that head. See chapter 3 section 3.4.2.2 for details.

matrix clause in terms of accusative case assignment. One important observation about restructuring is that it seems to be optional, i.e. restructuring verbs may also select vP complements. I have argued against this claim, and shown that, using my proposal, it is possible to explain more elegantly the data that Wurmbrand presents. In my version of the story, restructuring verbs obligatorily select complements with defective vP layers. The v in these complements has to be jump-started by a functional head in the matrix clause. Non-restructuring verbs take complements with non-defective vP layers

5.2 Finnish and Kolyma Yukaghir

In this section, I turn to Finnish and Kolyma Yukaghir. In the first part of the section (section 5.2.1), I focus exclusively on Finnish, discussing the distribution of bare objects in that language. The syntactic environments of relevance are passives, sentences with verbs of obligation and copular structures. I first evaluate an earlier account of the distribution of bare objects in Finnish, namely Vainikka (1989), then I present my theory. In the first two contexts, there is a link between the presence of bare objects and defective subject agreement morphology. This is comparable to the non-finiteness effect ((1)) and can be explained by recourse to the JuSH. So, I propose that in these environments v cannot be jump-started by a higher functional head due to the defectiveness of agreement features. This explains why accusative case cannot be assigned there. In copular structures, PredP blocks Jump-start, ruling out accusative objects. I end the first part of the section by discussing pronominal objects. In the second part of the section (section 5.2.2), I discuss Finnish in comparison with Kolyma Yukaghir. The data to be analysed consists of sentences with first and second person subjects in Yukaghir, and first and second person imperatives in Finnish. In both these contexts, accusative marking is ruled out. I propose that this is due to the interference of speaker and addressee operators positioned in the left periphery of these structures, which makes the jump-starting of v impossible.

5.2.1 Finnish

Finnish is a Finnic language of the Uralic family, spoken mainly in Finland. It is an agglutinating language which prefers suffixing. It has SVO constituent order and a complex system of infinitival clauses. It allows agreement only with the agent argument. Finnish has a complex system of case (Sulkala and Karjalainen 1992; Karlsson 1999). Here, I will constrain myself to the assignment of accusative case. Some preliminary information on accusative case follows next.

5.2.1.1 *The Finnish accusative*

According to traditional grammarians, the accusative case in Finnish is “not a uniform morphological case form as such, but a collective name given to a set of cases when they mark the object of the sentence” (Karlsson 1999: 100). (50) provides some illustrative examples.

- (50) a. Osta kirja!
buy.Imp.2sg book(.Acc)
Buy a book!
- b. Tuula kirjoittaa kirje-n
Tuula write.Pres.3sg letter-Acc
'Tuula writes a/the letter.'
- c. Tunne-n ruotsalaise-t.
know-Pres.1sg Swede-pl.Acc
'I know the Swedes.'
- d. Risto ve-i minu-t elokuvi-in.
Risto take-Past.3sg 1sg-Acc cinema-III
Risto took me to the cinema. (Karlsson 1999: 101-103)

An accusative-marked noun can be unmarked, looking like a nominative noun phrase ((50a)). It can also have the ending *-n* (which is identical to the genitive ending due to historical reasons (Itkonen 1966 via Toivainen 1993) ((50b)), or the ending *-t* if it is plural (which is identical to the nominative plural) ((50c)). By contrast, the morphological accusative marking for a pronoun is always *-t* ((50d)). It is distinct from the other morphological markers that a pronoun can bear.

Here, I will be focusing on the so-called unmarked accusative. The main reason that unmarked objects in Finnish are said to bear a zero-accusative, rather than nominative case say, is because in all the contexts where these objects can be found, they can alternate with pronouns marked in the *t*-accusative. However, many contemporary works tackling the problem of what this unmarked accusative actually is regard it simply as a nominative (e.g., Nelson 1998, Kiparsky 2001, i.a.). Here, I will simply extend the proposal I have put forth for Turkish in chapter 2 section 2.3.2.2 and assume that morphologically unmarked theme arguments do not have accusative case in Finnish, especially when they are in the object position of transitive clauses. In actual fact, as I will demonstrate below, the question of which case these arguments are assigned may be an orthogonal issue. What is at least as interesting is the distribution of these arguments. This distribution provides clues for the presence of inter-clausal case licensing dependencies in Finnish, just like in Turkish. This is what I turn to next.

5.2.1.2 *The distribution of bare objects*

Unmarked objects in Finnish are restricted to some well-defined syntactic environments. An observational generalization was made quite early on in Jahnsson (1871), expressed in various ways by various contemporary authors (e.g., Nelson 1998, Kiparsky 2001, Asudeh 2003) ((51)).

- (51) *Jahnsson's Rule*
Verbs with sentence initial nominative subjects govern the *n*-accusative, verbs which have no such subjects govern the zero-accusative.

Let me make this more explicit. An object is marked in the *t*-accusative if it is a personal pronoun and the interrogative pronoun *kuka* 'who'. It bears the *n*-accusative if it is in the domain of a subject which bears a structural case and the subject agrees

with the verb if possible, i.e. if it is an external nominative subject. This can be seen in the examples in (50). In all other environments, direct objects are unmarked. Thus, the contexts that require the zero-accusative are bare infinitives ((52a)), first and second person imperatives ((52b)), the so-called passive sentences ((52c)), including the so-called colloquial passives ((52d)), possessive copular structures ((52e)) and sentences with some verbs of obligation ((52f)).²⁵ I have parenthesized the accusative in the glosses to highlight its debated status.

- (52) a. Nāh-dä Napoli ja kuol-la.
see-1Inf Naples(.Acc) and die-1Inf
'To see Naples and to die.'
- b. Nāe Napoli!
see.Imp.2sg Naples(.Acc)
'See Naples!'
- c. Nāh-t-i-in-kö Matti?
see-Pass-Past-P-Q Matti(.Acc)
'Was Matti seen?'
- d. Me nāh-t-i-in Matti.
we.Nom see-Pass-Past-P Matti(.Acc)
'We saw Matti.'
(Kiparsky 2001)
- e. Häne-llä on hevonen.
s/he-Ade be.3s horse(.Acc)
'S/he has a horse.'
(Nelson 1998: 56)
- f. Mei-dän täytyy hyväksy-ä tämä.
we-Gen must.3sg accept-1Inf this(.Acc)
'We must accept this.'
(Karlsson 1999: 104)

These observations are already rather interesting from the perspective of the proposal developed in the previous chapters in that they hint at the existence of a link between subject agreement and the case of the object observed in some constructions in Turkish: The infinitive lacks subject agreement and disallows accusative-marked noun phrases. The passive form has a special marker, called the personal ending (Sulkala and Karjalainen 1992: 288, Karlsson 1999: 172), *-Vn*. This marker is invariant and distinct from other personal endings.²⁶ It does not show agreement with a noun phrase in the environment. In other words, strictly speaking, it is not an 'agreement' marker. Thus, the passive has 'defective' person marking (if we can call it "person") and also disallows accusative-marked noun phrases. Similar to passive verbs are some verbs of obligation, which include *täytyy* 'must', *pitää* 'ought to', *tulla* 'must', *kuulua* 'must' and *tarvita* 'need', among others. Sulkala and Karjalainen (1992: 318) note that these verbs are "monopersonal"; *täytyy* is invariably inflected in the third person

²⁵There is no passive construction comparable to the English passive in Finnish (Sulkala and Karjalainen 1992, Karlsson 1999). The term "passive" is simply a label traditionally used in the Finnish grammar tradition. The Finnish passive is more a counterpart of sentences with impersonal subjects like *one* in English or *man* in German. Thus, it is not so far-fetched to expect to find accusative-marked objects in this construction.

²⁶Compare the Finnish personal endings to the passive personal ending: *-n* (1sg), *-t* (2sg), *-Ø* (3sg), *-mme* (1pl), *-tte* (2pl), *-vat/-vät* (2pl). The passive ending does look similar to the first person singular ending, but it seems to be derived historically from a third person possessive affix (Nelson 1998: 166)

singular form *täytyy*, for instance. I will assume that these verb forms also have defective agreement properties, in a way not dissimilar to the passive forms. What is even more interesting is that these dependencies exemplified in (52) can be long-distance (see Vainikka 1989 and Kiparsky 2001 for a similar observation): A direct object will also be morphologically unmarked for case, if found in a non-finite clause placed in the contexts given in (52), in other words, for instance, when embedded under a copula ((53a) and (53b)), a first and second person imperative verb ((53c)), a passive verb ((53d)) or some verbs of obligation ((53e)).

- (53) a. On hauska [saa-da hyvä ystävä].
 be.3sg nice [get-1Inf good friend]
 'It is nice to get a good friend.'
- b. Sinu-n on pakko [vie-dä kirje posti-in].
 You-Gen be.3sg compulsion [take-1Inf letter post-III]
 'You have to take the letter to the post.'
- c. Anna Marja-n [osta-a auto].
 let.Imp.2sg Marja-Gen [buy-1Inf car]
 'Let Marja buy a car.'
- d. Minu-n kāske-tt-i-in [osta-a auto].
 I-Gen ask-Pass-Past-P [buy-1Inf car]
 'I was told to buy a car.' (Sulkala and Karjalainen 1992: 221-222)
- e. Sinu-n täytyy kieltäydy-ä [osta-ma-sta se kirja].
 you-Gen must.3sg refuse-1Inf [buy-3Inf-Ela that book]
 'You must refuse to buy that book.'

Thus, a non-finite clause seems to be dependent on the matrix clause for case assignment to its object. In my opinion, this picture presents a possible domain of application for the JuSH. However, there is one earlier proposal by Vainikka (1989), which offers a different (but nevertheless similar) account. This is what I will present in section 5.2.1.4, before I present my own JuSH-based account in section 5.2.1.5. But before both, I will give some preliminary information on non-finite clauses Finnish, traditionally referred to as the infinitives.

5.2.1.3 Finnish infinitives

Finnish has four main infinitival forms for a given verb, the first infinitive through to the fourth. Depending on the infinitive form, these may take case endings and be inflected using possessive suffixes. In (54) are examples of infinitives that do not bear any case endings or possessive suffixes (all examples in (54)-(56) from Karlsson 1999: 182-193).

- (54) a. Aio-n [lähte-ä ulos].
 intend-Pres.1sg [go-1Inf out]
 'I intend to go out.' (first infinitive basic form)
- b. [Sauno-minen] on mukavaa.
 [have a sauna-4Inf] be.3sg nice
 'Having a sauna is nice.' (fourth infinitive)

I exemplify the infinitives that are case-marked in (55).

- (55) a. Lapsi tul-i [itki-e-n kotiin].
child come-Past.3sg [cry-2Inf-Ins home]
'The child came home crying.' (second infinitive instructive)
- b. Istu-mme juuri [syö-mä-ssä].
sit-Pres.1pl just now [eat-3Inf-Ine]
'Just now we are sitting eating.' (third infinitive inessive)
- c. Mene-n ulos [syö-mä-än].
go-Pres.1sg out [eat-3Inf-III]
'I am going out to eat.' (third infinitive illative)
- d. Voit-i-n miljoona-n [veikkaa-ma-lla].
win-Past-1sg million-Acc [bet-3Inf-Ade]
'I won a million by betting.' (third infinitive adessive)
- e. [Syö-mä-ttä] ei elä.
[eat-3Inf-Abe] neg.3sg live
'Without eating one cannot live.' (third infinitive abessive)

Finally, I exemplify the infinitives that bear possessive suffixes in (56).

- (56) a. Lähd-i-n Hollanti-in [levät-ä-kse-ni].
leave-Past-1sg Holland-III [rest-1Inf-Tra-1sg]
'I went to Holland in order to rest.' (first infinitive translative)
- b. Muut nukku-i-vat [häne-n herät-e-ssä-än].
others sleep-Past-3pl [she-Gen wake-2Inf-Ine-3sg]
'The others were sleeping when she woke.' (second infinitive inessive)

These distinctions between the various Finnish infinitives are very important for the account that Vainikka (1989) offers for the distribution of bare objects, as well as my theory. The distinction between the infinitives inflected for person and number ((56)) versus those that are not ((54)-(55)) is especially relevant. I will now turn to Vainikka's theory.

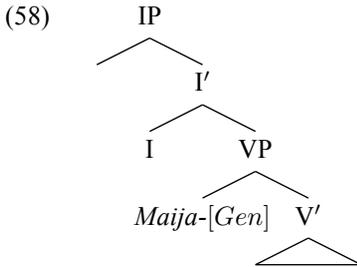
5.2.1.4 Vainikka (1989)

The observations that I have made in the preceding discussion in section 5.2.1.2 concerning the link between the case marking on the object and subject agreement are also made in Vainikka (1989) from a slightly different perspective. An account is proposed in that work to explain the empirical patterns discussed. In that account, Vainikka places more focus on the case of the subject, as opposed to whether the subject agrees or not, and exploits the morphological identity of accusative and genitive cases. As mentioned in section 5.2.1.1, both cases are marked with the morpheme *-n*. Whether a noun phrase is actually genitive or accusative can be discerned by replacing that noun phrase with a pronoun. A direct object with *-n* marking can only be replaced by an accusative case (i.e. *-t*) pronoun. These observations lead Vainikka to refer to the *n*-accusative as "Acc/Gen" (meaning an accusative element with genitive form), while the zero-accusative is labelled as "Acc/Nom" (meaning an accusative element with nominative form) (Vainikka 1989: 126-133).

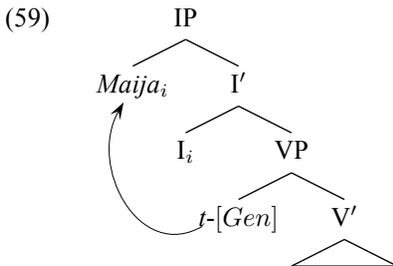
5.2.1.4.1 *Root clauses* Vainikka (1989: 157-165) proposes the following mechanism for *n*-accusative assignment in simple active sentences such as (57) (all examples in section 5.2.1.4 from Vainikka 1989).

- (57) Maija luki kirjan / *kirja.
 Maija.Nom read book-Acc/Gen / *book.Acc/Nom
 ‘Maija read a/the book.’

Vainikka supposes that genitive case is the default case for specifier positions of lexical projections, such as VP and NP. Accordingly, nominative subjects are initially generated in the specifier position of the verb phrase with genitive case as an abstract feature, as shown in (58).²⁷



The derivation, then, continues as in (59).

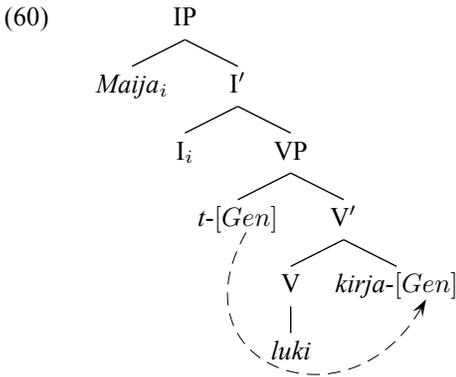


When the subject agrees with I (note the co-indexation), this prevents genitive case from being morphologically realized on the subject. The subject raises to the specifier of the IP without the genitive case feature and ends up with no case—which is what having nominative case is, according to Vainikka.

Subsequently, the unrealized genitive feature percolates to the object position. If the object position contains a noun phrase without overt case (i.e. if it is in nominative case), the feature is obligatorily realized on that noun phrase as genitive case ((60)).²⁸

²⁷Vainikka (1989) uses categories such as I/IP, rather than T/TP adopted here. IP and TP may be considered more or less equivalent. Also, the verb phrase does not have a functional layer (i.e. ν P) in Vainikka's (1989) system.

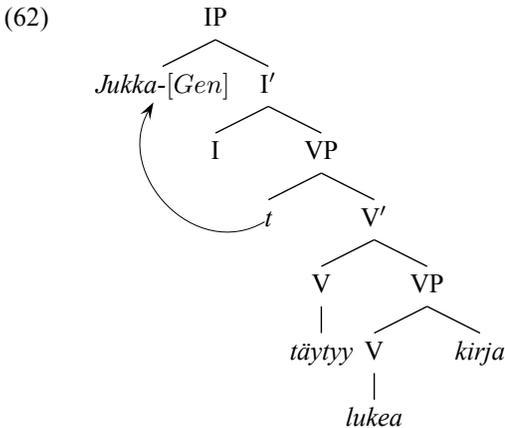
²⁸I suppress some details such as the movement of the verb to I⁰.



As for sentences, like (61), with modals such as *täytyy* ‘must’ as the main verb, in these cases, the subject is in genitive case, rather than the nominative, and the verbs in question do not agree with the subject.

- (61) Jukan *täytyy* lukea kirja.
 Jukka-Gen must read-Inf book-Acc/Nom
 ‘Jukka has to read (and finish) a book.’

Then, the genitive feature is not blocked from being morphologically realized on the subject due to the lack of agreement, in contrast to (59). Since genitive case is realized on the subject, no genitive feature is stranded, and no genitive marking occurs on an accusative object in these sentences (Vainikka 1989: 172-173). I show this derivation in (62).

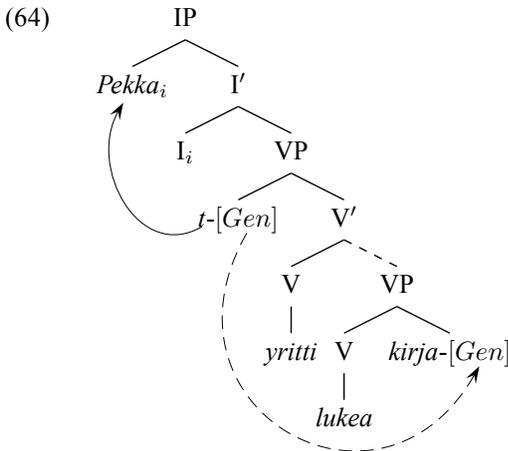


For passives and imperatives, Vainikka (1989: 167-170) proposes that no specifier position is generated in the verb phrase in these sentences. Therefore, no genitive suffix is generated either. This has the consequence that the object is unmarked.

5.2.1.4.2 *Embedded clauses* One important feature of this case phenomenon is the dependence of uninflected infinitival clauses (such as the basic form of the first infinitive) on the root clause for accusative case, versus the independence of inflected infinitival clauses (such as the second infinitive inessive or first infinitive translative). This is accounted for by Vainikka as follows. Consider first (63).

- (63) Pekka yritti lukea kirjan.
 Pekka-Nom tried read-1Inf book-Acc/Gen
 ‘Pekka tried to read the book.’

This example involves an infinitival clause, *lukea kirjan*. Vainikka (1989: 254, 273) supposes that the verbal domain in these uninflected infinitival clauses lacks a specifier. This has the consequence that neither a subject nor a genitive feature is generated in these clauses. This, in turn, means that the kind of subject that the root clause has will affect the kind of object that the embedded clause has: A root clause with a nominative subject will jettison the genitive feature it receives by default. This feature will percolate down to the embedded object. I have shown this case in (64).²⁹ A root clause with a genitive subject, in contrast to this, will use up the genitive feature leaving the embedded object bare.



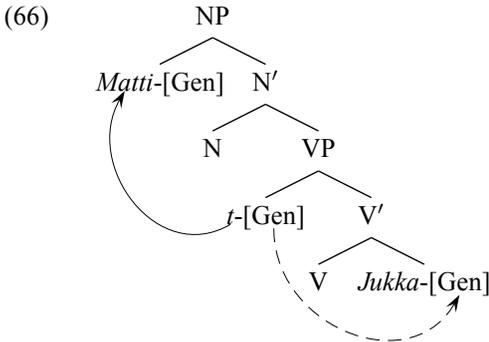
As to inflected infinitival clauses, Vainikka (1989: 288-314) proposes that these are VPs topped up by an NP layer. Thus, there are two specifier positions in these structures where a genitive feature can be generated. This ensures the independence of these clauses from the matrix clause. Let me make these comments more concrete: The embedded clauses in question can have either genitive-marked subjects, as in (65a), or have no subjects, as in (65b).³⁰

²⁹As before, I suppress some details such as verb movement to I⁰.

³⁰These genitive subjects may or may not co-occur with possessor agreement marking. Even though this does have some bearing on the issue, it has no direct implications for Vainikka's account of the case of the object. Regardless of whether the possessor subject agrees or not there will be a sufficient number of free genitive features in the embedded clause. However, examples like (65a) where no visible agreement features are present on the infinitival predicate do pose a problem for my theory, where the presence of agreement

- (65) a. [*Matti huomattessa Jukan*] oli jo liian
 [*Matti-Gen notice-2Inf-Ine Jukka-Acc/Gen*] was already too
 myöhäistä.
 late
 ‘It was already too late when Matti noticed Jukka.’
- b. *Sinun täytyy ostaa tämä romaani* [*lukeaksesi*
 you-Gen must buy-1Inf this novel-Acc/Nom [read-1Inf-Tra-1sg
 sen]
 it-Acc/Gen]
 ‘You must buy this novel in order to read it.’

I will explain Vainikka’s proposal for the derivation of the embedded clause in (65a). Consider the tree in (66).



Here, there are two specifier positions where the subject can receive a genitive feature. Regardless of which genitive feature is actually spelled out, there is one genitive feature that remains unrealized. This feature will percolate down to the object.

5.2.1.4.3 Criticisms Vainikka’s (1989) system accounts for the distribution of bare objects and accusative-marked objects, and the (in)dependence of embedded clauses sufficiently well. However, it is largely stipulative, with few convincing empirical arguments, and relies heavily on theory internal reasoning. Due to this, it suffers the major set back of being impossible to harmonize with the current understanding of many issues in theoretical syntax. Below I spell out two specific problems.

First, the central assumption for Vainikka’s proposal is that genitive features are generated in the specifier positions of lexical projections, and not the specifiers of functional projections. Reliance on this assumption puts Vainikka’s proposal in great jeopardy because the projections that are central to it, namely the VP and the NP (in whose specifiers the genitive feature and the subject are generated) are today analysed as having important functional layers. The subject in a clause is widely accepted to be generated in the specifier position of the *v*P, a functional layer that closes off the ver-

features is crucial. To circumvent this problem, I have to assume that in these instances, abstract agreement features are present nonetheless. This is similar to my treatment of third person singular verbal agreement features in Turkish which are also not morphologically marked.

bal domain. In fact, the specifier position of the ν P is thought to be the only specifier position in a transitive verb phrase. Also, nominal structures with genitive subjects, like the finite embedded clauses that have been discussed here ((65) and the associated derivation in (66)) are considered to be DPs, a functional projection, rather than NPs. This means that in the light of Vainikka's (1989) assumption that the genitive feature is generated in the specifier position of a lexical projection, there would be no way in these structures of generating the extra genitive feature needed for accusative/genitive assignment to the object. Alternatively, if one were to expand this assumption to cover functional projections, one could also claim, say, the specifier position of the IP to be a position where a genitive feature is generated by default. This would have the consequence that in sentences with *täytyy* as the main verb and with genitive subjects (such as (61) and the associated tree in (62)), there would be a free genitive feature that could be used to mark the object, contrary to fact.

Second, Vainikka (1989) crucially relies on there being no covert subjects of any kind in infinitival clauses. Were these postulated to exist, one could not escape accepting the presence of a specifier position in the verb phrase of an infinitival embedded clause (an assumption to the contrary is adopted by Vainikka as pointed out during the discussion of (63) and (64)). A genitive feature would be generated in this specifier position by default according to Vainikka. This genitive feature would be jettisoned by the null subject that would not allow this feature to be realized. Thus, one would have to accept the presence of a 'free' genitive feature that could be used to mark the embedded object in these contexts. (This would be similar to an agreeing subject of a finite clause discarding its genitive feature, which, then, can be used to case mark the object.) This would effectively mean that non-finite embedded clauses should be independent of root clauses, contrary to fact. The reason why this theoretical choice is today problematic for Vainikka's theory is that covert subjects of various kinds are a crucial ingredient of modern syntactic theory. One may assume sentences like (63), which involve restructuring verbs, to lack the covert subject PRO in the embedded clause in the light of Wurmbrand (2001) which proposes that restructuring infinitives lack PRO. However, there is no guarantee that covert subjects will be absent in all the instances that Vainikka's theory requires them to be absent. Particularly problematic are sentences like (53e) which involve non-restructuring verbs. Wurmbrand (2001) proposes that non-restructuring infinitives do have PRO as covert subject.

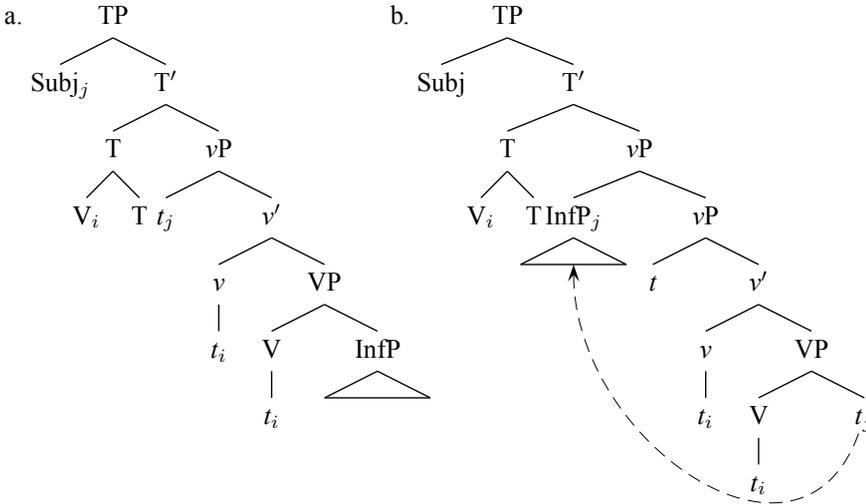
5.2.1.5 *Jump-start in Finnish*

I will now present my own JuSH-based account of the distribution of bare objects in Finnish. I will first discuss the passive structures in (52c)-(52d) and (53d), the root infinitives in (52a), and copular structures in (52e) and (53a)-(53b). I will discuss first and second person imperatives in (52b) and (53c) together with Kolyma Yukaghir data in section 5.2.2.

Before I begin, let me lay out an assumption that I make which has a bearing on the analysis I will propose. I assume that infinitival complements that are not marked for case, here the basic form of the first infinitive and the fourth infinitive ((54)), are in their base position, i.e. the position in which they are merged in the derivation, e.g. the

complement position of the VP.³¹ The infinitives that are case-marked ((55)–(56)), on the other hand, raise out of the VP and adjoin to the vP. I have shown these two options in (67).

(67)



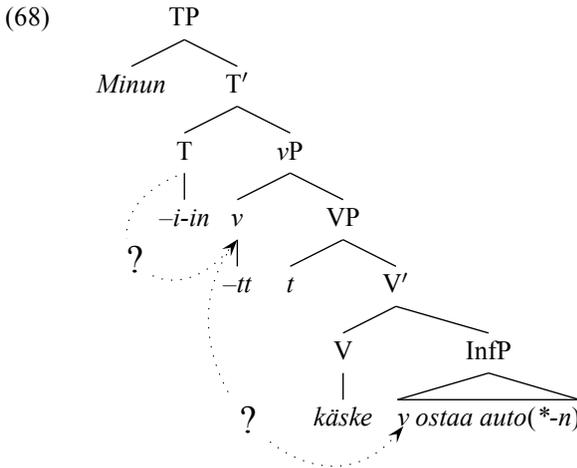
The case marking on the infinitives themselves is not effected in anyway by an environment that is detrimental to accusative case assignment because instructive, inessive, illative, adessive and abessive are among the inherent cases in Finnish (see e.g. Nikanne 1993). I have shown in various places in chapters 2 through to 4 that inherent cases are immune to the conditions that affect structural cases. Thus, I am basically adopting for Finnish infinitival clauses the analysis that I have proposed for bare versus case-marked infinitives in Turkish in chapter 4. Note though that the constituent order in examples involving high infinitives, as well as low, is V–Inf, rather than Inf–V. I assume that the raising of the infinitive complement clause is masked due to the lexical verb raising to T in Finnish (cf. Nelson 1998, Holmberg 2000).

I will now discuss the effects of the syntactic contexts in (53) on the different types of Finnish infinitives.

5.2.1.5.1 Passives As mentioned in section 5.2.1.2, passive verbs lack what can be called genuine agreement features. I will interpret this to mean that T in a passive sentence has ‘deficient’ φ -features—in the sense that these features have probably been fixed to a third person singular value in the history of the language, and have fossilized. So, one would expect T to be incapable of jump-starting *v*. I show this for complex sentences in the diagram in (68), the derivation of (69b) below.³² The same account applies, mutatis mutandis, to simple passive sentences.

³¹I exclude the fourth infinitive from the discussion. This is because it seems capable of licensing accusative case under all circumstances. According to Vainikka (1989: 247) this form is archaic or literary. Following Hakulinen and Karlsson (1979), she claims it can be “considered idiomatic or frozen”.

³²I indicate the effect of the deficient φ -features with a question mark.



No φ -features are passed down to v ; v is unable to agree with the theme argument; and the theme argument fails to receive accusative case. This goes for both high ((69a)) and low ((69b)) infinitives.

- (69) a. Kieltaydy-tt-i-in [osta-ma-sta se kirja].
 refuse-Pass-Past-P [buy-3Inf-Ela that book]
 'One refused to buy that book.'
- b. Minu-n kāske-tt-i-in [osta-a auto].
 I-Gen tell-Pass-Past-P [buy-1Inf car]
 'I was told to buy a car.'

Note that the claim here is the following: What effects the infinitive is a φ -deficient T head and not a passive v of the type postulated in English or Turkish passives. Thus, this phenomenon is not comparable to the passivization effect in Turkish that I have presented in chapter 4 sections 4.1.2 and 4.2.2. An English/Turkish-type passive vP layer in Finnish may be affecting a low infinitive embedded under it but that would not be possible to tease apart from the effect of the deficient subject agreement that I claim is at work here. What would be possible to say is that a high infinitive should *not* be affected by passivization. In chapter 4, I showed this to be the case in Turkish. This is certainly not the case here. This corroborates the idea that deficient subject agreement is responsible for the pattern in (69), rather than a passive vP .

Contrast (69) with the pattern induced by an infinitive embedded under an active verb, or rather under a T head that has fully-functional agreement features ((70)).

- (70) a. Minä kieltaydy-n [osta-ma-sta se-n kirja-n].
 I refuse-Pres.1sg [buy-3Inf-Ela that-Acc book-Acc]
 'I refuse to buy that book.'
- b. Pauli kask-i Marja-Liisa-n [osta-a talo-n].
 Pauli ask-Past.3sg Marja-Liisa-Gen [buy-1Inf house-Acc]
 'Pauli told Marja-Liisa to buy a house.'

In (70a), an active sentence that can be contrasted with the passive in (69a), an accusative inside a high infinitive is perfectly possible. The same goes for the low infinitive in (70b) (from Sulkala and Karjalainen 1992: 222). T with normal φ -features can jump-start *v*.

5.2.1.5.2 *Verbs of obligation* I believe the evidence that one can use to tease apart the possible effect of passivization from the effect of deficient agreement morphology that I claim is responsible for the unavailability of accusative case in (69) can be obtained from verbs of obligation.

In section 5.2.1.2, I showed that the same observation with respect to case assignment holds for some verbs of obligation that appear to have only one similarity with passive verbs, which is their agreement properties. These are invariably inflected in the third person singular which suggests that they have deficient agreement properties, in a way not dissimilar to the passive forms. As I show again in (71), infinitives embedded under these verbs disallow accusative assignment inside them.

- (71) a. Minu-n täytyy [osta-a kirja].
 I-Gen must.3sg [buy-1Inf book]
 'I must buy a/the book.'
 b. Sinu-n täytyy kieltäydy-ä [osta-ma-sta se kirja].
 you-Gen must.3sg refuse-1Inf [buy-3Inf-Ela that book]
 'You must refuse to buy that book.'

One can use the tree in (68), *mutatis mutandis*, to represent the example in (71a). Here, we have a low infinitival clause in the complement position of the VP that the verb *täytyy* 'must' originates from. *täytyy* itself raises to T^0 . The configuration in (71b) is effectively the same. The high infinitive might be high within the infinitival clause headed by *kieltäydyä* 'refuse', but it is still lower than the complement position of the higher verb. The distinction between a low and high infinitive is immaterial here, I have given examples of both for completeness sake. Then, this also supports the idea that deficient subject agreement is responsible for the pattern here, rather than a passive *vP*.

The preceding discussion implies that there is nothing that is intrinsic to the infinitive that bars accusative case in it other than the unavailability of accessible φ -features. This is, then, why the first infinitive in (52a) has a bare direct object: It is not embedded under any functional category that may be availed of as the source of φ -features that can be used to license accusative case (as opposed to those in, say (70), which are). Furthermore, this also suggests that an infinitive embedded under *olla* 'be', as in (53a), has to have a direct object unmarked in accusative for the very same reason. The same account probably extends to the possessive copular construction in (52e). Let me now turn to these.

5.2.1.5.3 *Copular structures* I had given examples of possessive copular constructions and infinitives embedded under other copular structures in (52e) and (53a), respectively. I repeat these below as (72a) and (72b).

- (72) a. Häne-llä on hevonen.
s/he-Ade be.3s horse(.Acc)
'S/he has a horse.'
- b. On hauska [saa-da hyvä ystävä].
be.3sg nice [get-1Inf good friend]
'It is nice to get a good friend.'

These constructions do impose restrictions on the occurrence of accusative case in the complement position as I had previously mentioned, but the entire picture is more complicated than that in (72). Consider (73).

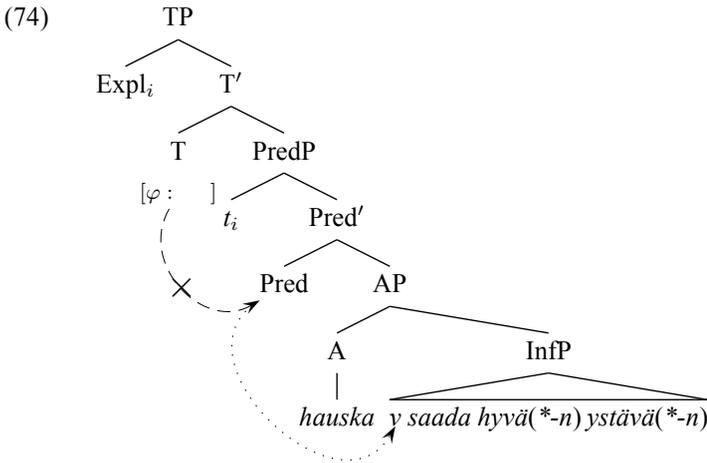
- (73) a. Ole-mme [osta-ma-ssa auto-n].
be-Pres.1pl [buy-3Inf-Ine car-Acc]
'We are planning to buy a car.'
- b. Ole-n kiinnostunut [osta-ma-an pesukonee-n].
be-Pres.1sg interested [buy-3Inf-III washing machine-Acc]
'I am interested in buying a washing machine.'

These sentences involve infinitives that look like they are embedded in syntactic contexts analogous to (72a) and (72b), respectively, but they allow accusative case marking in them. In this respect, they constitute *prima facie* counter-examples to the claim that copular structures have a detrimental effect on accusative case. How can one explain this contrast without giving up this claim? First, notice that there is an important difference between the infinitives in (72) and those in (73). The infinitives in (72) are those infinitives that I have assumed above to be low. (Note that they are unmarked for case.) The infinitives in (73), on the other hand, are those that I have assumed to be high.³³ (They are marked in inessive and illative cases, respectively.) Next, I have assumed in chapter 3 section 3.3, following Baker (2003), that copular structures have a PredP layer. Let us assume that that projection is also present in the structures in (72) and (73), so that (72b), for instance, has the structure in (74) (cf. Baker 2003: 36, (32)).

³³Evidently, the word order in these examples belies this assumption. We can assume that the infinitive has been obligatorily extraposed here. Dutch is an example of a language that has obligatory extraposition of complement clauses (Kerstens et al. 2001), as shown in (i).

- (i) a. Cem heeft [de prijs] geweigerd.
Cem has [the prize] refused
- b. *Cem heeft geweigerd [de prijs]
Kees has refused [the prize]
'Cem has refused the prize.'
- c. *Cem heeft [de prijs aan te nemen] geweigerd
Cem has [the prize prt to accept] refused
- d. Cem heeft geweigerd [de prijs aan te nemen].
Cem has refused [the prize prt to accept]
'Cem has refused to accept the prize.'

It might be possible to adopt this assumption for (67) as well, in place of verb raising to T.



Here the infinitive is a low infinitive. It is merged as the complement of an adjective phrase and remains in situ. The adjective phrase is embedded under PredP. The subject of PredP is a silent expletive (the Finnish counterpart of the English *it*), which moves to the subject position of the TP.³⁴ Now, crucially, I have shown in chapter 3 section 3.4.2.2.1 that a PredP layer acts as a block for Jump-start unless head movement applies through it. Head movement through a head either totally eliminates the blocking effect of that head or diminishes it, acting as a channel through which Jump-start can proceed (cf. (9a)). The lack of head movement between two domains, by contrast, either imposes severe restrictions on Jump-start or makes it totally impossible. I showed in chapter 3 that this is precisely why the complements of adjectives cannot be assigned accusative case: Adjectives raise till Pred⁰, but not beyond it. Then, applying the same account here, I propose that the reason why an infinitive embedded under a copula disallows the accusative in (74) and related structures is because of the intervening PredP layer. Head movement of the adjective does not continue beyond Pred⁰, so restrictions on the passage of φ -features should be expected between the domain that is above PredP and the domain that is below it.³⁵ In contrast to this, a high infinitive, which would be adjoined to PredP (following the assumption I have adopted above about the positions of high versus low infinitives), allows an accusative object inside it, because it can avoid the blocking effect of PredP thanks to its positioning above Pred⁰. I show

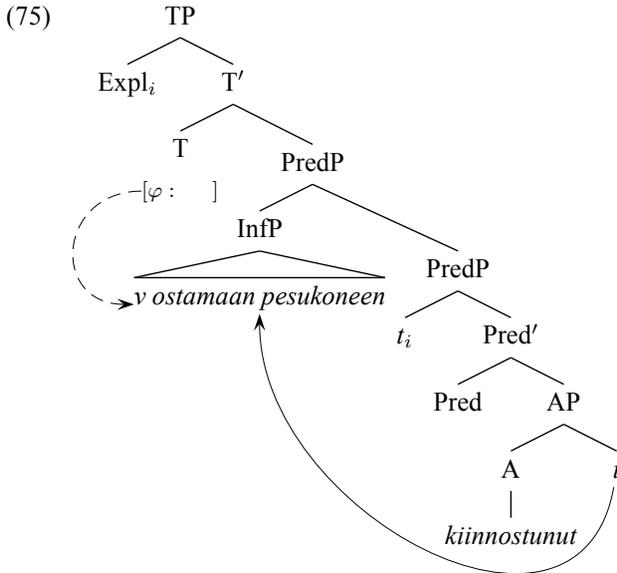
³⁴In chapter 4 section 4.2.2.4, I have discussed structures in Turkish that are comparable to these, with similar effects that obtain—with the important difference that the high/low distinction did not seem to apply there. There I have mentioned that Baker (2003: 36) notes the existence of nouns and adjectives in English that have to be analysed in a way parallel to (74) ((i)).

- (i) a. *The announcement makes* [_{PredP} *it* Pred [_{AP} *likely* [*that prices will go down*]]].
 b. *I consider* [_{PredP} *it* Pred [_{NP} *a cinch* [*that Chris will win*]]].

When Pred turns a noun or adjective into a predicate, one of the things that it does is to make a θ -marking category out of them. The precise θ -role that the noun/adjective assigns is a function of its lexical meaning. Baker conjectures that the lexical semantics of the APs and NPs in (133) is such that Pred does not activate a θ -role for them, even though it does make them into predicates. The specifier of PredP is then filled with an expletive *it* and the clausal complement is directly generated as the complement of the noun/adjective.

³⁵I abstract away from head movement of A in (74).

this in (75).³⁶



The same account could be generalized over possessive copular structures ((72a)): The functional head that has the possessed noun phrase as its immediate complement (and could agree with this noun phrase—assuming with Baker 2008 that probes may look downwards in Finnish—and assign it accusative case) is found inside the PredP, which blocks Jump-start.

This explanation predicts that even a high infinitive should disallow accusative case if the PredP it is adjoined to is embedded under a T⁰ that is deficient in terms of φ -features (or more precisely under C⁰ which is the source of the deficient φ -features on T). The reader will remember that T⁰ found in passive and obligation verbs has those properties. This prediction is borne out ((76)).

- (76) a. Ol-t-i-in [osta-ma-ssa auto].
 be-Pass-Past-P [buy-3Inf-1ne car]
 ‘One was planning to buy a car.’
- b. Sinu-n täytyy ol-la kiinnostunut [osta-ma-an
 you-Gen must.3sg be-1Inf interested [buy-3Inf-III
 pesukone].
 washing machine]
 ‘You must be interested in buying a washing machine.’

Both examples in (76) involve the copular verb *olla* ‘be’. In (76a), this verb is in passive form in a root clause; in (76b) it is in the first infinitive form embedded under *täytyy*. It has two case-marked (i.e. high) third infinitival forms as complement. Accusative marking is unavailable in these third infinitival clauses in both cases. I assume that the

³⁶I suppress here details such as the extraposition of the infinitival clause.

structures in (76) have a PredP projection like the structure in (75), and that the third infinitival clauses are adjoined to this projection as in that derivation. Even though the high infinitive evades the blocking effect of PredP by raising above it, it is not so high as to be able to avoid the detrimental effects of the φ -deficient T⁰ (or the source of the deficient φ -features C⁰). It is basically sandwiched between PredP and T⁰. In fact, there does not seem to be any position in the matrix clause that would enable the infinitive to obtain φ -features. Thus, the *v* inside the high infinitival cannot be jump-started due to the lack of adequate φ -features. Consequently, accusative case is unavailable in this domain.

The preceding discussion on infinitival clauses embedded under copular forms and verb forms invariant in terms of agreement has a prediction that holds for both cases: Accusative in an infinitive that has its own φ -features should be grammatical even when it is embedded in these contexts. This prediction is borne out. I have exemplified this with verbs with passive and obligation verbs in (77).

- (77) a. Me tul-t-i-in sisaan [rikko-a-kse-mme ove-n].
 we come-Pass-Past-P in [break-1Inf-Tra-1pl door-Acc]
 ‘We came in to break the door.’ (colloquial passive)
- b. Sinu-n täytyy maksa-a [osta-e-ssa-si kirja-n].
 you-Gen must.3sg pay-1Inf [buy-2Inf-Ine-2sg book-Acc]
 ‘You must pay when you buy a book.’

In (77a) we have a purpose clause headed by a first infinitive translative, *rikkoaksemme*. This verb form conveys the meaning ‘in order to’. It is conjugated for first person plural. Notice that this clause contains an accusative-marked theme argument, *ovi* ‘door’. Given that it is case-marked, I assume that the purpose clause is high, i.e. adjoined to *vP*. The passive verb *tultiin* is at T⁰. This is a configuration that, in the light of the preceding discussion, potentially prevents Jump-start from taking place due to the deficiency of agreement features and consequently rules out the accusative in the infinitival clause. However, the presence of fully-functional agreement features on the infinitive itself eliminates the detrimental effect of this syntactic context and makes accusative assignment possible. The same pattern obtains in (77b). Here we have a temporal adjunct clause headed by a verb in second infinitive inessive form inflected for second person singular, *ostaessasi*. It is embedded under the obligation verb *täytyy*.^{37,38}

³⁷Let me spell out an implicit assumption here: The agreement marking seen on embedded clauses inflected for person and number (i.e. the first infinitive translative and the second infinitive inessive) is intrinsic to those embedded clauses. In other words, it is not derived from a higher functional head. This is essentially the assumption that I have adopted for finite embedded clauses in Turkish.

³⁸I could not get my Finnish informants to produce an infinitival complement clause (rather than an adjunct clause) headed by an inflected infinitive embedded under a passive or a monopersonal verb of obligation, so it is not possible to have a minimal pair with the examples that involve uninflected infinitives. The reason for this is that these inflected infinitives are either purpose clauses (first infinitive translative) or temporal subordinate clauses (second infinitive inessive), i.e. adjuncts and not complements. The uninflected infinitives can function as complements, as the examples show. However, my theory makes no distinction between adjunct clause and argument clauses. Both may require Jump-start if non-finite, and are subject to the same conditions for this mechanism to operate.

5.2.1.6 *The pronominal accusative in Finnish*

Before I close this section, I will make a brief comment on the *t*-accusative observed on pronouns that bear the theme θ -role.

The *t*-accusative is allowed in the contexts that *n*-accusative is disallowed, i.e. the contexts where full noun phrase objects must be unmarked. In traditional Finnish linguistics, this is taken as a sign that unmarked objects have morphologically unmarked accusative case. If this argument is correct, it will nullify my assumption that bare objects are caseless and, thus, has the potential to undermine my account of the unavailability of accusative in certain environments in Finnish. In that case, the distribution of bare objects would in all likelihood be an issue of the unavailability of accusative marking in certain contexts rather than the unavailability of accusative case per se. An explanation of this would probably not require a JuSH-based account. I will provide one argument against this traditional stance.

For some of the contexts where a pronoun marked in *t*-accusative may replace a bare noun phrase, there are arguments suggesting that the full noun phrase carries nominative case. Kiparsky (2001) provides evidence to this effect from Vilkuna (1989: 155) from case parallelism between pronouns and nouns in coordination and agreement structures. In coordination, an argument shared by two predicates must be assigned the same case by each of the conjoined predicates. In this context, an unmarked noun phrase subject is treated as parallel to a nominative noun phrase object, but not to an accusative pronominal object. Consider (78).

- (78) a. Mikko pyörty-i ja (Mikko) kanne-tt-i-in ulos.
 Mikko.Nom faint-Past.3Sg and (Mikko(.Case)) carry-Pass-Past-P out
 ‘Mikko fainted and (Mikko) was carried out.’
- b. Hän pyörty-i ja *(häne-t) kanne-tt-i-in ulos.
 He.Nom faint-Past.3Sg and *(he-Acc) carry-Pass-Past-P out
 ‘He fainted and (he) was carried out.’

Kiparsky argues that assuming that the unmarked noun carries nominative case provides a simple explanation why the ellipsis in the second conjunct is allowed in (78a) but not in (78b). Active verbs, such as *pyörtyi* ‘fainted’ require their sole argument to have nominative case. ‘Passive’ verbs, such as *kannettiin* ‘was carried’, by contrast, assign morphological nominative case to their sole overt argument if it is a full noun phrase (*Mikko*), and morphological accusative case if it is pronominal (*hänet*). The ellipsis in (78a) is grammatical because the shared argument *Mikko* gets nominative case from both verbs. The ellipsis in (78b), on the other hand, is ungrammatical because the shared argument gets morphological nominative case from the first verb, and morphological accusative case from the second verb. Assuming that the unmarked noun carries accusative case does not allow us to formulate such a generalization, because under this assumption, *Mikko* and *hänet* as objects of *kannettiin* in (78) are both accusative. Under the traditional view, then, there would be no explanation for the contrast between (78a) and (78b). So, the fact that a pronoun marked in the *t*-accusative can replace a full noun phrase unmarked for case is not a reliable argument for the claim that that noun phrase has some morphologically unmarked accusative case.

5.2.2 Finnish imperatives and Kolyma Yukaghir

I now move on to a discussion of first and second person imperatives in Finnish. As exemplified in (52b) and (53c), these disallow accusative-marked full noun phrase objects. I will be comparing these constructions mainly with sentences that have first and second person subjects in Kolyma Yukaghir, which also disallow accusative objects. I will provide an explanation of these case assignment patterns using the JuSH, coupled with some additional assumptions.

5.2.2.1 The core data

Kolyma Yukaghir and Tundra Yukaghir together constitute the nearly-extinct Yukaghir family, spoken in eastern Siberia. Kolyma Yukaghir is an agglutinating language which prefers suffixing, and has a complex system of non-finite clauses. It allows agreement only with the agent argument. It has SOV constituent order (Maslova 2003).

In Kolyma Yukaghir, nominative case is morphologically unmarked and the accusative morpheme is *-Gele*. The distribution of accusative arguments is subject to constraints that are familiar from the discussion in section 5.2.1: The object has to be marked in “nominative” case (i.e. be bare) when the subject is a first or a second person, or when it is in a non-finite clause (Maslova 2003: 88-90). In (79) are some illustrative examples.

- (79) a. Met tolow kudede.
I deer kill.Tr.1sg
'I killed a deer.' (Maslova 2003: 10)
- b. Mit emd'e čohoče budie-t mit-kele juø-m, [mit anil
our younger sibling hill super-Abl we-Acc see-Tr.3sg [we fish
ik-čī-l]-gele.
catch-Iter-ANom]-Acc
'Our younger brother saw us fishing from the shore.'
(Maslova 2003: 149)
- c. Kurčeŋ āj [imil šelge-de-j-t] amdā-l'eł.
crane Conn [neck break-Caus-Pfv-SS:Ipfv] die-Infr.3sg
'The crane died too, having broken its neck.' (Maslova 2003: 161)
- d. Met es'ie tet pulut-kele kudede-m.
my father your husband-Acc kill-Tr.3sg
'My father has killed your husband.' (Maslova 2003: 89)

In (79a), the direct object *tolow* 'deer' is unmarked, and the sentence has a first person subject. Constructions that Maslova refers to as “non-finite clauses” come in several different types: attributive, nominal and switch reference. Embedded clauses headed by nominal and switch reference forms are particularly relevant. As can be seen in the bracketed portions of the examples (79b) and (79c) respectively, these clauses take bare

objects (*anil* ‘fish’ and *imil* ‘neck’).^{39,40} In other environments, accusative marking in *-Gele* is found on the object ((79d)).⁴¹

The non-finite clauses exemplified in (79b) and (79c) are characterized by lack of agreement morphology when compared to main clauses. In this sense, these domains constitute prime examples of the dependence of accusative case on subject agreement morphology in Kolyma Yukaghir.

As to the effect of the choice of subject on the case of the object, this pattern is directly comparable to the behaviour of first and second person imperatives in Finnish. Recall that in Finnish, first and second person imperatives, or in an infinitival clause selected by a first or second person imperative verb, the object must be unmarked. This contrasts with third person imperatives that do allow accusative case. I show this in (80).

- (80) a. Nāe Napoli!
 see.Imp.2sg Naples
 ‘See Naples!’
- b. Anna Marja-n [osta-a auto].
 let.Imp.2sg Marja-Gen [buy-1 Inf car]
 ‘Let Marja buy a car.’
- c. Osta-koon kirja-n!
 buy-Imp.3sg book-Acc
 ‘May he buy a book!’

My theory provides the sketch of an explanation for this intriguing pattern. I will presently lay that out. I will not discuss the non-finite clauses in (79b)-(79c).

5.2.2.2 *Jump-start in Finnish imperatives and Kolyma Yukaghir*

Building on works like Schlenker (2003, 2005), Sigurðsson (2004) and Anand and Nevins (2007), Baker (2008) proposes that there are special empty categories positioned at the CP level which refer to the speaker and the addressee of a sentence, as stated in (81) (Baker 2008: 125-126).

³⁹There are examples where accusative-marked objects occur with switch reference forms ((i)).

- (i) šebis’e nono-gele šaqal’e-š-nu-de eks’il’-ŋin qon-re-s’-u-m
 wild.rose branch-Acc gather-Caus-Ipfv-SS:Iter boat-Dat go-Caus-Iter-0-Tr:3sg
 ‘He was gathering wild-rose branches and bringing them to the boat (several times).’
 (Maslova 2003: 163)

These are structures where the objects can be argued to be in the matrix clause, rather than the embedded, and hence, in a finite domain where accusative can be licensed.

⁴⁰Attributive forms also take unmarked objects, but for an unrelated reason. See Maslova (2003: 89) for discussion.

⁴¹Accusative case on pronouns has different licensing conditions. I will not get into that topic here. Morphological accusative marking can be observed on all direct object pronouns regardless of their environment. First and second person pronouns have an accusative in *-ul* in addition to the *-Gele* accusative. This is reminiscent of the situation in Finnish, where pronouns have a special accusative (*-t*) which is always present on a pronominal theme argument.

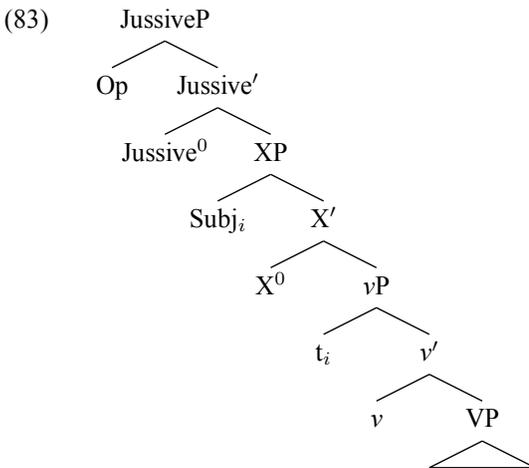
- (81) a. All matrix clauses and certain embedded clauses have two special null arguments generated within the CP projection, one designated S (for speaker) and the other A (for addressee).
 b. In the absence of an over-riding control relationship, S designates the person who spoke/wrote the CP and A designates the person who the CP was addressed to.

According to Baker (2008: 126), “[a]ll uses of a first person pronoun must . . . be interpreted by being bound by the S operator, and all uses of a second person pronoun must be interpreted by being bound by the A operator, in accordance with [(82)]”.

- (82) *Person Licensing Condition*
- a. A phrase X is first person only if it is locally bound by an S or another element that is first person, and there is no other S that c-commands X but not its local binder.
 b. A phrase X is second person only if it is locally bound by an A or another element that is second person, and there is no other A that c-commands X but not its local binder.
 c. Otherwise, X is third person.

Thus, the Finnish and Kolyma Yukaghir constructions under consideration also have S and A operators in their left periphery.

Furthermore, adopting an approach to imperatives along the lines of Zanuttini (2008), we can assume that a first or second person subject is syntactically represented in Finnish imperatives. Zanuttini proposes the structure in (83) where an imperative is a Jussive Phrase.

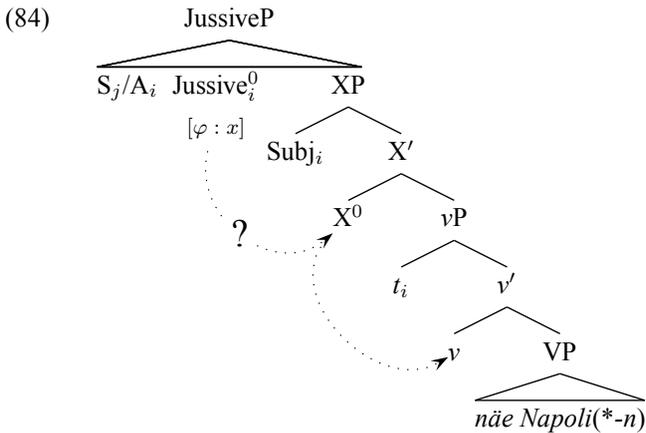


Thus, the structure of an imperative clause consists of the predicate, its arguments, and some functional structure.⁴² In this structure, the head of JussiveP, Jussive⁰, agrees with the subject and assigns it case. Zanuttini argues that neither JussiveP nor the operator

⁴²Zanuttini puts aside the question of whether a TP layer is present in an imperative or not.

in its specifier can be identified with the S/A operator proposed by Baker (2008), but deems it possible to assume that such an operator is present somewhere at JussiveP level. After Baker (2008), this operator will bind the subject if the subject is first or second person. This operator-variable binding relation will not be established if the subject is third person.

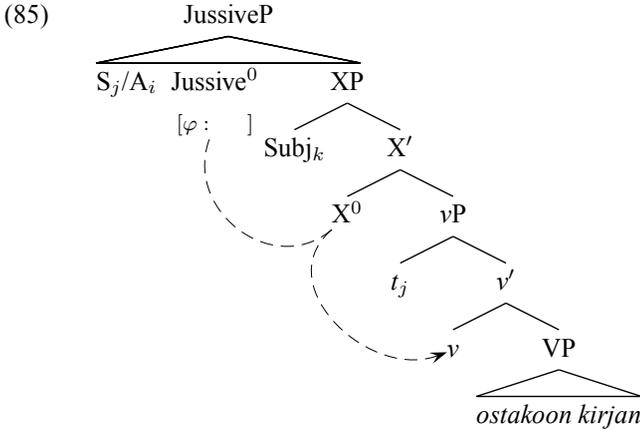
This difference between first and second person imperatives versus third person imperatives is likely to play a crucial role in the case assignment pattern under discussion. One possible venue to explore is a possible intervention effect induced by Jussive⁰. Baker observes that there has been a long standing intuition among linguists that there is something pronominal about agreement morphemes. Both pronouns and agreement morphemes make use of the same inventory of features, for instance, and many times the two are historically related (see for example Givón 1976, Bresnan and Mchombo 1987). Baker (2008) also observes that “even when recognizably the same condition applies to both phrases and heads, the locality holds in a stronger form in the case of heads.” Then, suppose that the agreement features in an imperative clause, by force of their pronominal nature and being located on a head, namely Jussive⁰, induce an intervention effect on the operator–variable relation between the S/A operator (which is above Jussive⁰) and the subject (which is below Jussive⁰). If the operator–variable relation has to be established, according to (82), the intervention effect of the agreement features on Jussive⁰ can only be circumvented by coindexation and the ensuing agreement with the subject. I leave aside the precise implementation of this intuition, but propose (84) for the example in (80a) as an approximate characterization of the process.



In this derivation, the licensing relation between the S/A operator and the first/second person subject forces Jussive⁰, the source of φ -features, to agree with the subject *before* it has the chance to clone its φ -features and pass them down to *v*. This has the consequence that *v* will not be jump-started and any direct object that may be present

will not receive accusative case.^{43,44}

When the subject is third person, on the other hand, there is no licensing relation between the S/A operator and the subject. Then, Jussive⁰ is not forced to agree before it can clone and pass its φ -features down to v . v can then agree with the object and assign it accusative case. I show this in (85), the derivation of (80c).



One could attribute the difference between imperative and declarative clauses in Finnish to a difference in timing. Suppose, as is assumed in the framework I have adopted in this work (Chomsky 2000, et seq.), that clause structure is constructed step-by-step, with the higher elements merging later than lower ones. In a declarative clause, C⁰ will merge before the S/A operator merges and binds the subject, C⁰ will pass its φ -features down before they are valued. In contrast, if the JussiveP projection as a whole is plugged into the derivation simultaneously in a Finnish imperative, Jussive⁰ may be forced to agree before it has a chance to clone its φ -features.^{45,46}

⁴³Here and in a few other places in this chapter, I stipulate the order in which operations take place. One theoretical problem with this is that the framework that I adopt here tries to avoid assuming any sequence in the application of operations. This problem was brought to my attention by Marjo van Koppen. I concede the problem but will not attempt here to have these orders follow naturally from principles of grammar.

⁴⁴Following common practice, I have indicated the binding relation between the operator and the subject with identical indices. I have also done this for the agreement between Jussive⁰ and the subject. This practice is justified under (i) proposed in Baker (2008: 124).

- (i) If F Agrees with XP, then F counts as a variable that referentially depends on XP.

Thus, the operator-variable relation and the Agree relation establish the same kind of referential link between two items.

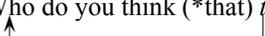
⁴⁵Adjoining the S/A operator to Jussive⁰ and introducing them simultaneously should also yield this effect.

⁴⁶Other data seems to call for a different JuSH-based solution. Finnish first and second person imperatives can have overt subjects. However, these have different properties than subjects of third person imperatives. Consider the examples in (i) and (ii).

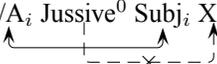
- (i) a. Näh-kää (te / poja-t) Napoli!
 see-Imp.2pl (you.pl.Nom) / boy-pl.Nom) Naples.Nom
 'You (guys) see Naples!'
 b. *Te näh-kää Napoli!
 you.Pl.Nom see-Imp.2pl Naples.Nom

One could apply this account of Finnish imperatives, *mutatis mutandis* to Kolyma Yukaghir declarative sentences. In Kolyma Yukaghir, the CP projection is merged simultaneously into the derivation, reproducing the effects seen in first and second person imperatives.

This way of approaching the case assignment problem in Finnish imperatives and Kolyma Yukaghir makes it comparable to the so-called *that*-trace effect. This is the observation that a subject cannot be moved across an overt complementizer in some languages, as in (86).

(86) Who do you think (*that) t came?


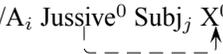
In other words a relation between the *wh*-word and its trace in the subject position rules out an overt complementizer. Compare this with the situation here where a relation between the S/A operator and the subject rules out a Jump-start relation that Jussive⁰ is engaged in ((87)):

(87) S/A_i Jussive⁰ Subj_i X⁰


By contrast, the lack of a relation between a *wh*-word and a trace in the embedded subject position rules in the complementizer ((88)):

(88) Who_i did you promise that John_j would come?

Similarly, the lack of a relation between the S/A operator and the subject rules in a Jump-start relation that Juss⁰ is engaged in ((89)):

(89) S/A_i Jussive⁰ Subj_j X⁰


‘You see Naples!’

- (ii) a. Näh-kööt (he) Napoli-n!
 see-Imp.3pl (they.Nom) Naples-Acc
 b. He näh-kööt Napoli-n!
 they.Nom see-Imp.3pl Naples-Acc
 ‘Let them see Naples!’

(modified from Kiparsky 2001)

Kiparsky notes that the overt pronominal subject in (ia) is probably not a subject licensed in an agreement relation with the imperative verb. First, it can be replaced by a full noun, without the need to change the second person verb inflection to third. This is unlike any pronominal subject and in particular the covert subject *pro*, which is of high relevance in imperative constructions. Kiparsky concludes that this suggests that there is no true agreement relation here. The second noteworthy property is that this pronominal subject is obligatorily post-verbal. When we contrast this pattern with third person imperatives we see that even though these imperatives also allow post-verbal subjects, they additionally allow an agreeing nominative subject, presumably in the specifier of TP. They also trigger accusative case on the object. Thus, one possibility for first and second person imperatives in Finnish is the lack of genuine syntactic subjects and subject agreement features. This would imply unavailability of accusative case according to the JuSH. Third person imperatives by contrast do have syntactic subjects and subject agreement features, which would rule in accusative case assignment under the JuSH.

These potential analogues between two unrelated phenomena brought out by my JuSH-based account add to its theoretical relevance.

5.2.3 Conclusion

In this section, I have discussed Finnish and Kolyma Yukaghir. In the first part of the section, I have focused exclusively on Finnish, discussing the distribution of bare objects in that language. The syntactic environments of relevance were passives, sentences with verbs of obligation and copular structures. I have first evaluated an earlier account of the distribution of bare objects in question, namely Vainikka (1989). Next, I have presented my own account. In the first two contexts, there is a link between the presence of bare objects and deficient subject agreement morphology. So, I have proposed that in these environments v cannot be jump-started by higher functional heads due to this deficiency. This explains why accusative case cannot be assigned to objects, and why they have to be left bare. In copular structures, PredP blocks Jump-start, ruling out accusative objects. I have ended this part of the section by discussing pronominal objects. In the second part of the section, I have discussed Finnish in comparison with Kolyma Yukaghir. The data that I have analysed consisted of sentences with first and second person subjects in Yukaghir, and first and second person imperatives in Finnish. In both these contexts, accusative marking is ruled out. I have proposed that this is due to the interference of speaker and addressee operators positioned in the left periphery of these structures on the Jump-start operation which would have activated v .

5.3 Cuzco Quechua

In this section, I turn to Cuzco Quechua. This is a Quechuan language of southern Peru. It is an agglutinating language which prefers suffixing. It has a system of nominalized clauses, reminiscent of those of Turkish. It allows agreement with both agent and theme arguments. It has SOV constituent order.

I will discuss two phenomena in Cuzco Quechua, both possible to explain using the JuSH. First, nominalized subject clauses without agreement morphology require bare objects. This is clearly a manifestation of the non-finiteness effect ((1)). I propose that this distribution of bare objects is due to the fact that v in the subject clause cannot be jump-started because N_{minl} blocks Jump-start. Next, I turn to nominalized clauses with agreement morphology. These also require bare objects. There might be two independent reasons for the pattern to come about. First, in cases where the embedded subject is in genitive case, the categorial condition prevents D from jump-starting N_{minl}. Second, when the embedded subject is nominative, some sort of economy condition on derivation rules out Jump-start, making accusative marginal.

5.3.1 Objects in nominalizations without agreement

Cuzco Quechua is a language that expresses verbal agreement with direct objects morphologically (when these are first and second person), as well as agreement with subjects. When morphological marking is allowed, the language marks direct objects with

accusative case. Subjects are marked in the genitive in nominalizations, or left morphologically unmarked in the nominative. Below are two examples ((90)).

- (90) a. Tata-y maqa-wa-rqa-n
 father-1.Poss beat-1.Obj-Past-3.Subj
 ‘My father beat me.’
- b. Xwan [tata-y-pa maqa-wa-sqa-n]-ta
 Juan [father-1.Poss-Gen beat-1.Obj-Nmnl.Past-3.Subj]-Acc
 uyari-n.
 hear-3.Subj
 ‘Juan heard that my father had beaten me.’ (Lefebvre and Muysken 1988: 16)

Embedded clauses impose intriguing constraints on the case marking of direct objects. Consider (91).

- (91) a. [Papa mikhu-y] allin-mi.
 [potato eat-Inf] good-Aff
 ‘Eating potatoes is good.’
- b. [Papa-ta mikhu-y⁴⁷]-ta muna-ni
 [potato-Acc eat-Inf]-Acc want-1
 ‘I want to eat potatoes.’

The example in (91a) shows that infinitival subject clauses disallow accusative-marked direct objects. The only option available is to leave them bare. Accusative case is allowed in the infinitive only in restructuring configurations. Note that in (91b), we have a sentence with a restructuring matrix verb, *muna* ‘want’. The verb has an infinitival clause as its complement, and the object in this embedded clause is marked in accusative case (Lefebvre and Muysken 1988: 21, 39, 120).

The picture in (91a) is very much like the situation in Turkmen discussed in chapter 4 section 4.1.3. Turkmen disallows accusative case-marked direct objects in non-finite subject clauses under certain circumstances which I have spelled out in chapter 4. Direct objects have to be bare in these contexts. It appears that Cuzco Quechua imposes a much stricter restriction on accusative objects, barring them across the board in non-finite clauses.

Lefebvre and Muysken claim that in Quechua the bare objects under discussion are marked in a null morphological variant of accusative case, similar to the nominative. They reject the idea that this can be abstract accusative case assigned by the verb under adjacency (Lefebvre and Muysken 1988: 129-130). In order to support these claims, they present the data in (92).

- (92) Muna-nki [Mariyacha-q platanu pi-wan ranti-y-mu-na-n]-ta.
 want-2 [Maria-Gen banana who-with exchange-Inf-Cis-Nmnl-3]-Acc
 ‘You want that Maria will buy bananas with whom.’

⁴⁷The reason why agreement with the object is not seen on the verb here is because the third person object marker is \emptyset .

In this example, the direct object *platanu* ‘banana’ is separated from its verb by *piwan* ‘who with’. Under the commonly held belief that bare direct objects remain adjacent to the verb at all levels of syntactic representation, this constitutes an argument in their favor. However, not every displacement of an argument can be attributed to syntactic movement. The data these authors provide may involve scrambling.⁴⁸ They do concede this possibility, but reject it on the basis of the network of assumptions they have adopted. These assumptions crucially rely on a Government and Binding framework. This network of assumptions does not readily transfer to my work.

Another reason for them to reject the ‘accusative case under adjacency’ idea, is the lack of bare objects in main clauses. In Cuzco Quechua main clauses, direct objects have to have morphological accusative marking. They contend that the putative accusative case assigned under adjacency should have been available in main clauses as well, if it is available in embedded clauses (Lefebvre and Muysken 1988: 130).

The obligatoriness of accusative case on direct objects of main clauses in Cuzco Quechua (as opposed to its optionality in Turkish) can be explained under Baker (2008). Baker diagnoses Imbabura Quechua as a language where probes may look downward when searching for a goal. Let us assume this to be the case in Cuzco Quechua as well. In languages where probes may look downwards, we see that a noun phrase carries the same case marking regardless of the position it is found in in a clause. Take accusative case assignment as an example. The direct object will be generated in the VP, i.e. lower than *v*. *v* will look down, see the direct object, agree with it and assign it accusative case. The object will then raise, if that is an option. This is unlike the situation in languages where probes look up. In this second type of language, when a noun phrase is lower than the probe, it will be invisible to the probe, and hence, will not receive the case that the probe assigns. When the noun phrase is above the probe, the probe will be able to see it, and assign it case. Turkish is a good example of one such language (see chapter 2 section 2.3).⁴⁹

I will explain why direct objects in infinitival subject clauses cannot receive accusative case in the next section.

5.3.1.1 *Jump-start in nominalizations without agreement*

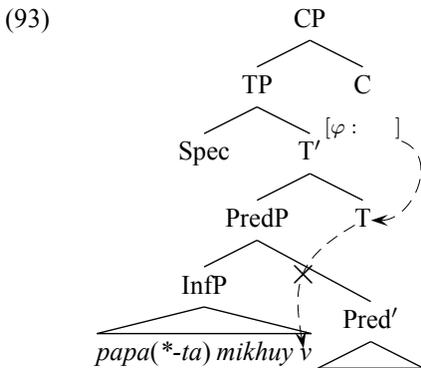
This ‘gap’ in the accusative assignment pattern has a rather straightforward explanation in my theory. What we have here are direct objects obligatorily left bare in non-finite embedded clauses, and direct objects with obligatory morphological marking in main clauses. This situation is largely parallel to the pattern in Finnish which I have discussed in section 5.2 and the Oghuz pattern I have discussed in various places in

⁴⁸*Platanu* ‘bananas’ in (92) seems to be non-specific. Non-specific arguments in Turkish are strictly adjacent to the verb under neutral intonation. However, given the right context and intonation the scrambling of non-specific is possible. The same might apply to Cuzco Quechua.

⁴⁹Note that for this account, I have assumed a different order of operations in Cuzco Quechua than in Turkish: The probe agrees with the object, and the object raises. In Turkish, I have assumed that the object raises first, thus becomes visible to the probe, and the probe agrees with it. This order of operations is required for Baker’s (2008) system to work. This seems to predict that in languages like Cuzco Quechua, inherently case-marked arguments should be unable to raise because their raising depends on their being active for the probe. In Turkish, an inherently case-marked argument can raise, suggesting that its raising is not triggered by Agree.

chapter 4, modulo some additional complexities that come into play in each language. Then, we may plausibly apply to Cuzco Quechua the same analysis I have applied to these languages.

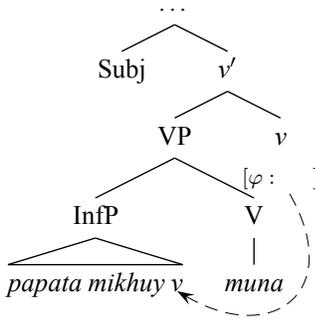
Suppose that v in a non-finite clause is defective in Cuzco Quechua. Suppose also that this v cannot be jump-started by the finite matrix clause in some cases, the sentence in (91a) being one. Quite possibly, the nominalization head, $Nmnl^0$, blocks Jump-start, like some other functional heads do (e.g. *Pred*, *-IK* in Turkish, *Nmnl* in Turkmen action nominals, etc.). In this sense, I think that the Cuzco Quechua infinitive is quite like the Turkmen action nominal. Neither allows accusative case assignment inside it. I have argued in chapter 4 section 4.1.3.3 that the unavailability of accusative case in Turkmen action nominals is due to the blocking effect of *Nmnl*. The *Nmnl* head is a complex syntactic head that is a composite of *T* and *N*, with *N* dominating over the *T* component in Turkmen action nominals. *N*, as a lexical category, is unable to agree, which causes *Nmnl* to reject φ -features. The *Nmnl* head in Cuzco Quechua nominalizations also seems to be a composite category. It can express tense distinctions to a certain degree and clearly has nominal properties (Lefebvre and Muysken 1988: 10-11). So, it seems possible to extend to the Cuzco Quechua *Nmnl* head the analysis I have proposed for Turkmen. Then, the derivation of (91a) will be as in the tree diagram in (93).



The consequence of the failure to jump-start v will be that direct objects will fail to be assigned accusative case in the usual means, i.e. through agreement with v . An abstract general case (distinct from an abstract form of accusative) will be assigned to the embedded objects under adjacency to the embedded verb. (See chapter 2 section 2.3.2.)

When it is possible to jump-start v thanks to a favorable syntactic environment, e.g. a restructuring environment as in (91b), the blocking effect in the embedded clause will be avoided and v will be jump-started. (What makes the configuration in (94) favorable is possibly the obligatory control relation between the matrix clause and the embedded clause. See the appendix in chapter 4 for the effects of obligatory control on Jump-start.) The direct object will then be assigned accusative case by v . I show this in (94), the tree diagram I propose for example (91b).

(94)



There is an interesting feature of restructuring configurations in Cuzco Quechua that I should mention before I move on. Consider (95).

- (95) a. [Maqa-wa-y]-ta qallari-ra-n.
 [beat-1.Obj-Nmnl]-Acc begin-Past-3
 ‘He/she began to beat me.’
- b. [Maqa-y]-ta qallari-wa-ra-n.
 [beat-Nmnl]-Acc begin-1.Obj-Past-3
 ‘He/she began to beat me.’ (Lefebvre and Muysken 1988: 218)

In (95a), agreement with a silent first person object is marked on the embedded verb (*-wa*). As shown in (95b), this marker may alternatively occur on the matrix verb. Lefebvre and Muysken regard these examples as instances of clitic climbing. To me these data suggest that there are two alternative derivations in sentences with restructuring infinitives: The embedded *v* may be jump-started, enabling it to agree with the embedded object and assign it accusative case ((95a)). Or, the matrix *v* may directly agree with the embedded object ((95b)).

5.3.2 Accusative case in nominalizations with agreement

Another pattern observed as part of the case assignment phenomena of Cuzco Quechua is the following: In nominalized clauses, the subject may be marked in both genitive and nominative cases, but accusative marking on direct objects is at best marginal. The fully grammatical option is to leave them morphologically unmarked. In (96) are some examples.⁵⁰

- (96) a. [Kay warmi-q qusan-n maqa-sqa-n]-ta
 [this woman-Gen husband-3.Poss beat-Nmnl-3]-Acc
 yacha-ra-nki-chu?
 know-Past-2-Q
 ‘Did you know that this woman beat her husband?’
- b. [Kay warmi qusan-n maqa-sqa-n]-ta yacha-ra-nki-chu?
 [this woman husband-3.Poss beat-Nmnl-3]-Acc know-Past-2-Q

⁵⁰Lefebvre and Muysken note that the third combination is “marginal” but do not indicate this in these examples. I will add double question marks to them.

- c. ??[Kay warmi qusan-n-ta maqa-sqa-n]-ta
 [this woman husband-3.Poss-Acc beat-Nmnl-3]-Acc
 yacha-ra-nki-chu?
 know-Past-2-Q
- d. *[Kay warmi-q qusan-n-ta maqa-sqa-n]-ta
 [this woman-Gen husband-3.Poss-Acc beat-Nmnl-3]-Acc
 yacha-ra-nki-chu?
 know-Past-2-Q

(Lefebvre and Muysken 1988: 119)

In all these examples, the embedded clause is a nominalization headed by the transitive verb *maqa* ‘beat’ inflected for subject agreement. The subject is overt, and marked in either genitive ((96a) and (96d)) or nominative case ((96b) and (96c)). The direct object *qusan* ‘husband’ found in the embedded clause is either left bare ((96a) and (96b)) or bears accusative case ((96c) and (96d)). I have summarized the possible case combinations and indicated their grammaticality status in (97).

- (97) a. Subj_{Gen} Obj
 b. Subj_{Nom} Obj
 c. ??Subj_{Nom} Obj_{Acc}
 d. *Subj_{Gen} Obj_{Acc}

It is possible to interpret this pattern from the perspective of my system. I propose that the functional head that assigns structural genitive case to the embedded subject cannot jump-start the embedded *v*, but the functional head that assigns the nominative can, albeit at a cost. The detailed account goes as follows.

5.3.2.1 Agreement in Cuzco Quechua

Let me first introduce the building blocks of my explanation. First, Lefebvre and Muysken (1988: 10-18) report that in Cuzco Quechua, the agreement marking paradigm that is associated with nominalizations is not found exclusively on structures that have a D projection, such as possessive noun phrases and nominalizations, but also on structures which are, in all likelihood, not nominal in any discernible way. That is why they use the label non-Main Tense for this agreement paradigm in Quechua, as opposed to Main Tense, the agreement paradigm of root clauses, as well as embedded clauses introduced by a lexical complementizer, such as *chay* ‘that’. I present the two paradigms in (98), and in (99) are some illustrative examples.

(98)

Person	Main Tense	non-Main Tense
1	-ni	-y
2	-nki	-yki
3	-n	-n

- (99) a. wawa-y
child-1sg
my child
- b. hamu-sqa-y-ta
come-Nmnl-1sg-Acc
that I came
- c. hamu-qti-y-qa
come-Sub-1sg-Top
'If I come'

In (99a) and (99b), we have comparable domains, i.e. a possessive noun phrase and a nominalization. These show similarities to each other cross-linguistically, such as genitive noun phrases that function as subjects/possessors and possessor agreement on the head noun. In both examples, the possessor agreement marker is the same, $-y$. The construction in (99c), however, is quite different from the previous two. It is a conditional clause. It bears a topic marker, $-qa$, but that is no indication that it is a nominal structure, because non-nominal structures are also known to be able to function as topics in the world's languages.⁵¹ Note that despite this dissimilarity, the agreement marker is the same as before, i.e. $-y$, rather than $-ni$, the marker for root clauses, as one might expect, say, when one considers European languages.

Then, suppose that the φ -features spelled out by the non-Main Tense paradigm are independent of the head they are found on. In other words, these features do not spell out any particular syntactic head, in the way nominal agreement features spell out D^0 in Turkish. Then, suppose that φ -features in Cuzco Quechua merge with those heads during the course of the derivation forming a complex head of sorts. (See Cinque 1999 for the claim that agreement morphemes do not correspond to any specific syntactic heads and that they may attach to various different functional heads.) Suppose also that in a nominalization, these φ -features merge either with D^0 , the syntactic head that hosts the subject agreement features, or with $Nmnl^0$, the head that hosts the nominalization marker. Both of these functional heads, then, can potentially assign case through Agree. Agreement with D results in genitive case and agreement with $Nmnl$ in nominative—due possibly to T or a comparable functional element that forms part of $Nmnl$ (cf. chapter 4 section 4.1.3.3). This accounts for how the case of the subject can optionally

⁵¹Prepositional phrases in Germanic are notable examples ((i)-(ii)):

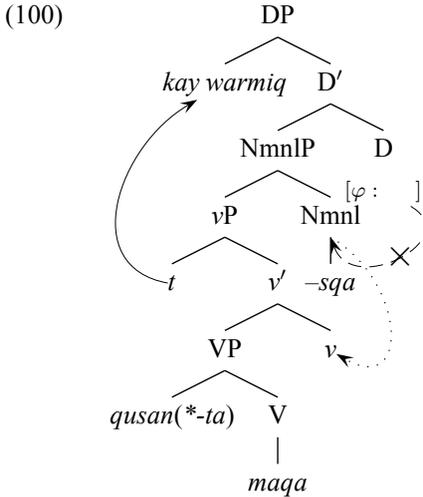
- (i) a. Ik heb het Westmalle in de koelkast gezet.
I have the Westmalle in the fridge put
'I have put the Westmalle in the fridge.' (Dutch)
- b. In de koelkast, heb ik het Westmalle gezet.
in the fridge have I the Westmalle put
'In the fridge, I have put the Westmalle.'
- (ii) a. Ich habe das Warsteiner in den Kühlschrank gestellt.
I have the.Acc Warsteiner in the.Acc fridge put
'I have put the Warsteiner in the fridge.' (German)
- b. In den Kühlschrank, habe ich das Warsteiner gestellt.
in the.Acc fridge have I the.Acc Warsteiner put
'In the fridge, I have put the Warsteiner.'

be nominative or genitive.⁵² Next, I will explain the pattern of case assignment to the object and link it to the case of the subject.

5.3.2.2 Jump-starting case assignment

The derivation can proceed in two different ways determined by the choice of the functional head that will bear the φ -features.

5.3.2.2.1 φ -features on D The first option, where φ -features merge with D, is partially depicted in diagram (100).



In this derivation, v is expecting φ -features from D to assign accusative case to the object. D is to jump-start v , and can only do this by passing the unvalued φ -feature set that it has in a stepwise manner, starting first with NmnI, according to the successiveness condition ((8a)). Suppose now that NmnI is incapable of receiving φ -features. Consequently, v cannot be jump-started and accusative case cannot be assigned to the object. (Subsequently, D will probe and agree with the subject, assigning genitive case to it. The subject will then raise to the specifier of DP.)

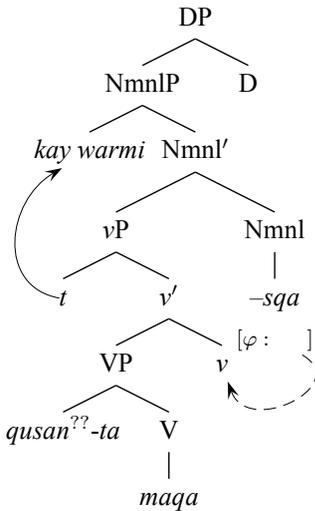
I have to assume that the reason for the NmnI head spelled out by *-sqa* to reject φ -features is different from the reason why the infinitival NmnI head *-y* rejects them. This is because I propose below that *-sqa* is unlike *-y* in that it can, in principle, host φ -features. So, I propose here that the reason for the resistance of *-sqa* in (100) is the categorial condition ((8b)): As I have claimed above, NmnI in Cuzco Quechua is a composite category made up of N and T. T, being a functional category, is the element that may host φ -features in NmnI. In (100), T in NmnI receives φ -features from D. As I have proposed in chapter 4 section 4.2.1.4, D and T are heads of different natures. The former is nominal and the latter sentential. These two types of categories do not accept φ -features from each other.

⁵²This is similar to the case of possessives in Hungarian. In that language, low possessives receive nominative, and high possessives dative case (see e.g. Szabolcsi 1994).

However, note that in (100) the verb should move up to D^0 through v^0 and $Nmnl^0$ under the assumptions I have adopted here (see chapter 1 section 1.3.3), which should help circumvent the categorial condition (see (9b)) (see also chapter 4 section 4.2.1.4). Due to this, if the explanation that I have just laid out is to work, Jump-start must be assumed to have happened before head movement has taken place. One could also speculate that Jump-start takes place after head movement has taken place, but that head movement does not yield the desired effect due to the independence of the φ -features from the functional heads they are attached to.

5.3.2.2.2 *φ -features on Nmnl* In contrast to (100), if it is Nmnl that bears the unvalued φ -feature set, as shown in (101), the categorial condition is met and Nmnl jump-starts v . Then, Nmnl will agree with the subject, assigning it nominative case, and v will agree with the object assigning it accusative case.

(101)



However, judging from the marginality of this case combination, we have to say that this is not the preferred option in Cuzco Quechua. Not jump-starting v and leaving the object without accusative case appears to be less costly. This may be why subjects with nominative case are found mostly with intransitive verbs, where there is no need to jump-start a category for object case assignment. In transitive clauses, assigning φ -features to D yields the simplest derivation, with no choice of jump-starting any functional category, due to the blocking effect of Nmnl. Assigning φ -features to Nmnl, on the other hand, increases derivational options by introducing the option of jump-starting v . In this case, not jump-starting v is the cheapest course to take. In intransitive clauses, on the other hand, no such complication arises and assigning φ -features to D or Nmnl are equally simple.

An alternative account of the pattern in (96) could be based on what it means for (97c) to be marginal. It may well be that this case combination is rejected by the majority of speakers, but accepted by a few. Then, it could be that in the nominal domain only D is allowed to jump-start another functional category in Cuzco Quechua

by the majority. For these speakers, in nominalized clauses, N_{mn}l will block D from jump-starting *v*. For the minority that do allow accusative case in an embedded clause, N_{mn}l may also be capable of jump-starting *v*, without any adverse effects.

5.3.3 Conclusion

In this section, I have discussed Cuzco Quechua. I have provided an explanation of why bare objects are required in nominalized subject clauses without agreement morphology and nominalized clauses with agreement morphology. I have proposed that, in the former case, this may be because *v* in the subject clause cannot be jump-started because N_{mn}l blocks Jump-start. In the second case, there might be two independent reasons for the pattern to come about. First, in cases where the embedded subject is in genitive case, the categorial condition prevents D from jump-starting N_{mn}l. Second, when the embedded subject is nominative, some sort of economy condition on derivation rules out Jump-start, making accusative marginal.

5.4 Mangarayi

In this section, I discuss data from Mangarayi. This is a nearly extinct language of the Gunwinguan family, spoken in Northern Australia. It has OVS constituent order. It is an agglutinating language that gives equal weight to suffixing and prefixing. It allows agreement with both agent and theme arguments.

In this language, gerunds disallow accusative assignment to direct objects they contain. Interestingly, they are the only non-finite clause type in that language. This is a clear instance of the non-finiteness effect ((1)) and can be explained using the JuSH with some auxiliary assumptions: The gerunds in question are adjuncts in Mangarayi. It has been proposed in the literature that adjuncts are merged late. So, I propose that, by the time the adjunct clause enters the derivation, it will either have missed the Jump-start ‘train’, or will be positioned outside the c-command domain of the highest source of φ -features. The *v* in these clauses, which I assume is defective, will not be jump-started and accusative case will not be assigned.

5.4.1 Gerunds in Mangarayi

Mangarayi has two subordinate clause types (Merlan 1982: 9-11): ‘generalized’ subordinate clauses on the one hand ((102a)), and purpose, causal and temporal complements, on the other ((102b)).⁵³

- (102) a. mun ja-wuḷa-ṅjuṅjag [∅-warwiyan wa-∅-ma-ṛi]
 only 3-3pl/3sg-imitate [NAbs-totem Sub-3sg-do-PC]
 ‘They are only imitating what the totem did.’

⁵³Some markers, such as the purposive and the genitive markers, are circumfixes. I have indicated this as “*Aff*₁...-*Aff*₂” in the glosses.

- b. [*ṅa-marb-wañjin-gu ṅa-muyṅ-gu*] *ja-∅-ṅiṅa-n*.
 [*Purp₁-tie-Nmnl-Purp₂ Gen₁-dog-Gen₂] 3-3sg-come-Pres
 ‘He’s coming to tie up the dog.’*

In the first type, the embedded predicate is like a root clause verb form and is marked as subordinate only by prefixes which occupy the first position (see the prefix *wa-* on the embedded verb *wamaṛi* in (102a)). The second type of embedded clause are gerunds, derived by the affixation of *-yin*, *-jin*, *-ṅjin* or *-wañjin*, or through irregular nominalization (Merlan 1982: 172-174). They have no overt subjects and bear no agreement marking.

5.4.1.1 Case assignment in Mangarayi gerunds

The case marking of arguments shows an interesting skewing in Mangarayi gerund clauses. The direct objects of finite verbs are marked in accusative if they are masculine ((103a)) or feminine ((103b)) and in the absolutive if they are neuter ((103b)).

- (103) a. *ṅan-yaba ga-ṅa-ḍaṅidba*.
 Acc-brother -3-1sg-await
 ‘I am waiting for my brother.’
 b. *ṅan-guḍugu- buy? wuḷa-wu-na ∅-ṅani*
 FAcc-woman show 3pl/3sg-Aux-PP NAbs-language
 ‘They taught the woman language.’ (Merlan 1982: 63-64)

In contrast to this, the objects of gerund clauses are marked in genitive case ((104)).

- (104) a. [*ṅa-marb-wañjin-gu ṅa-muyṅ-gu*] *ja-∅-ṅiṅa-n*.
 [*Purp₁-tie-Nmnl-Purp₂ Gen₁-dog-Gen₂] 3-3sg-come-Pres
 ‘He’s coming to tie up the dog.’
 b. *Ja-∅-ṅiṅa-n maṅaya [ṅanyangu ṅa-yala-jin-gu]*.
 3-3Sg-come-Pres perhaps [1InPl.Gen Purp₁-bother-Nmnl-Purp₂]
 ‘Maybe he’s coming to bother us.’
 c. [*ṅa-bamaṛ-wu ṅa-juya-wu*] *∅-ṅiṅa-ñ*.
 [*Purp₁-steal.Nmnl-Purp₂ Gen₁-meat-Gen₂] 3sg-come-PP
 ‘He came to steal the meat.’ (Merlan 1982: 11)**

This seems to be a non-structural genitive: It is not assigned through agreement. Normally, genitive-marked noun phrases agree with the head noun ((105)):

- (105) *ṅa-bugbuṅ-gu ∅-baṅam-ṅawuṅ-gaḷama ga-ṅa-yag*.
 Gen₁-old.man-Gen₂ All₁-camp-his-All₂ -3-1sg-go
 ‘I am going to the old man’s camp.’ (Merlan 1982: 66)

In this example, the possessor *bugbuṅ* ‘old man’ bears genitive case and the possessee bears the third person singular masculine possessive marker *-ṅawuṅ*.

5.4.1.2 *Lexical versus syntactic derivation*

In what sense are Mangarayi gerunds interesting for a discussion of a possible manifestation of Jump-start in Mangarayi? Actually, the fact that these structures are gerunds with genitive-marked objects reminds one of English Inf-of gerunds, which I had discussed in chapter 3 section 3.4.3. I return to them in (106):

- (106) a. [A quick reading of The Bald Soprano] will not allow you to appreciate its literary value.
 b. [The inadequate treatment of cholera] is affecting the people of Zimbabwe.
 c. [Quickly reading The Bald Soprano] will not allow you to appreciate its literary value.

The gerund in (106a), sometimes called an Ing-of gerund (see e.g. Abney 1987), involves the deverbal predicate noun *reading*, which obligatorily takes determiners, allows only adjectival modification and takes PP objects. In these respects, it is the same as the subject noun phrase in example (106b), which involves the deverbal noun *treatment*.⁵⁴ Compare the bracketed nominals in these examples with the gerund in (106c), commonly called a PRO-ing gerund. The predicate in this construction disallows determiners, allows only adverbial modification and takes accusative objects.

As I noted in chapter 3, Ing-of gerunds may be interesting in themselves but they are largely irrelevant for the discussion of possible manifestations of Jump-start. This is because they are generally accepted to involve what appear to be simple deverbal nouns (Abney 1987: 107), derived in the lexicon (Milsark 2006). So, when they enter a syntactic derivation, they behave as ordinary nouns, taking genitive-marked arguments and allowing determiners and adjectival modification. They would be of interest for my current purposes, if they took complements bearing a case such as structural accusative, like the verbal nouns that constitute the center-piece of chapter 3.

Like Inf-of gerunds, Mangarayi purpose clauses take genitive objects. If they are simply an equivalent of English Ing-of gerunds in this sense, that would imply that they are irrelevant for our discussion. However, Mangarayi gerunds would become relevant for my theory, if I can show that despite their *prima facie* resemblance to English nominal gerunds, the two are fundamentally different. Mangarayi gerunds would be especially interesting if they were shown to carry the hallmarks of having been syntactically derived. In that case, the unavailability of accusative case in that environment would be remarkable, particularly in the light of the fact that the syntactically derived PRO-ing gerunds in English do allow accusative case.

As it turns out, the properties of Mangarayi gerunds are sufficiently different from those of English Ing-of gerunds and quite similar to those of PRO-ing gerunds to deserve some attention. Let me now discuss some of these properties. First of all, judging from the data in Merlan (1982), Mangarayi gerunds do not seem to allow determiners, but there is no information in the cited work as to whether they allow adverbs or adjectives. There is some other relevant information, however. Consider (107).

⁵⁴However see chapter 3 section 3.2.3.4.2 for data that suggests that under certain circumstances deverbal nouns may also take adverbs.

- (107) a. *[Her achieving of legendary status] made us all green with envy.
 b. [Her achievement of legendary status] made us all green with envy.
 c. [Her achieving legendary status] made us all green with envy.

These sentences exemplify another property of Ing-of gerunds noted earlier, their limited productivity. (185a) shows that an Ing-of gerund derived from the verb *achieve* is ill-formed. Only a derived nominal is allowed ((107b)). By contrast, PRO-ing gerunds are fully productive ((107c)). Limited productivity has standardly been taken as a hallmark of a lexical derivation, while syntactic derivation is generally assumed to be fully-productive (see for example Chomsky 1970). This suggests that while the predicates of Ing-of gerunds are lexically derived, the predicates of PRO-ing gerunds are syntactically constructed in English (see Milsark 2006). As for Mangarayi gerunds, Merlan (1982: 173-174) notes that they are fully productive. Then, in the light of the preceding discussion of (107), I conclude that gerundive verb forms in Mangarayi are also syntactically derived.

Furthermore, Ing-of gerunds do not allow obligatory control, in contrast to PRO-ing gerunds. Obligatory control environments involve complex sentences, where the embedded clause has an understood subject that is obligatorily interpreted as being coreferential with the subject of the matrix clause. In (108) are illustrative examples:

- (108) a. We enjoyed [a reading of The Bald Soprano].
 b. We enjoyed [reading The Bald Soprano].

In (108a), the reader need not be the same as the enjoyer, but in (108b) it has to be (cf. Wasow and Roeper 1972). Mangarayi gerunds are like the PRO-ing gerund in (108b) in that they are used as purpose clauses, which typically involve obligatory control. For instance, in (109), the person going to the gym and the understood subject of the purpose clause who is angry have to be the same person.

- (109) I went to the gym [in order to vent off my anger].

Then, available data helps us conclude that gerunds in Mangarayi are like the English PRO-ing gerunds. Both are derived in the syntax, and not in the lexicon. This conclusion raises the following question: If Mangarayi gerunds are like English PRO-ing gerunds, why do they not allow accusative case assignment, like PRO-ing gerunds ((104) versus (106c))? Accusative case is in principle available in Mangarayi, as I have shown in (103a). I present my answer to this question in the next section.

5.4.2 Jump-starting case assignment in Mangarayi

I propose that accusative case cannot be assigned to the object of a Mangarayi purpose clause because there is no subject agreement in that clause, and because *v* of the purpose clause cannot be jump-started by the matrix. Consequently, genitive case is assigned to the object, possibly as default case, as a last resort. I will make my proposal more concrete a little further down, but let me first set the scene.⁵⁵

⁵⁵Another possibility is the following: Mangarayi is an object agreement language but the gerunds in question do not have any object agreement markers. Perhaps, the reason that accusative-marked objects

5.4.2.1 Mangarayi clause structure

Mangarayi appears to have a head-initial word order: It positions relative clauses to the right of the modified noun ((110a)), and uses preposition-like elements rather than postpositions ((110b)).

- (110) a. \emptyset -Gawa-j [gi-nara-bayi \emptyset -wi|a [wa- \emptyset -bir?[?]+ma-ñ]]
 3sg/3sg-bury-PP [Ana-that-Foc NAbs-string [Sub-3sg/3sg-twist-PP]]
 ‘He (a goanna) buried that same string that he’d twisted.’
 (Merlan 1982: 15, 17)
- b. biyanjin na-boŋ-gan
 inside NLoc₁-box-NLoc₂
 ‘in the box’ (Merlan 1982: 27)

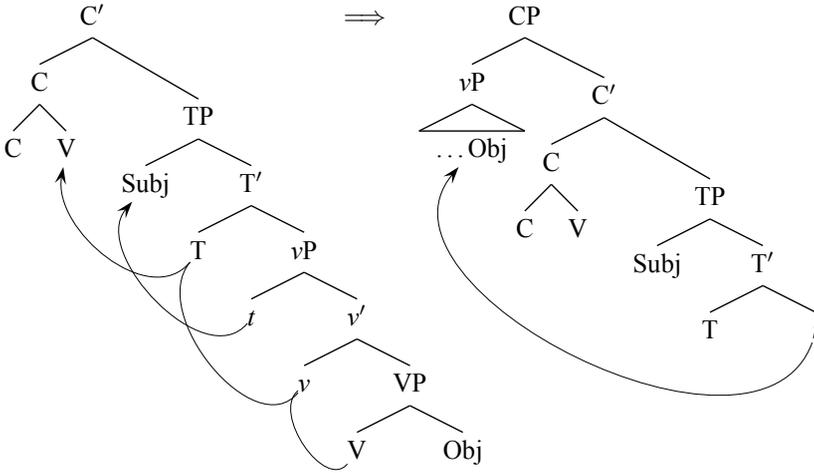
In these respects, then, Mangarayi is comparable to English, another head-initial language. In the light of this, let us suppose that Mangarayi clauses start off with an SVO order which is later rearranged as OVS, the dominant constituent order in the language. There are several ways to do this and it has to be tested against data which one is the actual derivation. For current purposes, however, suppose that the desired word order is obtained as in (111):

are barred from gerunds is because they cannot be licensed due to the lack of object agreement features. I have two arguments to counter this objection. First, the lack of object agreement features along with the lack of subject agreement features is an indication that the former are dependent on the latter. Object agreement features could perfectly have occurred without the presence of subject agreement features. It is true that it is not common among the world’s languages to have object agreement features without subjects agreement features. Only 30 languages out of 378 (8%) in Haspelmath et al. (2008) fall into this category. However, this observation concerns the general picture in a given language, not a particular construction in that language, and furthermore, object agreement features do occur without subject agreement features, if not in the majority of the worlds languages (see chapter 1 section 1.1.2 for further discussion). Second, object agreement features need not be spelled out in Mangarayi for accusative objects to be licensed. In ditransitive constructions only the subject and the indirect object are agreed with overtly. In (i), the prefix *ŋan* marks third person subject with first person indirect object. While the direct object is marked in the accusative, there is no marker for it in this structure.

- (i) ŋan-jiwi-j ŋan-gaɖugu-ŋanju
 3sg/1sg-take.away FAcc-woman-1sg.Poss
 ‘He took my wife from me.’ (Merlan 1982: 65)

So covert object agreement features could have been present in the gerunds under scrutiny, licensing the object. Apparently, φ -features used to license accusative case on the object are absent in gerunds along with φ -features used to license the case of subjects.

(111)



Abstracting away slightly from the sequence of operations, the subject raises to the specifier position of the TP, and the verb to C^0 passing through T^0 . This yields a VSO order. Subsequently, the vP is raised past the verb to the specifier position of the CP, with the object in it, yielding the OVS order. As for the object, one can assume that it raises to the edge of the vP in root clauses and generalized subordinate clauses. In nominalized (i.e. purpose) clauses, however, the object is possibly in situ, given that the constituent order in those clauses is VO with some degree of flexibility allowed. One can attribute this difference in the position of the object with respect to the verb to the fact that in non-nominalized clauses the object is assigned structural case, which is commonly accompanied by object raising (due to an EPP feature of the case assigner). In purpose clauses, by contrast, default genitive case is assigned to the object, which does not require the object to be moved.⁵⁶ The reason for why I propose the entire vP is raised to the CP level, rather than just the object, will become clear in the next section, when I turn to purpose clauses and a discussion of Jump-start in these structures.

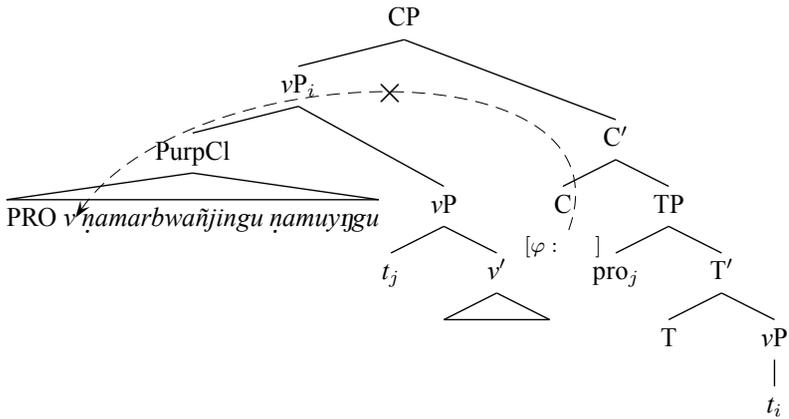
5.4.2.2 *Jump-start in purpose clauses*

Consider the tree in (112) given as the derivation of (104a):⁵⁷

⁵⁶See chapter 2 for an extensive discussion.

⁵⁷The “pro” in this structure is an implicit subject. Mangarayi is a so-called pro-drop language which allows subjects to be unexpressed under the right conditions.

(112)



Suppose that the purpose clause is adjoined to the raised vP . C attempts to jump-start v in the purpose clause, without success. As a result, accusative case cannot be assigned to the object, *namuyngu* ‘dog’, inside this clause. I propose that this failure is due to a timing problem: The purpose clause is inaccessible to C , when C is meting out φ -features. This is because the purpose clause enters the derivation late, after Jump-start has taken place. Now, note that the purpose clause is an adjunct, not an argument. An idea has been circulating in linguistic literature since the 1980s that adjuncts need not be merged into the derivation at the same time that arguments are; they may be merged later than arguments. Among the works that have argued for this position, especially relevant for a treatment of Mangarayi adjunct clauses are works like Lebeaux (1988), Bošković (1997), Nissenbaum (1998), Bošković and Lasnik (1999) and Stepanov (2001) which discuss the merger of adjuncts with phrases that are moved at some point in the derivation. According to these works, the merger of the adjunct takes place (obligatorily for some) after the phrase in question has moved. Then, suppose that the purpose clause in (112) is adjoined to the vP after the vP has raised to the CP level. The raising of the vP itself can take place only after Jump-start has taken place and the head of the vP has been jump-started. This conclusion is forced on us by the fact that there is no problem with accusative assignment in any domain other than purpose clauses in Mangarayi: The vP must have been in the c -command domain of C when φ -features were being given out (see (7a)). Thus, by the time that the vP has raised to the CP level and the purpose clause has entered the derivation, the ‘Jump-start wave’ will already have passed. Even if the highest source of φ -features, namely C , still retained its capability to jump-start, the purpose clause would be positioned outside its c -command domain, and consequently, be out of reach according to the c -command condition on Jump-start ((7a)).⁵⁸

⁵⁸In Turkish, purpose clauses can always have accusative-marked objects in them. Take, as example, a purpose clause adjoined to a subject clause ((i)).

- (i) [[Antje-yı memnun et-mek için] bisiklet-in-i onar-mak] ben-i yor-du.
 [[Antje-Acc please do-Inf for] bicycle-3sg-Acc mend-Inf] 1sg-Acc make tired-Past.3sg
 ‘To mend her bike in order to please Antje made me tired.’

5.4.3 Conclusion

In this section, I have discussed gerunds in Mangarayi. These constructions disallow accusative assignment. I have proposed the following: The gerunds in question are adjuncts in Mangarayi. It has been proposed in the literature that adjuncts are merged late. Thus, by the time the adjunct clause enters the derivation, it will either have missed the Jump-start operation, or will be positioned outside the c-command domain of the highest source of φ -features, i.e. C. The v in these clause will have to be left defective and accusative case will not be assigned.

5.5 Koasati

Next, I turn to Koasati. This is a critically endangered Eastern Muskogean language, spoken in Louisiana (USA) and Texas (USA). It has SOV constituent order. It is an agglutinating language that gives equal weight to suffixing and prefixing. It allows agreement with both agent and theme arguments, as well as indirect objects.

The constructions that I discuss involve negative stative verbs. While Koasati verbs have a rich system of agreement in negative and affirmative forms, negative stative verbs fail to agree with the subject, showing pleonastic third person singular agreement. I believe that this is yet another venue of application for the JuSH. I propose that the head that agrees with the subject in negative stative sentences (i.e. Neg_k^0) cannot receive φ -features early enough for agreement to take place. By the time Neg_k^0 does receive φ -features from an auxiliary that is positioned higher up in the structure, the latter will already have agreed with the subject. The only option for Neg_k^0 to value its φ -features is by default agreement.

Before I begin discussing negative stative verbs, I will first give some information on clause structure in Koasati. The language has a way of treating agreement markers that is different from many other languages that one may be familiar with, which has implications for grammatical processes relevant to my theory.

5.5.1 The Koasati clause structure

Koasati has several conjugation paradigms with negative and affirmative agreement differing in each. The Koasati verbal complex can host a large number of affixes. Among these, agreement markers can be seen on both sides of the stem ((113)).

(113) ... 4- 3- 2- 1- 0 -1...
 ... IO- DO- Loc- Subj(1A)- Stem -Subj...

This difference may be attributed to the time when adjunct clauses enter the derivation. I have argued that, in Turkish, an argument has to be in the specifier position of the functional head that it agrees with, before Jump-start begins. This is how that head is identified for being jump-started. If adjuncts are merged after movement has taken place, the adjunct clause in (i) can be merged after the subject clause has taken its position, before Jump-start begins. Thus, the adjunct clause will not miss the Jump-start wave. In some languages like English, the availability of accusative case in purpose clauses must be attributed to the extent of Jump-start: v in English purpose clauses is not defective and does not have to be jump-started.

Here, the numbers stand for suffix and prefix positions. Direct object and indirect object markers consistently occupy the third and fourth prefixal positions, respectively. In contrast, subject agreement markers occupy the first prefixal position if the verb belongs to the conjugation class 1A, otherwise they are in the first suffixal position (Kimball 1991: 111 ff.).

Let me now spell out my views as to what kind of syntactic structure this morphological structure points to. In generative linguistic literature, assumptions about the link between morphology and syntax have been based on a very popular proposal by Baker (1985b). Since that work, suffixes are assumed to occupy syntactic positions in line with the Mirror Principle proposed there, given in (114).

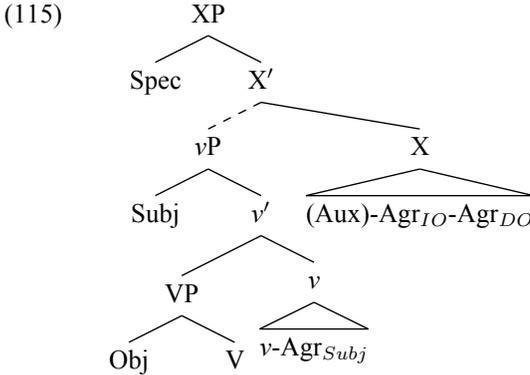
(114) *The Mirror Principle*

Morphological derivations must directly reflect syntactic derivations (and vice versa).

In the light of the hierarchical structure assumed in this work, this suggests that, subject agreement suffixes (i.e. the agreement markers that do not belong to the conjugation class 1A) in Koasati are at v^0 , occupying the first slot after the verb stem. This is rather surprising under the commonly held assumption that subject agreement is found on T^0 , which is much higher in the structure than v^0 . This conclusion seems unavoidable, though, because the tense markers are found in the twelfth position (Kimball 1991: 111 ff.). However, this conclusion is not all that problematic under Cinque (1999). This is another major work that explores the link between sequence of morphological markers and syntactic structure. In this work, Cinque takes the Mirror Principle as a reference point and compares the sequences of suffixes (and adverbs) in several languages. He finds striking cross-linguistic parallels in the sequence of verbal suffixes. On the basis of this, he proposes an order of syntactic projections that he claims to be universal. But, despite the parallels, there are two kinds of suffixes which do not follow the overall pattern. These are agreement and negation markers. Cinque does not believe that this seeming glitch constitutes counter-evidence for his proposal, however. He claims that these problematic morphemes do not correspond to any specific syntactic heads and proposes that they may attach to various different functional heads. Agreement and negation markers are then different from, say, tense suffixes which occupy only the T head in syntax.

As to prefixes, as Cinque (1999: 68-70) notes that the order of these elements and its links to clause structure have been rarely discussed in the literature. He then notes two major types of prefix orders. The first order is Asp–T–Agr–V, and the second is the mirror image of the first: Agr–T–Asp–V. Next, he writes that the first order may be obtained by postulating “the existence of a null auxiliary, which starts the successive adjunction of lower to higher heads, with the lexical V a phonological clitic to the cluster” (suggested to him by Mark Baker and Lisa Travis, p.c.). The second order may be obtained by treating the prefixes “as free morphemes (particles) clitic on the verb” (cf. Mchombo 2003). An alternative to Cinque’s approach is to assume that all morphological markers may be picked up by a head through raising but that the markers may end up on either side of the head depending on their linearization requirements, those to the left of the head being prefixes and those to the right suffixes (Harley 2007).

Here, I will use a blend of these approaches. I have shown this in (115).



I will assume that in a given derivation the subject agreement marker is originally found on the functional projection associated with the verb, i.e. v . During the derivation, the lexical verb picks it up as it raises. I will also assume that these markers are specified as either prefixal or suffixal depending on the conjugation class. Thus, they will end up either in the first prefixal or the first suffixal positions, as shown in (113). By contrast, other agreement markers are found on a silent auxiliary. The verb, along with the markers it bears, cliticizes to the right of this auxiliary in the phonological component.⁵⁹

Having laid the groundwork, I can now move onto the phenomenon I would like to discuss.

5.5.2 Negative stative verbs

I will first introduce negation in Koasati. Next, I will turn to the peculiarities of the negative forms of stative verbs.

5.5.2.1 Negation in Koasati

Koasati has two sets of subject agreement markers per conjugation class. The affirmative set and the negative set. I provide an example from class 3B in (116) (Kimball 1991: 81).

⁵⁹I am ignoring many details and the problems that may arise under such a structure. For instance, in an ideal theory, both the verb and the auxiliary should move and pick up the markers they need to pick up without interfering in each others paths of movement. I do not know if the derivation that I propose is in harmony with this theoretical requirement.

(116)

	Affirmative	Negative
1s	-li	-ákkɔ
2s	-íska	-tcíkkɔ
3	-∅	-íkkɔ
1pl	-ílka	-tkílkkɔ
2pl	-áska	-thácíkkɔ

The negative agreement markers are affixes formed by the fusion of genuine agreement morphemes and the two segment negative marker $-k-\varphi-$. The right part of the negative marker, the so called negative complement $-\varphi-$, is always found suffixed to the verb stem in the first suffix position of a negative verb form. The left part, $-k-$, appears to be an affixal form that seeks a subject agreement marker to attach.⁶⁰ It is always found adjacent to the subject agreement marker in the negative verb form. Thus, it is prefixed to the verb if the subject agreement marker is a prefix, and suffixed to the verb if the agreement marker is a suffix. In (117) are illustrative examples. Note that $-k-$ can be on either side of the agreement marker.

- (117) a. ak-łá:h-o-t
1sgneg(1A)-shoot:and:hit-NegC-Past
'I did not hit the mark.'
- b. kil-łá:h-o-t
1plneg(1A)-shoot:and:hit-NegC-Past
'We did not hit the mark.' (Kimball 1991: 59)
- c. im-awí:ci-tkílko-∅
3dat-help-1plneg(3B)-Phrterm
'We do not help him.' (Kimball 1991: 82)

I assume here that the negative complement $-\varphi-$ spells out the head Neg^0 of the negative phrase NegP . As to $-k-$, it is adjoined to the functional head that agreement markers are found on, i.e. v .⁶¹

My assumption about the positions of agreement and negation markers is supported by one fact in Koasati (Kimball 1991: 66-71): Conjugation classes 2Aii and 2B are characterized by the presence of the marker $-li$ on the verb stem. This is an element found in other Muskogean languages as well. In all these languages $-li$ seems to indicate agentivity. In the theoretical framework assumed here, agentivity is expressed by v . Importantly, $-li$ is always adjacent to the lexical verb root. Then, in all likelihood, $-li$ corresponds to v^0 in syntax, in accordance with the Mirror Principle and the phrase structure hierarchy assumed here. Crucially, $-li$ is replaced by agreement suffixes in affirmative and negative finite verbs. This suggests that they target the same morphological slot, and by extension the same syntactic head, as $-li$, i.e. v^0 . In (118) are examples of inflected forms of the verb *yíłáplín* 'to tear one thing down', a class 2Aii verb.

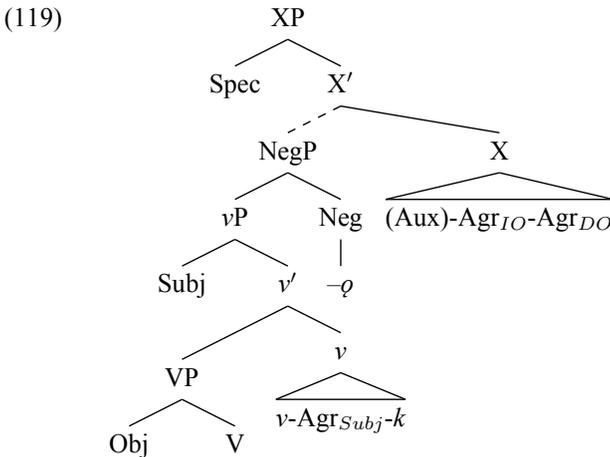
⁶⁰Kimball (1991: 107) writes that this is the actual negative part of the negative marker.

⁶¹Note that the variation in the positions of the agreement markers in (117) with respect to $-k-$ suggests that whether affixes behave as suffixes or prefixes might need to be specified individually.

- (118) a. yiłáp-c
 tear one thing down-2sg
 ‘You tear it down.’
 b. yiłáp-cíkkø
 tear one thing down-2sgneg
 ‘You do not tear it down.’

(Kimball 1991: 67)

Then, under these assumptions, the syntactic structure that a negative verb form corresponds to in Koasati is as shown in (119).



Note that NegP, the syntactic projection that hosts $-\phi$, immediately dominates the verb phrase as is standardly assumed.

5.5.2.2 Agreement of negative stative verbs

The elements that will constitute the centerpiece of the discussion here are an important group of verbs in Koasati that Kimball (1991) refers to as stative verbs. These contrast with the so-called active verbs.⁶² Kimball (1991: 249 ff.) writes that “stative verbs consist of that class of verbs in which the syntactic subject is perceived as not having control over the performance of the action”. They are either predicates with experiencer subjects, or unaccusatives, or mediopassive and passive predicates. In other words, stative verbs are verbs that lack external arguments. So, they cross-reference their syntactic subjects with the prefixes that usually mark the direct object or the indirect object of a transitive verb. The position of the marker indicates whether it marks the subject or the object. Compare the subject agreement markers in (120) to the list of object markers in (121) (Kimball 1991: 111).

- (120) a. ci-ca-bán
 2sstatobj-1sstats-need
 ‘I need you.’

(Kimball 1991: 256)

⁶²This should not be confused with the active-passive distinction one sees in English, for instance.

- b. ca-nó:ci-t
1sstats-sleep-Past
'I fell asleep.' (Kimball 1991: 252)
- c. a:nipó-k am-onaksóhka-t
meat-Subj 3dat-char-Past
'The meat got charred (on me).'
- d. ittiŋi-ho-cobá-k ho-ci-mánka-Ųhco-k
eye-Distr-big-Subj Distr-2sobj-call-Habit-SS
'... You are called Big-Eyes ...' (Kimball 1991: 138)
- (121)

	IO	DO
1sg	am-	ca-
2sg	cim-	ci-
3sg	im-	∅-
1pl	kom-	ko-
2pl	hacim-	haci-

An interesting agreement pattern obtains in the negative forms of stative verbs (Kimball 1991: 249 ff.). In contrast to the negative forms of active verbs (where the negative marker agrees with the subject, as in (117)), stative verb forms have third person singular negative markers in all persons. I exemplify this in (122).

- (122) a. cin-ca-yím-ko-laho-Ų
2sstatobj-1sstats-believe-3neg(2A)-Irr-Phrterm
'I will not believe you.' (Kimball 1991: 257)
- b. ca-ficcák-hikkŋ
1sstats-be jealous-3neg(3A)
'I am not jealous.' (Kimball 1991: 259)

In these examples, subjects are first person singular but negative markers are in third person, *-ko* in one and *-hikkŋ* in the other. The person and number of the subject is expressed by the direct object marker *ca-*.

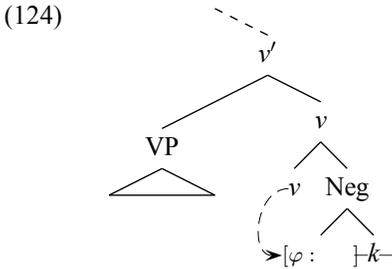
I believe that I can explain this agreement pattern rather neatly using my theory. This is what I will do next.

5.5.3 Jump-starting agreement

Suppose that in Koasati the negative marker obtains the φ -features that it uses to agree with the subject from *v*. There is some evidence suggesting that agreement markers are independent to some degree, hence lending support to the assumption that they can migrate from one head to the other: In Koasati, each independent word must bear at least one accent, and in most of the conjugation classes, agreement markers bear stress along with the verb stem. This suggests that they may be independent words at some level of representation. I show this in (123), where both the verb stem and the agreement marker bear stress.

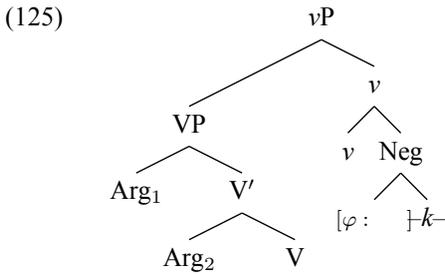
- (123) a. *cák-hílk*
 catch up with-1pl(3A)
 ‘We catch up with it.’
 b. *cák-kílkø*
 catch up with-1plneg(3A)
 ‘We do not catch up with it.’

The transfer of φ -features from Neg^0 to v^0 must be done through an operation that is akin to Jump-start, but subtly different from it. In Jump-start one obtains two sets of φ -features, one on the source of φ -features, and the second on the functional head being jump-started. These two separate sets of features agree with a different argument each. Here, there is only one argument to agree with, namely the subject, so we have to assume that the source functional head does not have any φ -features left on it after the operation takes place. This is basically a description of φ -feature percolation proposed by Chomsky (2001) as interpreted by some authors (e.g. Richards 2007) (see also chapter 3 section 3.4.2). I show this derivation in (124).

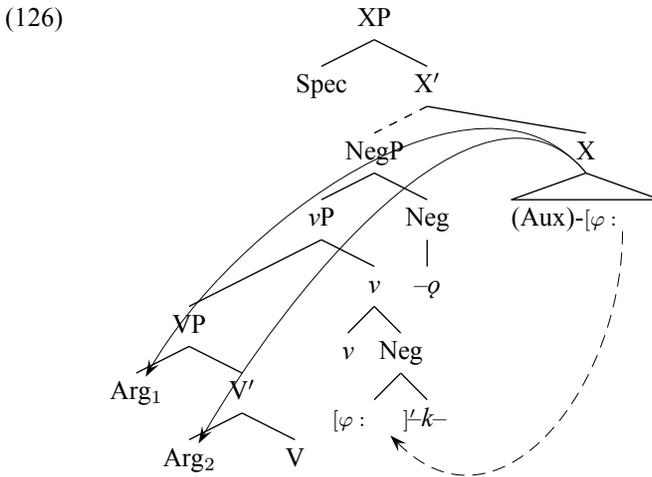


As with Jump-start, φ -feature percolation must take place before φ -features have been valued. This seems to be the case here: Affirmative subject agreement markers are different from negative subject agreement markers. If agreement with the subject occurred at v^0 before φ -features are passed on to Neg^0 , we would expect affirmative and negative agreement to be the same. The only thing that would be different in that case would have been the position of the marker.

Baker (2008) classifies Choctaw (also a Muskogean language) as a language where probes may search both up or down. Then, let us assume the same for Koasati and suppose that this lower Neg head (call it Neg_k^0) probes in either direction in search of a noun phrase to agree with. In sentences with active verbs, it agrees with the agent argument that it finds in the specifier of v . What happens in stative sentences, then, so that Neg_k^0 cannot agree with the subject? In these environments, Neg_k^0 has to value its φ -features by what look like default values, third person singular being a common default value for agreement cross-linguistically. Now, as I have pointed out above, the kinds of predicates that form the class of stative verbs in Koasati, have no external arguments. This means that there is no argument in the specifier of vP in stative sentences. Then, the arguments of a two-place stative predicate are positioned inside the VP, as shown in (125). This coincides with stative predicates showing object agreement with all their arguments.



Given this structure, Neg_k^0 should be able to search its c-command domain and find an argument to agree with.⁶³ Evidently, it cannot, which results in default agreement. Recall that a stative predicate, or technically, a null auxiliary associated with that predicate ((115)), shows object agreement with its arguments. Then, this auxiliary must be agreeing with the arguments of the stative predicate. This suggests that the reason why negative agreement in stative structures is third person singular by default is because the arguments in the search domain of Neg_k^0 have already been agreed with by the auxiliary, and inactivated. Some factor must be preventing Neg_k^0 from probing and agreeing on time. The (simplified) derivation in (126) is my solution to this problem.



⁶³This expectation seems to be well-founded. Objects that look like non-specific/indefinite noun phrases can bear accusative making in Koasati ((i), from Kimball 1991: 392). Such noun phrases remain in their base position, i.e. in the c-command domain of *v*, and are visible to *v* only if probes may look downward in a given language (see chapter 2 section 2.3.2.1).

- (i) a. Noksi:pa-k ittó-n itta-i,h,s-ok pa:-bókli-t
 be:angry-Conn stick-Acc Loc-pick:up(sg)Hgrade-SS:Foc Loc-beat-Conn
 ‘He was angry and he picked up a stick off the ground and beat him on the back with it, and . . .’
 b. A:tasihka-n mat-im-páhka-Vhco-t ómmi-to-n.
 policeman-Acc afar-3Dat-call-Habit-Conn be-III Past-SW.
 ‘It was the case that they called off (at a distance) for some policemen.’

Neg_k^0 obtains its φ -features from v . However, as is standardly assumed, v in non-agentive predicates is devoid of φ -features (see Chomsky (2000), et seq.). So, in statives, Neg_k^0 will be unable to obtain φ -features from v . Then, Neg_k^0 will have to wait till the φ -features on the auxiliary join the derivation, and are used to jump-start it.⁶⁴ Only then will Neg_k^0 be able to probe and agree. If, as it makes sense to assume, the auxiliary probes at the same time that it jump-starts Neg_k^0 , it will find the arguments before Neg_k^0 . The arguments will, thus, be inactive by the time Neg_k^0 get to them. The φ -features on the source have to be unvalued at the moment they are cloned to be copied onto the functional category that will be jump-started. The source of the features need not wait any longer after that to probe and agree. This delay that affects negative statives would not occur in a negative active sentence, since Neg_k^0 will have started probing before the auxiliary is merged. This is simply because, in an active sentence, Neg_k^0 can obtain the φ -features that it needs to agree from v , which Neg_k^0 is adjoined to. And v is merged into the derivation much earlier than the auxiliary is.

5.5.4 Conclusion

In this section, I have discussed negative stative verbs in Koasati. While Koasati verbs have a rich system of agreement in negative and affirmative forms, negative stative verbs fail to agree with the subject, showing default agreement. I have provided an explanation of this phenomenon using my theory. I have proposed that the head that agrees with the subject in negative stative sentences (i.e. Neg_k^0) cannot receive φ -features early enough for agreement to take place. By the time Neg_k^0 does receive φ -features from an auxiliary that is positioned higher up in the structure, the latter will already have agreed with the subject. The only way for Neg_k^0 to value its φ -features is by default agreement.

5.6 Conclusion

In this chapter, I have taken a look at the languages of the world to try to show that Jump-start is not an exotic mechanism reserved only for Oghuz, but is far more widespread than one might think. For this purpose, I have focused mostly on syntactic structures where the effects of Jump-start appear to emerge (if Jump-start is at work in the given language), i.e. structures without subject agreement morphology and with direct objects, transitive infinitives being a prime example. Because of the fact that morphology constitutes a reference point in this analysis, I have studied languages that morphologically mark agreement with the subject and/or have morphological accusative marking. These are German, Japanese, Finnish, Kolyma Yukaghir, Cuzco Quechua, Mangarayi and Koasati. I have shown that effects comparable to the JuSH related effects that obtain in Turkic languages can also be observed in these genealogically unrelated languages.

⁶⁴I am assuming that the higher Neg head $-\text{o}$ (or any other intervening functional head, for that matter) does not block Jump-start.

5.6.1 Jump-start and parametric variation

I will close this chapter by spelling out some questions that arise in this cross-linguistic context, and trying to answer some of these questions.

The first set relates to the cross-linguistic extent of Jump-start: Does Jump-start occur in every language; if not, how is this variation encoded? I answer these questions as follows. If Chomsky's (to appear, 2005) proposal that T derives its φ -features from C is universal, then something like Jump-start exists in every language. I have argued in chapter 4 section 4.3.1 that the extent of Jump-start is determined by the presence of a phase boundary, so the extent of Jump-start is determined by the inventory of phases in that language. The inventory of phases, in turn, is determined by whether certain elements like v have intrinsic φ -features or not. If, for example, a language completely lacks a non-defective v , then the effects of feature transmission will be seen wherever there is a v , i.e. a verb phrase, and an object that needs structural case in that verb phrase. If the distribution of defective v is restricted in that language, then the effects of feature transmission will coincide with the co-distribution of defective v and direct objects.⁶⁵

From this perspective, the variation that one finds in this empirical domain is entirely in line with an influential proposal about language variation found in Borer (1984) and Chomsky (1995): All parameters can be traced down to the properties of lexical items. I should note, though, that I do not espouse this strong version of this thesis. In fact, I have adopted some key proposals of Baker (2008) that rely on there being some parametric variation that has to be attributed to syntax, such as that in the direction of probing in the operation Agree. Then, I have to tread a middle path, where some kinds of parametric variation, like the variation in the extent of Jump-start, may be attributed to variation in the lexicon, while some others, such as the direction of probing, to variation in syntax.

There are some other questions that I will simply spell out here, without trying to answer them. However, I will suggest how they could be answered. These questions are the following:

1. How did the VP phase disappear in the relevant languages and constructions studied in this book?
2. What kinds of grammatical phenomena are available in the languages in question as empirical evidence for the absence of a VP phase?
3. What other grammatical phenomena can these phenomena be linked to? Or in other words, do languages which lack a VP phase constitute a certain class of

⁶⁵In some languages, object agreement markers encode features different from those that subject markers do. For instance, French participles agree in number and gender with the object and the main verb agrees with the subject in person, as well as number and gender. One question that arises in the light of this fact is whether JuSH can handle this observation (Marjo van Koppen, p.c.). In this context, it is important to recall that it is person features that are crucial for case assignment to take place. I have shown this in chapter 2 section 2.3.1. So one might speculate that Jump-start involves the transmission of the feature [person] rather than the wholesale transmission of a φ -feature set involving other features as well. All features other than [person] may be considered to be intrinsic to the heads they are found on. Then, if object agreement in a language does not involve a person feature, the functional head that bears those agreement features has not been jump-started.

languages, such as those that have a dominant subject–object–verb constituent order, that allow flexible word order, etc.?

4. What are the general implications of this on the architecture of grammar proposed in Chomsky (2000, et seq.)?

Any research that undertakes to answer these questions should adopt a comparative outlook with both a meso-variation (variation within a language family) and a macro-variation (variation between language families) dimension.

The meso-variation dimension should have the following focus: Among the languages that I have discovered to show phenomena in the verb phrase that could be accounted for by the JuSH, Turkish, Turkmen and Azerbaijani belong to the Oghuz group of the Turkic family of languages. So, Oghuz languages would seem to lack a VP phase. Interestingly, Turkic languages belonging to other groups within the family contrast with Oghuz languages, in that they do not seem to lack a VP phase. (What I mean by that is that I have not discovered any phenomena in these languages that required recourse to the JuSH). Then, one should compare Oghuz languages to each other, and then these to non-Oghuz Turkic languages to discover what sorts of relevant correlations can be revealed.

The macro-variation dimension of this research should seek to bring out similarities and differences between Oghuz languages, on the one hand, and two groups of language, on the other: First, non-Turkic languages where VPs do not seem to be phases; second, non-Turkic languages where VPs do seem to be phases.

Concerning the first group of languages, an areal linguistic approach may yield interesting results. Languages may show similar features due to geographical proximity. Interestingly, some of the languages that I have shown to lack a VP phase, namely Oghuz languages, Finnish and Kolyma Yukaghir, originated in northern Eurasia. It is true that this is a vast geographical area for any definition of proximity, but the peoples inhabiting the area have led a nomadic lifestyle for thousands of years, making it possible for them to interact with each other over great distances, allowing linguistic features to spread. For instance, vowel harmony, dominant subject–object–verb constituent order, rich agglutinative morphology and lack of grammatical gender can be listed among properties that are common to an overwhelming majority of north Eurasian languages and are characteristic of the region, just to name some very general linguistic features. So, one could investigate whether any languages of the region other than those that I have just mentioned show similar characteristics with respect to the properties of the VP. Various language groups in the Uralic family, such as Samoyedic (north central Eurasia), northern Ugric (north central Eurasia) and eastern Finnic (north western Eurasia), as well as some in the Altaic family, such as the northern branch of the Tungusic group (north eastern Eurasia) might be interesting for comparison with the Oghuz languages.

In the Germanic languages, VPs do seem to be phases (with some exceptions, such as VPs in restructuring configurations in German), consequently these languages constitute the second group. These are especially important due to the amount of research that has been carried out on them concerning various topics of theory of grammar. They should be compared with Oghuz languages and north Eurasian languages that show similarities to Oghuz languages with respect to VP behaviour.

Thus, a four way comparison (i) within Oghuz Turkic, (ii) between Oghuz Turkic and non-Oghuz Turkic, (iii) between Oghuz Turkic and unrelated north Eurasian languages, and finally, (iv) between Oghuz Turkic and north Eurasian, on the one hand, and Germanic, on the other, will help bring out, narrow down and sharpen the correlations that are essential in answering the questions spelled out in above.

Conclusion

I started this book by pointing out the relationship between case and agreement. I have noted that a noun phrase is assigned the structural case it bears through agreement with a functional head. This thesis, referred to as the George and Kornfilt Thesis, has been assumed as a basic premise in several recent works, to provide an account of structural case assignment. Often, agreement is spelled out morphologically as subject or object agreement, just like subject and object cases. When this is the case, one sees that structural subject case relies on subject agreement, and structural object case on object agreement.

After these observations, I have made the claim that there is at least one more dependency that needs to be assumed in case phenomena, namely that, in some languages of the world, structural object case, or more particularly accusative case, is dependent on subject agreement—the Subject Agreement–Accusative Case Conjecture. In order to explain this dependency, I have proposed the Jump-start Hypothesis. According to this hypothesis, in a finite construction, case assignment to each argument is activated by a single source of agreement. This has been the main theoretical contribution of this book. I have devoted the rest of the book to substantiating these ideas.

Building on my initial remarks, I have, first, demonstrated the empirical foundations of the George and Kornfilt Thesis using Turkish data, in chapter 2. I have shown that there are two classes of case, namely structural and inherent. The latter is dependent on θ -role assignment and has no relation to agreement. The former, however, is licensed through an agreement relation that holds between a functional head and a noun phrase being assigned case. Nominative is licensed through agreement with T. Genitive case relies on agreement with D, and accusative with v .

Next, in chapter 3, I have argued that a ‘generalized’ version of the George and Kornfilt Thesis must hold. I have done this through a discussion of the verbal noun construction, a nominal construction that, in Turkish (and to a certain degree in Azerbaijani), allows accusative case assignment to an object that it contains, unlike its analogues in other languages. I have first discussed at great length and eventually rule

out a possible explanation of the availability of accusative case in this nominal environment, which I have called the Abstract Light Verb Hypothesis. This hypothesis involves postulating a verbal projection in the VNC that can agree with the object and assign it accusative case. Next, I have shown that, in the VNC, the functional head that hosts the subject agreement features is responsible for both genitive case and accusative case. I have done this by observing that accusative case is illicit in the VNC without subject agreement. I have called this the non-finiteness effect. This observation is the empirical foundation of the JuSH. Then, I have proposed the jump-start operation as an implementation of the JuSH. This operation produces a duplicate of unvalued agreement features found on a functional head and places that duplicate on another functional head. These two distinct feature sets are then used to license structural case on two arguments through agreement. I have also introduced some constraints that regulate the functioning of jump-start. I have ended this chapter with a discussion of case assignment in English gerunds. I have shown that these constructions also constitute a venue of application for the JuSH.

Chapter 4 aimed to show that the JuSH is not suited to just explaining the case assignment patterns in the VNC, but can also be invoked to explain several other phenomena in Turkish grammar, and some phenomena in the closely related Turkmen and Azerbaijani. I have, first, demonstrated the dependence of the accusative case assignment capability of the verb in embedded clauses on the local subject agreement or subject agreement in the matrix clause. The data that I have analysed came from various offshoots of nominalization, restructuring infinitival complements, and non-finite subject clauses in Turkmen. The offshoots of nominalization present a pattern that can be subsumed under the non-finiteness effect. Restructuring infinitival complements disallow accusative case assignment when the matrix verb is passivized—the passivization effect. This suggests that accusative case assignment in the embedded clause is dependent on a functional category in the matrix clause. I have shown that that functional category is ultimately the source of subject agreement features in that syntactic domain. As for non-finite subject clauses in Turkmen, their distribution is directly affected by accusative case assignment in the subject clause. This points to an inter-clausal case dependency. I have termed the restricted distribution of non-finite subject clauses the sensitivity effect. Next, I have focused on case assignment to the subject and shown that the functional category that is responsible for subject case in a particular syntactic domain may also be dependent on a higher functional category for case assignment. The constructions I have discussed were non-finite subject clauses and non-restructuring infinitival complements in Turkish. Non-finite subject clauses in Turkish have a distribution which is comparable to that in Turkmen, and consequently, which can be subsumed under sensitivity effects. So, I have claimed that this pattern in Turkish is linked to case assignment as in Turkmen. The difference is that in Turkish what determines the distribution of subject clauses is case assignment to the subject rather than the object. Non-restructuring infinitival complements show a variant of the passivization effect that restructuring infinitives show, with the difference being, again, the involvement of case assignment to the subject rather than the object. In the course of the discussion, I have implemented some of my observations as additional constraints on the jump-start operation.

In chapter 5, I have taken a look at the languages of the world to try to show that the

phenomena that could be subsumed under the JuSH are not an exotic selection reserved for Turkish and the closely related languages of the Turkic family, but are far more widespread than one might think. For this purpose, I have focused mostly on syntactic structures where I believe the effects of jump-start are readily observable—if jump-start is at work in the given language—such as clauses without subject agreement morphology that contain direct objects, transitive infinitives being a prime example. Because of the fact that morphology constitutes a reference point in this analysis, I have studied languages that morphologically mark agreement with the subject and/or have morphological accusative marking. These were German, Japanese, Finnish, Kolyma Yukaghir, Cuzco Quechua, Mangarayi and Koasati. I have shown that effects comparable to the JuSH related effects that obtain in Turkic languages can also be observed in these genealogically unrelated languages.

To sum up, I believe that I was successful in making the case for the JuSH, and consequently, the Subject Agreement–Accusative Case Conjecture. The phenomena covered by this hypothesis had hithertofore been largely unexplored. I have revealed some phenomena in Turkish, which had previously not been noted, and explained them by recourse to the JuSH; I have also reinterpreted some others from the perspective of my theory. Furthermore, I was able to explain several other phenomena in other languages by the JuSH. In short, the Subject Agreement–Accusative Case Conjecture pointed out a theoretical lacuna, and this was the connection I had aimed to demonstrate in this book. I deem this task accomplished.

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Samenvatting in het Nederlands

De hoofdstelling van dit proefschrift is dat er talen zijn waarin de accusatief afhankelijk is van congruentie met het subject. Sinds George en Kornfilt (1981) was de algemeen aanvaarde visie dat structurele casus op het subject afhangt van de aanwezigheid van subject-congruentie in de minimale clause die het subject bevat. Zo neemt bijvoorbeeld Chomsky (1995) aan dat accusatief gelicenseerd wordt door coverte en overte object-agreement. In dit proefschrift laat ik een andere vergelijkbare afhankelijkheidsrelatie zien die nog niet eerder in de literatuur beschreven werd: in een aantal talen legt de afwezigheid van congruentie met het subject in een syntactisch domein restricties op de beschikbaarheid van de accusatief in hetzelfde domein. Dit is een aanwijzing dat de accusatief mogelijk afhangt van subject-agreement. Als verklaring voor deze observatie stel ik de Jump-start Hypothese voor:

(1) *Jump-start Hypothese (JuSH) (niet technische versie)*

In een finiete constructie wordt naamvalstoekenning voor elk argument geactiveerd door een enkelvoudig achterliggend congruentiemechanisme.

In hoofdstuk 2 laat ik aan de hand van Turkse data de empirische onderbouwing zien van de stelling van George en Kornfilt (1981). Ik bespreek verder dat er twee categorieën van naamvallen zijn, namelijk structurele en inherente naamval. De eerste wordt gelicenseerd door een congruentierelatie tussen een functioneel hoofd en een nominale constituent die een naamval toegekend krijgt. De tweede is afhankelijk van het toekennen van een θ -role in plaats van congruentie. Hiernaast presenteer ik een korte beschrijving van de formalisering van deze licensing-relaties in de generatieve grammatica.

In hoofdstuk 3 onderbouw ik de geldigheid van de gegeneraliseerde versie van George en Kornfilt's stelling. Hiervoor bediscussieer ik de verbale-noun-constructie (VNC), bestaande uit een nominale constructie die het toekennen van structurele accusatief toestaat aan een thematisch argument dat deel uitmaakt van dezelfde nominale constructie. Ik bespreek eerst uitgebreid een mogelijke verklaring voor de beschikbaarheid van accusatief in deze nominale omgeving en ga uiteindelijk laten zien dat deze verklaring niet werkt. Deze verklaring, door mij genoemd de Abstract Light Verb Hypothesis, houdt een postulatie in van een verbale projectie in de VNC die kan congrueren met het object en aan deze accusatief toe kan kennen. Daarna laat ik zien dat het functionele hoofd dat in de VNC het subject-agreement feature inhoudt, verantwoordelijk is voor genitief en accusatief casus. Dit wordt ondersteund door de observatie

dat accusatief uitgesloten is in VNC zonder subject-agreement. Deze observatie, die ik het non-finiteness-effect noem, vormt de empirische onderbouwing van de JuSH. Later in dit boek stel ik Jump-start operaties voor als toepassing van de JuSH. Jump-start produceert een duplicatie van neutrale agreement-features gevonden in een functioneel hoofd en verplaatst deze duplicatie naar een ander functioneel hoofd. Deze twee verschillende feature-verzamelingen worden vervolgens ingezet om -door middel van congruentie- structurele casus te licenseren op twee argumenten. Hiernaast introduceer ik een aantal constraints die Jump-start reguleren. Het hoofdstuk eindigt met een discussie over naamvalstoekenning bij Engelse gerundiumconstructies en ik laat zien dat de JuSH ook bij deze constructies van toepassing is.

In hoofdstuk 4 toon ik aan dat de JuSH niet alleen casuspatronen binnen de VNC kan verklaren, maar bovendien ook een aantal andere fenomenen van de Turkse grammatica. Ik demonstreer eerst dat de eigenschap van het werkwoord om accusatief toe te kennen in bijzinnen, afhankelijk is van de congruentie met het lokale subject, of van de congruentie met het subject in de matrixzin. De hier geanalyseerde data bestaat uit verschillende soorten nominalisering, herstructurering van infinitiefcomplementen en de distributie van niet-finiete subjectzinnen in Turkmeens. De verschillende soorten nominalisering vormen samen een patroon dat valt onder het non-finiteness effect. Herstructureren van infinitiefcomplementen verbiedt toekenning van accusatief als het werkwoord in de hoofdzin passief wordt—het passivization effect. Dit is een indicatie dat toekenning van accusatief in de bijzin afhankelijk is van een functionele categorie in de hoofdzin. Ik laat zien dat deze functionele categorie de ultimatieve oorzak vormt voor subject-agreement-features in dit syntactische domein. Wat betreft de verdeling van niet-finiete subject zinnen in het Turkmeens zo wordt dit patroon direct beïnvloedt door toekenning van accusatief in de subject clause. Dit wijst op een inter-clausale casus-afhankelijkheid. Ik noem deze beperkte distributie van niet-finiete subjectzinnen sensitivity effects. Vervolgens bespreek ik casustoekenning aan het subject, en laat zien dat de functionele categorie die verantwoordelijk is voor de naamval op het subject in een bepaald syntactisch domein eveneens afhankelijk is van een hogere functionele categorie voor naamvalstoekenning. De constructies die ik hier bespreek zijn niet-finiete subject zinnen in het Turks en niet-herstructurende infinitiefcomplementen. Niet-finiete subject zinnen in het Turks hebben een distributie die vergelijkbaar is met die in het Turkmeens en vallen daarom onder de sensitivity effects. Daarom stel ik hier dat dit patroon in het Turks gelinkt is aan casus-toekenning in het Turkmeens. Het verschil is dat in Turkse de distributie van subject-zinnen afhankelijk is van de naamvalstoekenning aan het subject in plaats van aan het object. Niet-herstructurende infinitieven laten een variante van het passivization effect zien die van herstructurende infinitieven wordt vertoond, met het verschil dat naamvalstoekenning het subject betreft, en niet het object. In de discussie voeg ik deze observaties toe als constraints van de Jump-start operatie.

In hoofdstuk 5 kijk ik naar de talen van de wereld om te laten zien dat de fenomenen die onder de JuSH vallen geen uitzonderlijke gevallen zijn die alleen gelden voor het Turks en nauw verwante talen binnen de Turkse taalfamilie, maar dat deze fenomenen juist vaker voorkomen dan tot nu toe gedacht. Hiervoor focuseer ik op die syntactische structuren die—voor het geval dat Jump-start actief is in de betreffende taal—de omstandigheden bieden waarbij de effecten van Jump-start zich potentieel vertonen

en eenduidig gediagnosticeerd kunnen worden, zoals zinnen zonder morfologie voor subjectcongruentie die wel een direct object hebben. Een voorbeeld hiervoor zijn transitieve infinitieven. Omdat morfologie een referentiepunt is in deze analyse, onderzoek ik talen die congruentie met het subject morfologisch markeren en/of morfologische markering van de accusatief hebben. Het hier onderzochte sample van talen die aan deze criteria voldoen, houdt in Duits, Japans, Fins, Kolyma Yukaghir, Cuzco Quechua, Mangarayi en Koasati.

Curriculum Vitae

Cem Keskin was born on 17th December 1971 in İzmir, Turkey. He completed his secondary school education at Ankara Atatürk Anatolian High School in 1990. He began his education in economics at Hacettepe University the same year. In 1995 he changed to the study of linguistics. He obtained his BA degree from Hacettepe University Department of Linguistics in 1999 with a distinction. In 2002, he completed the MSc program in Cognitive Science at Middle East Technical University. The same year, he entered the PhD program at the same department. After a one month fellowship from the Utrecht Institute of Linguistics OTS in 2004, he began his PhD in the same institute. He was employed there as a PhD student from 2005 until 2009. This dissertation is the result of his research carried out there.