Minimalist C/case

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This article discusses A-licensing and case from a minimalist perspective, pursuing the idea that argument NPs cyclically enter a number of A-relations, rather than just a single one, resulting in *event-licensing* (entailing θ-licensing), *case-licensing* and *ϕ-licensing*. While argument case commonly reflects Voice/v-relations, canonical A-movement is driven by higher elements, either in the C-T system or in a superordinate v-system (in ECM constructions). In addition, there is a distinction to be drawn between the triggering of A-movement, by for example C, and the licensing of the landing site, by for instance T_{ϕ}, C-probing leading to tucking-in into Spec-T. Much of the evidence presented comes from quirky case constructions in Icelandic and from ECM and raising constructions in Icelandic and English. It is argued that T in ECM constructions inherits ϕ-licensing from the matrix v_{ϕ}, regardless of the case properties of v_{ϕ}.

1. Introduction*

Taking Vergnaud's famous 1977 letter to Chomsky and Lasnik as a starting point, Lasnik (2008:18) succinctly states what may be referred to as *Vergnaud's Conjecture* as follows:

> "Vergnaud's now very familiar basic idea was that even languages like English with very little case morphology pattern with richly inflected languages in providing characteristic positions in which NPs with particular cases occur."

However, Icelandic notoriously exemplifies a "richly inflected" language where there does not seem to be any direct correlation between "particular cases" and "characteristic positions in which NPs … occur".[1] The central phenomena that illustrate this are quirky (that is, non-nominative) subjects and a number of related phenomena, including case-agreement in PRO infinitives. See Andrews 1976, Thráinsson 1979, Zaenen et al. 1985, Yip et al. 1987, Sigurðsson 1989, Marantz 1991, and Jónsson 1996, to mention only a few milestones from

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[1] Ergative systems illustrate this as well, but the issues are complex (see Legate 2007, Müller 2008, Bobaljik and Wurmbrand 2009) so I refrain from considering ergativity (except occasionally in direct relation to the Icelandic facts discussed here).

the 20th century. Since Chomsky 2000, generative research into the nature of the relevant Icelandic data has increased explosively (see the references in Sigurðsson 2009 and in Sigurðsson and Holmberg 2008).

The Icelandic facts are voluminous and complex, but the core facts can be sketched as follows:[2]

(1) *Quirky subjects with a rich variety of predicate types*, e.g.:

a. Var *þeim* ekki hjálpað? *Dat*
was.DFT them.D not helped.DFT
'Were they not helped?'

b. Hafði *þá* rekið að landi? *Acc*
had.DFT them.A driven.DFT to land
'Had they drifted ashore?'

c. *Þeirra* gætti ekki. *Gen*
them.G noticed.DFT not
'They were not noticeable.'

(2) *Quirky raising to subject and object* (ECM), as in e.g.:

a. *Þeim*/*Þeir virtist ekki hafa verið hjálpað. *Raising*
them.D/*N seemed.DFT not have.INF been helped.DFT
'They did not seem to have been helped.'

b. Við töldum *þeim*/*þá ekki hafa verið hjálpað. *ECM*
we.N believed.1PL them.D/*A not have.INF been helped.DFT
We didn't believe them to have been helped.'

(3) *Overt (quirky or Nom) subjects in the Experiencer ECM construction, e.g.:*

a. Mér sýndist *þeim* hafa verið hjálpað. *Dat*
me.D appeared.DFT them.D have.INF been helped
'They appeared/seemed to me to have been helped.'

b. Mér sýndust *þeir* hafa bjargast. *Nom*
me.D appeared.3PL they.N have.INF got-rescued
'They appeared/seemed to me to have made it / been rescued.'

[2] Both finite verbs and participles agree with nominative as opposed to quirky subjects, the latter being accompanied by default agreement morphology (3.SG in finite verbs, N/A.N.SG in participles). I use the following abbreviations in glosses: Capital N, A, D, G for nominative, dative, accusative and genitive; small capitals M, F, NT for masculine, feminine and neuter; SG, PL for singular and plural; DFT ('default') for both non-agreeing default finite verb forms (3SG) and past participles (N/A.NT.SG); INF for infinitive and SUBJ for subjunctive mood.

(4) *Non-raising of case-marked indefinite NPs, e.g.:*

a. Þá höfðu verið seldir *bílar* á uppboðinu. *Nom*
then had been sold cars.N at auction.the
'Then cars had been sold at the auction.'

b. Virtust [$_{TP}$ hafa verið seldir *bílar* á uppboðinu]? *Nom*
seemed have.INF been sold cars.N at auction.the]
'Did it seem seem that there had been cars sold at the auction?'

c. Við töldum [$_{TP}$ hafa verið selda *bíla* á uppboðinu]. *Acc*
we believed.1PL have.INF been sold cars.A at auction.the
'We believed there to have been cars sold at the auction.'

(5) *Case agreement with PRO*, as for example in:
Bræðurnir vonuðust til [$_{CP}$ að PRO verða *báðum*/*báðir hjálpað].
brothers.the.N hoped.3PL for to D be both.D/*N helped.DFT
'The brothers hoped to be both helped.'

In early approaches, including Andrews 1976 and Zaenen et al. 1985, the question of whether quirky subjects (in Spec,T) are derived by NP-movement was not a central issue, whereas this was extensively argued to be the case across the board in Sigurðsson 1988, 1989, an analysis adopted by Marantz (1991), Holmberg and Platzack (1995) and many since (for example Jónsson 1996, Chomsky 2000, McFadden 2004). Given that conclusion, it was clear that quirky subjects bear in an interesting way on NP-licensing, A-movement and standard GB Case Theory.

Apparently, overt NP-placement is largely independent of the morphological marking of NPs, raising the question of what it is that licenses overt (argument) NPs, including quirky subjects, and also the question of whether NP-licensing (A-licensing) is somehow indirectly related to case marking. These questions are central and much debated in generative syntax (see for instance Legate 2008, Markman 2009, Bobaljik and Wurmbrand 2009). I will here try to shed some fresh light on them, from a minimalist point of view, pursuing an approach where argument NPs enter a number of A-relations, rather than just a single one, yielding *event-licensing*, *case-licensing* and *ϕ-licensing*.[3] This is not a trivial task, but I will nonetheless try to develop a coherent general approach to these phenomena. As it turns out, argument case

[3] Event-licensing (cf. Pylkkänen 2008) entails θ-licensing. While thus being syntactically licensed, θ-roles are interpreted or read off at the C-I interface, on the basis of structural (mainly Voice-v) and lexical information transferred from syntax. As has been widely discussed, there are commonly observable language-specific correlations between cases and θ-roles, the reason being that semantic θ-interpretation and morphological case-interpretation are read off from a common underlying structure. The interpretation takes place at the interpretative interfaces, that is, syntax does not contain or operate with θ- or case-features, instead providing the abstract information that forms the basis for case-and θ-interpretation. See further section 2.

commonly reflects Voice/v-relations, whereas subject NP-movement is driven by abstract ϕ-features in the C-T-system (or in a superordinate v-system). However, in caseless languages like Chinese and in case-poor languages like English, there are no or only marginal overt indications that these variably high licensing relations are distinct.

I will be focusing on canonical high A-movement of subjects, leaving aside Object Shift and other instances of low NP-movements, including low subject raising out of vP.[4] I adopt the Strong Minimalist Thesis and hence the *single-cycle hypothesis* (Chomsky 2000, 2001, 2004, 2005, 2007, 2008), that is, the hypothesis that the syntactic computation proceeds in a single cycle, deriving a representation that is legible to both the interfaces (albeit in different terms, semantic vs. expressive). Following much recent work (for example Sigurðsson 2000, 2004a *et seq.*, Boeckx 2009, Burton-Roberts 2009), I furthermore adopt the thesis that Universal Grammar contains no parameters, for instance no case parameters. On this approach, linguistic variation is confined to the externalization component, that is to say to broad PF, including morphology, where variation arises in an interplay of experience and general (non-linguistic) principles–the 2nd and the 3rd factors in the sense of Chomsky (2005). It follows that all languages and individuals operate with the same set of abstract syntactic features, even though they show great variation in feature externalization. See the discussion in Sigurðsson 2004a, 2010a, 2010b, 2010c, and in Boeckx 2009, 2010.

Within the minimalist/biolinguistic framework as it has developed in recent years (Chomsky 2004 *et seq*.), these assumptions are coherent and reasonable (see for example Berwick and Chomsky 2008, Chomsky 2010). None of them are self-evident or innocent (see Biberauer et al. 2009, Holmberg 2009, Roberts 2010), but I will defend them here with respect to case and high NP-licensing. If they are on the right track, syntax does not operate with case features, instead building structures that are interpreted in terms of overt case in the externalization component of individual case languages. It follows that we cannot obviously expect there to be a universal theory of morphological case. In fact, typological research suggests that not having any case marking at all is crosslinguistically by far the most common "case system" (see Iggesen 2008).

A note of historical clarification is in place here. In Sigurðsson 1988, 1989, 1991, 1992 I argued extensively that A-movement is unrelated to morphological case. Marantz (1991) advocated for this standpoint as well, furthermore claiming that A-movement should be accounted for in terms of "the requirement for sentential subjects encoded in the EPP" (Marantz 1991:252).[5] However, Icelandic does not have any general EPP requirement, being

[4] Notwithstanding the fact that some of my central claims bear on these phenomena. Discussing Object Shift and low subject movements would take me much too far afield here (but see for example Sigurðsson 2000, Bošković 2004, Thráinsson 2001, 2007 on Icelandic, and, more generally, Moro 2008, Chomsky 2010.

[5] Lasnik 2001 pursues this too, suggesting that A-movement follows from the demand that "the functional head of the clause have a specifier" (2001:360). For thorough arguments against an EPP account of A-movement even in English (and more generally), see Bošković 2002.

like many other case languages (German, Russian, Finnish, etc.) in showing much weaker EPP effects than English.[6] Thus, abstract Case cannot be replaced by EPP (which is in any event an epiphenomenon), and must instead be taken seriously, as a crucial property of language (as argued in Chomsky 1980 *et seq*.). The central claim I pursue is, however, that "Case" in this sense is unrelated to morphological case, instead boiling down to ϕ-licensing.

Section 2 sketches a novel approach to the event-licensing of arguments and the nature of case-licensing, that is, the abstract mechanism that underlies PF case assignment to arguments in Icelandic and a few related languages. Section 3 discusses ϕ-licensing of finite clause subjects, corresponding to what has been referred to as abstract nominative Case, arguing that this highest or final licensing relation of subject NPs is distinct from lower case- and event-licensing relations. Section 4 extends the analysis to ECM and raising infinitives, arguing, on the basis of some rather striking evidence, that an overt Spec,T in these infinitive types is licensed by ϕ-transmission from the matrix v_ϕ to the infinitival T_{def} (following the spirit, if not all the analytical details, of Chomsky 2001 *et seq*.). Section 5 concludes the paper.

2. Little v, case, Voice

In this section I will discuss and analyze the mechanisms that enter morphological case marking in Icelandic and a few related languages, demonstrating that argument case is commonly decided in PF by properties of v-heads and by their interaction with various Voice type heads. Since case assignment is a late morphological (PF) process, many of the facts described here are partly language-specific and even irregular. My purpose by analyzing these facts is thus (obviously) not to develop a general *syntactic* theory of morphological case–as case assignment is a PF process, the best we can hope for in syntax is a theory of the underlying relations that are interpreted in terms of different PF cases in different constructions and in different languages. Instead, my aim by scrutinizing the nature of argument case marking is the more modest one of showing that the mechanisms yielding morphological case are distinct from the mechanisms behind high A-licensing (the latter will be discussed in more detail in sections 3 and 4).

At first sight, it would seem that subject case has a vP-external source, whereas (direct) object case originates vP-internally (see Chomsky 1981, 1995, 2001, etc.). Thus, Chomsky (2001) suggested that Acc in (regular accusative systems) is the responsibility of ϕ-complete v, designated as v*, whereas Nom is activated or "assigned a value under agreement" with ϕ-complete T, T_ϕ (Chomsky 2001:6). Plain or defective v, in constrast, was analyzed as not

[6] In Sigurðsson 1989 I nevertheless pursued a somewhat similar idea, the Subject Command Condition, saying, informally, that any (definite) core argument must either be a subject or commanded by a subject. For a recent minimalist analysis of disparate phenomena that have commonly been attributed to EPP, see Sigurðsson 2010a.

assigning or licensing any case value, thereby rendering the underlying object in passive, unaccusative and other defective vP-types accessible to vP-external Nom. As illustrated in (6), this yields Burzio's Generalization (for English), that is to say, the "Acc-to-Nom conversion" typical of defective predicate types:

(6)	a.	We sank *them*.	transitive v*-V:	Nom – Acc_i
	b.	*They* were sunk.	passive v-V:	Nom_i
	c.	*They* sunk.	unaccusative v-V:	Nom_i

The assumption that Nom originates in or with T_ϕ has commonly been taken to account for finite verb agreement, as in (6b). However, it is even simpler to assume that ϕ- and case-*relations* are syntactic, whereas ϕ- and case-*feature values* are assigned in post-syntactic (PF) morphology. Morphological Nom can thus be analyzed as reflecting a syntactically absent case relation, and finite verb agreement as arising in morphology whenever the verb successfully probes a noncased NP. If so, morphological case of subjects and direct objects in accusative case systems reflects v-relations (or rather Voice/v-relations, see below) plus "no case relations", as it were. I will here develop a formal way of encoding this idea, without breaking with Chomsky's view of Acc and Nom as reflecting v* and v. However, as I will show, both v* and v may or may not be ϕ-complete, either licensing or not licensing a vP-internal (definite) NP. That is, instead of assuming only v* and v, we need to distinguish between v_ϕ* and v* and between v_ϕ and v. I will return to this shortly.[7]

The system proposed by Chomsky applies to the structural cases, Nom and Acc. However, many languages have one or more inherent cases (dative, genitive, instrumental, ablative, partitive, concomitative, and so on), and even though accusative is usually the most central direct object case in such languages, they also apply the inherent cases to mark some of their direct objects (in addition to various other relations). Icelandic, in fact, has hundreds of ordinary verbs that take dative direct objects, including verbs such as *ausa* 'scoop', *bjarga* 'rescue', *eyða* 'spend, eliminate', *fleygja* 'throw away', *fljúga* 'fly', *hjálpa* 'help', *hjúkra* 'nurse', *róa* 'row', *stjórna* 'control, govern', *ýta* 'push', *þjóna* 'serve' (see Barðdal 2001, Maling 2002, Svenonius 2002, Jónsson 2003, 2005, Thráinsson 2007:208ff, Sigurðsson 2009). Verbs taking genitive direct objects are much fewer, but those that do are not particularly rare or peripheral, including, for example, the common *bíða* 'wait for', *geta* 'mention', *krefjast* 'demand', *leita* 'look for,

[7] Scandinavian Object Shift has commonly been taken to provide evidence in favor of an active AgrO or v_ϕ (Chomsky 1995, 2000 *inter alia*). Of course, languages like Icelandic, without general object agreement, do not offer any straightforward morphological evidence in favor of the ϕ-completeness of transitive v-V (cf. Markman 2009). However, as morphology *is* not syntax, instead only reflecting it, absent morphological evidence is not tantamount to absent syntactic evidence.

search for', *neyta* 'consume, use', *njóta* 'enjoy', *óska* 'wish for', *sakna* 'miss', *þarfnast* 'need'.

It is not obvious how to accommodate facts of this sort in Chomsky's system. His approach is about argument licensing, whereas the morphological cases make overt distinctions between licensed NPs. Consider the Icelandic direct object case marking contrasts in (7)–(8) (showing just a few samples of such contrasts).

(7)	a.	*hjálpa* 'help'	*hjúkra* 'nurse'	*fylgja* 'follow'	*ljúka* 'finish'	Dat
	b.	*aðstoða* 'assist'	*lækna* 'cure'	*elta* 'chase'	*klára* 'finish (up)'	Acc

(8)	a.	*geta* 'mention'	*krefjast* 'demand'	*óska* 'wish for'	*þarfnast* 'need'	Gen
	b.	*nefna* 'mention'	*heimta* 'demand'	*vilja* 'want'	*þurfa* 'need'	Acc

It does not seem to be the case that the dative direct objects of the verbs in (7a) are somehow "more" or "less" licensed than the accusative direct objects of the verbs in (7b), nor do the genitive-taking verbs in (8a) seem to be stronger (or weaker) licensers than the accusative-taking ones in (8b). If the accusative objects are licensed in relation to a ϕ-complete v, it would seem that the dative and genitive objects are so too. That is, it seems that v* comes in several flavors in individual case languages, as, say, v*,v*$^{+}$,v*$^{++}$, and so on. I will refer to all v* types as *case star augmented* v-heads, that is, v-heads that, in addition to potentially licensing a direct object, have the property of triggering some case in PF, in tandem with V.[8]

Given this notation, the basics of the core argument case system in nominative-accusative/dative/genitive languages can be described as in (9), where the arrow reads as 'yields' (in PF morphology).

(9)	a.	$v_{(\phi)}*^{++}$-V	→	Gen
	b.	$v_{(\phi)}*^{+}$-V	→	Dat
	c.	$v_{(\phi)}$*-V	→	Acc
	d.	$v_{(\phi)}$-V	→	Ø (Nom)[9]

[8] This is slightly different form the approach in Sigurðsson 2011b, where v derives from v* (a less coherent analysis that nevertheless yields the same general results as the present one).

[9] Elsewhere relations are commonly but not necessarily interpreted or reflected by morphological nulls. Icelandic masculine "strong" nouns, for instance, typically have the nominative singular ending *-ur*, while most "strong" neuter and feminine nouns in the language have no nominative singular ending. Of course, many others have argued that Nom is "no case" in some sense (see for example the discussion and references in Markman 2009:402ff). However, the suggestion has different implications in different approaches (that is, it is not a single or a coherent suggestion across the board). In the present approach it means that whenever an NP is transferred from syntax to PF without any specific case-instructions, it will wind up as nominative, regardless of the morphological shape of nominative forms.

We now have a connection with the Chomskyan system. Importantly, however, further factors than just v-type heads, decide the case of an argument NP, a central issue I will return to.[10]

Notice the split in (9) between the A-licensing property, $_{\phi}$, and the case triggering property, *. These properties often conflate or apply in tandem and have thus commonly been taken to be a single property (as in Chomsky 2001). However, as we will see, they must be kept apart, the case triggering power being independent of the A-licensing power and vice versa. Importantly, the different v*-types are morphological and not syntactic elements. That is, *syntactically*, Icelandic and German are just like, say Chinese, in having only general object-licensing v_{ϕ}, the v*-flavors being activated in the externalization process, as language-specific PF interpretations (recall that the most common "case strategy", crosslinguistically, is not to have any cases at all, that is, not to activate any v*-flavors). Case star augmentation is commonly based on or triggered by vP-internal categories, as in (9), but it may also be triggered by higher categories. As we will see, vP-external categories may also overwrite or erase the initial vP-internal case instructions. I will return to these issues shortly.

The case stars are simple diacritics, the extended case star notation thus not being essential for my purposes. There are several reasons why I nevertheless opt for it, rather than simply for $v_{(\phi)}{}^{Dat}$, etc. A trivial reason is that "case content" is largely unimportant for my purposes. Another less trivial reason is that traditional case terms like "dative" do not have any constant reference across languages (or within individual languages, see shortly).[11] That is, notions like h(ead)^{Dat}, for example $v_{(\phi)}{}^{Dat}$, are inevitably language- or even construction-specific, hence insufficiently general. A third and a related reason is that the star notation has expository advantages, making it relatively easy to highlight and express generalizations across constructions and grammars.

As has been widely discussed, v-heads seem to relate to distinct semantics (see, e.g., Svenonius 2006, Ramchand 2008), but, as seen by pairs like the ones in (7)–(8), and as will be further substantiated shortly, overt case-marking does not express such semantics in any direct manner. There are common and easily observable "semantic case tendencies" in individual

[10] The literature is flooded by suggestions as to how to analyze the morphological cases, each making specific claims about the correlation between the different cases. For recent suggestions, see for example Caha 2009, Pesetsky 2010, and for an overview of some not so recent approaches, see Blake 2001. I do not wish to make any such claims here. What the sketch in (9) says is, trivially, that Icelandic has v-V elements or structures that assign or trigger different cases in PF, in addition to potentially licensing a direct object in syntax. This is the minimum that must be said, and it is also sufficient for my purposes. Distinct v*-types could be analyzed as distinct "prepositions" or extra K(ase)-heads in extended v-projections in morphology (see Bayer et al. 2001), but I will not adopt or assume any such approach here.

[11] Thus, obviously, "dative case" is something different in a 4 case system, such as the German/Icelandic one, than in, say, a 6 case system like the Turkish one, or in a 9 case system, such as the one found in some Dravidian languages (see Blake 2001:158), not to mention case systems, such at the Finnish one, that are traditionally assumed to lack "dative case".

case languages, but the putative correlations between the cases and semantic categories (such as aspect and θ-roles) stem from the fact that semantic interpretation and morphological interpretation are read off at the interfaces from a common underlying syntactic structure. That is, there are indirect but no direct or causal correlations between semantics and morphology.

As one would expect on this view, speaker-internal case variation does not generally correlate with any semantic distinctions (see Jónsson and Eythórsson 2005:235–236). A few examples illustrating this for contemporary Icelandic are given in (10)–(14). The *a*-examples are standard and common, whereas the *b*-examples are nonstandard and not as common (but on the increase, it seems).[12]

(10) a. *Ég* hlakka til þess.
I.N look.1SG to it.G
'I am looking forward to it.'
b. *Mig/Mér* hlakkar til þess..
me.A/D looks.DFT to it.G
'I am looking forward to it.'

(11) a. *Okkur* rak að landi.
us.A dove.DFT to land.D
'We drifted ashore.'
b. *Við* rákum að landi.
we.N drifted.1PL to land.D
'We drifted ashore.'

(12) a. *Mig* langar þangað.
me.A longs.DFT there
'I want to/would like to go there.'
b. *Mér* langar þangað.
me.D longs.DFT there
'I want to/would like to go there.'

(13) a. Voruð *þið* barðir?
were.2PL you.N.PL hit.N.PL.M

[12] On these phenomena (including "Dative Sickness", "Nominative Sickness", and the "New Passive" or the "New Impersonal", see Thráinsson 2007 and the references there, and, more recently, Eythórsson 2008, Jónsson 2009, Sigurðsson 2011b. Like the varying case marking, the varying (finite verb and past participle) agreement morphology has no semantic correlates, being just an automatic reflection of the shifted case morphology (see Sigurðsson 2006a).

'Were you hit (by sby)?'

b. Var barið *ykkur*?
was.DFT hit.DFT you.A.PL
'Were you hit (by sby)?'

(14) a. Mér voru gefnir *bílarnir*.
me.D were.3PL given.N.PL.M cars.the.N.PL.M
'I was given the cars.'

b. Mér var gefið *bílana*.
me.D was.DFT given.dft cars.the.A
'I was given the cars.'

However, this does not preclude that historical case changes, say Acc > Dat or Dat > Acc in some constructions, originally relate to some fairly regular semantics, but, typically, such correlations are alternatively expressed by some other means both within a language and in other languages, and they also get obscured over time by new trends, therefore not being amenable to true generalizations but only to suggestive descriptive approximations, commonly mistaken to be of analytical value.

Some further explanations and caveats are in order here. First, what I have to say here applies to core argument case. The mechanisms underlying the case-marking of complements of prepositions and adverbial and other non-argument NPs (see the lists in (17)–(20)) are different from those underlying core argument case, but I will not pursue the issue here, that is, I will not present any coherent analysis of nonargument case and prepositional case.

Second, verbs or verb roots may combine with more than one v-type heads, thus taking objects with different cases, yielding contrasts like *wash car.the.ACC* vs. *wash child.the.DAT* (Barðdal 2001 and others since, including Jónsson 2005, Thráinsson 2007:212ff, Sigurðsson 2009). While variation of this sort is commonly semantically related to an extent, it is not in principle different from idiosyncratic case marking (*pace* Woolford 2006), such marking arising as lexical verbs link to an unexpected v-type head. That is, both clearly idiosyncratic case and "more semantic" case result from (unpredictable versus "more predictable") V-linking to some particular v-type head. Facts of this sort tend to arouse much interest among case researchers, but, as they are largely irrelevant for my purposes, I put them aside here. Under the present approach, even case that is more or less predictable is a PF idiosyncracy.[13]

Third, languages (obviously) split the v-domain differently between their cases. Thus, Russian instrumental direct objects, for instance (see Richardson 2007:27), typically

[13] As suggested by many facts not discussed here, for example the simple fact that the putative semantic correlations do not yield any PF marking in most languages. Obviously, numerous PF phenomena that are "unnecessary quirks" from a deep syntactic or biological point of view are nevertheless largely predictable within a given language community.

correspond to dative objects of verbs of controlling and directing in Icelandic (such as the verbs meaning 'control' and 'guide'), partitive direct objects in Finnish commonly correspond to accusative objects in German and Icelandic, and so on. Even closely related languages like German and Icelandic, with identical case inventories, can have a rather different case distribution, German for instance usually assigning accusative to object themes that get dative marking in Icelandic, as briefly illustrated in (15) and (16) (from Sigurðsson 2009:267f).

(15) a. Hún kastaði *steininum*/*steininn. Icelandic *Dat*
she threw stone.the.DAT/*ACC
'She threw the stone.'

b. Sie hat *den Stein*/*dem Stein geworfen. German *Acc*
she has the stone.ACC/*DAT thrown

(16) a. Hún stýrði *skipinu*/*skipið. Icelandic *Dat*
she steered ship.the.DAT/*ACC
'She steered the ship.'

b. Sie hat *das Schiff*/*dem Schiff gesteuert. German *Acc*
she has the ship.ACC/*DAT steered

Importantly, there are no discernible semantic differences between the languages in the numerous pairs of this sort.[14] A few more examples illustrating this: the verbs meaning 'spill', 'forget', 'invite', 'change', 'sink', 'exterminate' (*hella niður*, *gleyma*, *bjóða*, *breyta, sökkva, tortíma*) all take dative case in Icelandic, while correponding verbs in German all take accusative case (*verschütten*, *vergessen*, *einladen*, *verändern, versenken, ausrotten/vernichten*), the German accusatives nevertheless expressing exactly the same semantics as the Icelandic datives. Generally, case-variation may indirectly correlate, more or less loosely, with some semantics intralinguistically without also doing so crosslinguistically.[15]

[14] Maling (2002:31) reports that an unpublished work of hers "contains a list of more than 750 [Icelandic] verbs which in at least one sense occur with a dative object ... The corresponding number of verbs for German is approximately 140, and for Russian fewer than 60."

[15] This is expected if case features (in contrast to the relations they interpret or express) are morphological elements. Thus, there are numerous other examples of different distribution or function of the "same" case in Icelandic and German without any concomitant semantic differences, including genitive objects in Icelandic that correspond to accusative (or prepositional) objects of synonymous (even cognate) verbs in German, genitive or dative complements of prepositions that correspond to accusative complements of synonymous (even cognate) prepositions in German, dative-marked adverbial NPs corresponding to nominative (or noncased) adverbial NPs in German, and so on. However, I will not go into further comparative details here (but see Maling 2001, 2002, Wunderlich 2003, Sigurðsson 2009).

Fourth, a "single" case usually has multiple functions language-internally (see also Barðdal 2001). Thus, the Icelandic cases are used to mark the NP-relations listed in (17)-(20).

(17) *Nominative*:
- a. agentive subjects
- b. most non-agentive subjects
- c. subjects of certain ECM-like complements (e.g., me had seemed *they* be intelligent) here referred to as the Experiencer ECM construction
- d. most raised NPs (*they* had seemed be intelligent)
- e. objects of certain predicates (*me* have always liked they)
- f. most predicative NPs (this is *she*, *she* is *priest*)
- g. many dislocated NPs (*Olaf*, I didn't think of him)
- h. vocative NPs (*Mary*, what say you?)
- i. most listed NPs
- j. many exclamative NPs (*she president*! = 'Her for president!')

(18) *Accusative*:
- a. subjects of certain predicates (*us* lacks food, *them* drifted ashore)
- b. most direct objects
- c. some indirect (or 'first') objects (they robbed *me* my wallet)
- d. subjects of regular ECM complements (they considered *her* be smart)
- e. most predicative NPs in ECM-contexts (we believed her be *priest*)
- f. subjects of certain ECM-like complements (us had seemed *them* lack food)
- g. some raised NPs (*them* had seemed lack food)
- h. complements of certain prepositions
- i. some dislocated NPs
- j. certain adverbial NPs (she stayed *two days*, they ran *all way.the*)

(19) *Dative*:
- a. certain experiencer subjects (*us* bores; *us* is cold = 'we are bored; we are cold')
- b. certain theme subjects (*them* delayed = 'they got delayed/late')
- c. agentive NPs in passive *af*- 'by' phrases
- d. many direct objects
- e. most indirect objects
- f. subjects of some ECM complements (we had believed *him* be ill)
- g. subjects of some ECM-like complements (us had seemed *him* be ill)
- h. some raised NPs (*him* had seemed be ill)
- i. complements of most prepositions

j. free benefactives (she made *herself* coffee)
k. some dislocated NPs
l. a few adnominal NPs (she looked in eyes *me* = 'she looked into my eyes')
m. complements of certain adjectives (she was *me* kind = 'she was kind to me')
n. certain adverbial NPs (she came here *four times*, she is *foot* taller than I)

(20) *Genitive*:
a. a few subjects (*them* ('their') noticed = 'they were noticeable')
b. some direct objects (we expected *them* ('their'))
c. a few direct or 'second' objects of double object verbs (we asked him *question* ('question's')) – but no indirect or 'first' objects of double object verbs
d. subjects of some ECM complements (we had believed *them* ('their') notice)
e. subjects of some ECM-like complements (us had seemed *them* ('their') notice)
f. some raised NPs (*them* ('their') had seemed notice)
g. complements of some prepositions
h. most adnominal NPs, reflecting a wide array of semantic/syntactic relations[16]
i. some dislocated NPs
j. bare partitive NPs (most *them* ('their') = 'most of them') and NPs in various other adverbial or adverbial-like functions (see Kress 1982:228ff)

These lists are non-exhaustive and a number of case agreement phenomena are also not taken into account. It should furthermore be noticed that many of the listed relations are complex, involving factors and relations (subject, object, etc.) that are themselves not primitives of language.[17]

Thus, both crosslinguistic and intralinguistic observations suggest that individual cases are morphological entities, interpreting or reflecting various complex syntactic structures, rather than being syntactic units or building blocks themselves. In other words, the underlying syntactic relations are not stateable in terms of the cases, although they yield the cases, being morphologically interpreted in terms of them. To use a simple metaphor, the difference is similar to the distinction between materials and a product. The product (case) may be, say, a window or a wall, but that does not mean that it consists of "small" windows or walls in any meaningful sense.

Now, reconsider the description in (9) of direct object case in nominative-accusative/dative/genitive languages like Icelandic and German. It only describes the basic object case system, not taking into account the fact that further factors than just v-type heads

[16] That is, like most other case languages, Icelandic has many adnominal genitives, morphologically homogeneous but syntactically heterogeneous.

[17] One might be tempted to believe that a system like this is just unlearnable chaos, but the Icelandic case system has remained basically intact since Iceland's settlement, more than 1100 years ago.

decide the case of an argument NP. Most centrally, the actual or the "final" case of the underlying object of v-V is affected by Voice. The well-known type is the Burzio's Generalization type (or the Sibling Correlation type, see Sigurðsson 2003), that is, the Acc-to-Nom conversion typical of active-passive pairs, as the Icelandic (and the corresponding English) one in (21):

(21) a. Þeir handtóku *hana*.
they arrested her.A
b. *Hún* var handtekin.
she.N was arrested

At first sight, it might seem straightforward to assume (with Chomsky 2001) that passive verbs, V_{PASS}, simply combine with a defective non-case assigning v-type head (by selection or abstract Agree), yielding v-V_{PASS}. However, passives are compatible with nonaccusative marking of their underlying objects (dative and genitive in Icelandic and German, as in *Uns wurde geholfen* 'us.DAT was.DFT helped' = 'We were helped'). Thus, something more than simply combining V_{PASS} with a non-case assigning v-type head is needed to account for the facts. There are evidently some v*-types that are ϕ-defective, triggering case marking but not licensing a (definite) vP-internal argument. That is, as suggested in (9), there is no one-to-one correlation between the case triggering property (*) and the A-licensing property (ϕ) of v-type heads.

Suppose that all passive vPs in case languages like Icelandic and German have a case licensing v, either v*, v*$^{+}$ or v*$^{++}$. If so, passive Acc-to-Nom conversion can be analyzed such that passive Voice, $Voice_{PASS}$, deletes the accusative case triggering property of v* (as opposed to v*$^{+}$ and v*$^{++}$). Following Sigurðsson 2011b, inspired by Svenonius 2006, building, in turn, on observations in Zaenen and Maling 1984, we may refer to this PF process as *case star deletion* (vP-external case star augmentation will be discussed shortly). It commonly applies when there is no need for case to distinguish between arguments in PF (see Sigurðsson 2006b). However, as we will see, it need not always apply, that is, there are both "unaccusative" and passive constructions where accusative case is preserved, the case star thus not being deleted even though the syntactic argument structure preconditions are met (= a vP with only a single argument), showing that case star deletion is not an automatic or an obligatory syntactic process, instead taking place in PF.[18]

Case star deletion is a common phenomenon, that is, it is not only found in the regular passive Voice but also in other Voices, most pervasively in the anticausative Voice, marked with the (historically reflexive) *-st* marker on the main verb and traditionally referred to as

[18] PF externalization scans the whole phase, thus having access to idiosyncratic properties of lexical verbs that often affect case-marking, for instance by irregularly linking to an unexpected v-type (as mentioned above) or by blocking an otherwise expected case star deletion process.

'mediopassive' or 'middle'.[19] Importantly, different Voice types have different effects upon case-marking, *-st* anticausatives, for instance, triggering *general* case star deletion, affecting genitive and dative as well as accusative, whereas (standard) passive Voice triggers *plain* case star deletion, affecting only accusative case. This difference between these Voice types is illustrated in (22)–(24) for the Icelandic cases.

(22) *The impact of two Voice-types upon Acc*

a. Þeir löguðu *hana*. — Active Nom-Acc_i
they mended her/it.A (e.g. 'the machine')

b. *Hún* var löguð. — Passive Nom_i
she/it.N was mended
'It/She was mended / fixed (by someone).'

c. *Hún* lagaðist. — Anticausative-ST Nom_i
she/it.N mended.ST
'It (got) mended' / 'She recovered.'

(23) *The impact of two Voice-types upon Dat*

a. Þeir breyttu *henni*. — Active Nom-Dat_i
they changed her/it.D

b. *Henni* var breytt. — Passive Dat_i
her/it.D was changed
'It/She was changed/altered (by someone).'

c. *Hún* breyttist. — Anticausative-ST Nom_i
she/it.N changed.ST

(24) *The impact of two Voice-types upon Gen*

a. Þeir óska *hennar*. — Active NOM-Gen_i
they wish-for her/it.G

b. *Hennar* er óskað. — Passive Gen_i
her/it.G is wished-for
'She/It is wished for (by someone).'

c. *Hún* óskast. — Anticausative-ST Nom_i
she/it.N wishes.ST
'She/It is being sought/wished for/desired.'

[19] The analysis below applies only to those *-st* verbs that enter a transitive-intransitive alternation and therefore count as anticausatives. Icelandic has a number of other classes or types of *-st* verbs, including unaccusative *-st* verbs, some of which take a dative subject (Sigurðsson 1989:259ff). Conversely, it also has unaccusatives (not discussed here) that are not derived by *-st* formation but share semantic properties with *-st* anticausatives.

In passing, it should be pointed out that only some genitive assigning verbs are amenable to anticausative *-st*-formation – but those that are erase the genitive marking, as in (19c) (see also Thráinsson 2007:290). A somewhat similar reluctance is seen with respect to passive formation of dative assigning verbs in Russian (Freidin and Sprouse 1991), which however delete the dative marking, in case they passivize (Richardson 2007:31ff), and this behavior is also observed for Icelandic *stative* passives (see further below and Sigurðsson 1989:334–335). In contrast, *dynamic* passive formation in Icelandic does not show any case sensitive reluctance of this sort, nor does it erase dative or genitive marking.

Passive Voice has been extensively studied within the generative tradition (Chomsky 1981, Jaeggli 1986, Baker et al. 1989, Emonds 2000, Collins 2005, etc.). Other Voice-types and the category of Voice in general are not as well understood. However, there is emerging consensus that Voice is a clausal head, located between v and T proper, as the highest category in the v-system or the lowest category in the T-system, either morphologically unmarked or marked, commonly on the main verb (Kratzer 1996, Cuervo 2003, Diaconescu and Rivero 2007, Pylkkänen 2008, Schäfer 2008). Second, Voice is a cover term, much as Aspect in Cinque 1999 and related work, that is, there are a number of mutually exclusive Voice-type heads, including passive and active Voice, $\text{Voice}_{\text{PASS}}$ and $\text{Voice}_{\text{ACT}}$.

I assume that any predicate is embedded under some Voice head, either content related or expletive, matched by the v head of the predicate. Voice commonly alters the argument structure of basic (i.e., lexical, non-derived) predicates. A number of such processes are frequently observed (see Silverstein 1976, Sigurðsson 1989:246ff, Klaiman 1991, Palmer 1994, Polinsky 2008, Schäfer 2008), including passivization, anticausativization, causativization, and demotion. In addition, it is often assumed that indirect objects in the double object construction are introduced by an applicative head, Appl (Marantz 1993 and many works since, see Cuervo 2003, Pylkkänen 2008, Schäfer 2008). I adopt the essence of this view here, pointing out, however, that Appl is actually a Voice category in the sense that it alters argument structure, adding non-external θ (see also Pylkkänen 2008). Following Alexiadou et al. (2006) and Schäfer (2008), I will refer to anticausative Voice as *expletive Voice*, $\text{Voice}_{\text{EXPL}}$, otherwise using traditional terms, $\text{Voice}_{\text{ACT}}$, $\text{Voice}_{\text{PASS}}$, and so on, as well as Appl for the applicative Voice in the double object construction (and elsewhere, see section 4).

It is commonly assumed that subjects are introduced into clausal structure by Voice (Kratzer 1996 and many since), and, as just stated, that indirect objects are introduced or licensed by an applicative head. Similarly, direct objects are licensed by predicates. Assume therefore that any argument must be *event-licensed* by a specialized head (cf. Pylkkänen 2008): direct objects by v-type heads (in relation to V), indirect objects by Appl, and regular agentive or active subjects by $\text{Voice}_{\text{ACT}}$. Ordinary ditransitive structures like *She gave me the book* can then be analyzed as derived by recursive external Merge, as illustrated in (25).

(25) a. Introduce a participant:[20] θ_1

b. Event-license θ_1: v-V θ_1

c. Add a participant: θ_2 [v-V θ_1]

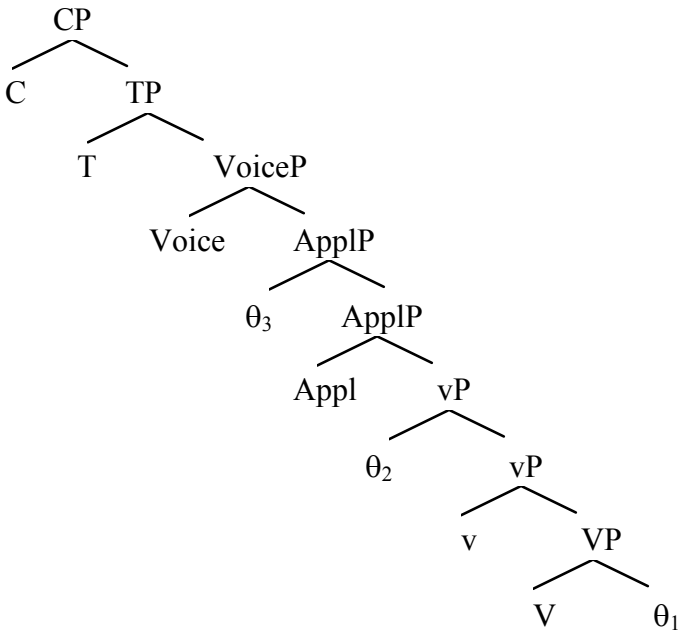
d. Event-license θ_2: Appl θ_2 [v-V θ_1]

e. Add a participant: θ_3 [Appl θ_2 [v-V θ_1]]

f. Event-license θ_3: Voice θ_3 [Appl θ_2 [v-V θ_1]]

It is not obvious in which order these operations apply, but I assume the order in (25), yielding the structure in (26), where, canonically, θ_3 = Nom, θ_2 = Dat, θ_2 = Acc (in most monotransitive constructions, on the other hand, Appl is inactive, θ_2 thus being locally licensed by Voice and showing up as Nom).[21]

(26)



In view of the fact that case marking distinguishes between different NPs, it does not come as a surprise that heads that event license different argument types affect their case marking. We saw this above for some v-type heads and also for passive and anticausative Voice. Even further types of Voice heads affect case marking. Thus, Icelandic so-called *fate (un)accusatives*, typical of fate predicates like *drift*, *swamp*, *get swept overboard*, etc., are embedded under $\text{Voice}_{\text{FATE}}$ (Sigurðsson 2009, 2011b). Importantly, $\text{Voice}_{\text{FATE}}$ commonly differs from $\text{Voice}_{\text{PASS}}$ and $\text{Voice}_{\text{EXPL}}$ in not triggering case star deletion, thereby preserving accusative (in violation of Burzio's Generalization). This is illustrated for *fylla* 'fill; swamp' in (27).

[20] Vocative NPs can be analyzed as not being lexically event-licensed.

[21] The assumptions behind (26) are rather orthodox. An alternative, argued for in Sigurðsson 2006c, is that subjects are merged as first or lowest arguments, subsequently being raised across the object or objects for independent (ϕ-related) reasons. See also Bowers 2010.

(27) a. Þeir fylltu *bátinn*. Transitive Nom-Acc_i
they filled boat.the.A
'They filled the boat (with some cargo).'

b. *Báturinn* var fylltur. Dynamic passive Nom_i
boat.the.N was filled
'The boat was filled (with some cargo).'

c. *Báturinn* fylltist. Anticausative Nom_i
boat.the.N filled.ST
'The boat got full (of something).'

d. *Bátinn* fyllti. Fate (un)accusative Acc_i
boat.the.A filled
'The boat swamped.'

The fate reading of fate (un)accusative predicates is never shared by the "same" predicate when either transitive, passive or anticausative (Ottósson 1988:147–148, Sigurðsson 2006b:25).[22] That follows if different Voice types are mutually exclusive, active, passive and anticausative readings thus being incompatible with $Voice_{FATE}$. As usual, however, there is only an indirect correlation between the case marking and the semantics (here fate semantics), as underlined by the fact that speakers do not preserve the fate accusative (instead applying case star deletion, yielding Nom) in the so-called "Nominative Sickness" variety of Icelandic (see Eythórsson 2000, 2002), without any concomitant semantic differences between this variety and the standard fate accusative variety. This change has been completed in Faoese, which has lost all fate accusatives, applying nominative instead, again without any concomitant semantic change (see Thráinsson et al. 2004:277, 427–428 and Tráinsson 2007:224–225).

Stative passives regularly behave like *-st* anticausatives but unlike dynamic passives in erasing not only accusative but also dative marking of themes. This is illustrated in (28).

(28) a. Við lokuðum *gluggunum*. Active Nom-Dat_i
we.N closed.1PL windows.the.D

b. *Gluggunum* var lokað þjösnalega. Dynamic passive Dat_i
windows.the.D was.DFT closed.DFT brutally

c. *Gluggarnir* lokuðust. Anticausative Nom_i
windows.the.N closed.3PL-ST
'The windows closed.'

d. *Gluggarnir* voru lengi lokaðir Stative passive Nom_i

[22] No dative- or genitive- taking verbs force the fate reading, as far as I can judge (see Sigurðsson 2006b:26).

windows.the.N were.3PL long closed.N.M.PL
'The windows were closed for long.'

Stative passives are thus like *-st* anticausatives in being embedded under $\text{Voice}_{\text{EXPL}}$ (even though these predicate types have different vP-internal properties, see Sigurðsson 2011b). Thus, most of the variation discussed above can be simply analyzed as in (29)–(31), where the arrows indicate matching (Agree) relations (for simplicity I disregard genitives).

(29) a. $\text{Voice}_{\text{PASS}}$ … [… v* NP …] > … v … NP_{NOM} … (* deletion)
↑_____↑↑__↑

b. $\text{Voice}_{\text{PASS}}$ … [… v*^{+} NP …] > … v*^{+} … NP_{DAT} … (no $*^{+}$ deletion)
↑_____↑↑___↑

(30) $\text{Voice}_{\text{FATE}}$ … [… v* NP …] > ... v* … NP_{ACC} … (no * deletion)
↑_____↑↑__↑

(31) $\text{Voice}_{\text{EXPL}}$ … [… $\text{v*}^{(+)}$ NP …] > … v … NP_{NOM} … (* and $*^{+}$ deletion)
↑_____↑↑____↑

Interestingly, anticausative $\text{Voice}_{\text{EXPL}}$ erases dative marking of direct objects (cf. (23c), (28c)), whereas it does not alter the benefactive dative of ditransitives, as illustrated in (32) (from Sigurðsson 1989:260).[23]

(32) a. Pétur bauð *mér* vinnu.
Peter.N offered me.D job.A
'Peter offered me a job.'

b. *Mér* bauðst vinna.
me.D offered.ST job.N
'I got a job opportunity / a job offer.'

That is, $\text{Voice}_{\text{EXPL}}$ erases the dative marking property of v*^{+}, whereas it leaves the dative assigned by Appl intact (a fact underlining that applicative datives and complement datives are not 'the same'). This difference explains important properties of anticausative quirky subject constructions, as will be discussed in section 4.

In contrast to case star deletion, case star augmentation is usually triggered by vP-internal heads, as discussed above. However, some Voice related processes can be analyzed

[23] Only some ditransitives undergo *-st* formation, but those that do show this behavior. See further Thráinsson 2007:290ff.

as inducing case star augmentation (yielding oblique case marking).[24] Thus, the Germanic languages form certain causative weak verbs on the basis of (historically and structurally basic) intransitive, unaccusative strong verbs, leading to pairs like strong *rise* vs. weak *raise*. Many such pairs have disappeared from English, whereas they are still numerous in the Scandinavian languages, in particular Icelandic. This weak verb causativization may lead to dative marking, as illustrated in (33) and (34) (from Sigurðsson 1989:280).

(33) a. *Glasið* rann yfir borðið.
glass.the.N slid.STRONG across table.the
'The glass slid across the table.'

b. Hann renndi *glasinu*/*glasið yfir borðið.
he.N slid.WEAK glass.the.D/*A across table.the
'He slid the glass across the table.'

(34) a. *Báturinn* sökk.
boat.the.N sank.STRONG
'The boat sank.'

b. Þeir sökktu *bátnum*/*bátinn.
they.N sank.WEAK boat.the.D/*A
'They sank the boat.'

Demotion in ergative systems, yielding e.g Erg-Dat "instead of" Erg-Abs, can also be analyzed as involving case star augmentation, and perhaps ergative case marking of agentive or active subjects (A) can as well. Ergative is less direct or less central than absolutive, similarly as dative is less direct than nominative and accusative in accusative systems (see Woolford 1997). It thus seems possible that $\text{Voice}_{\text{ACT}}$ in ergative systems not only event licenses ergative subjects but also triggers their ergative marking, similarly as the Appl head event-licenses indirect objects and also triggers their (commonly dative) case marking.

To summarize, the morphological cases reflect or interpret a wide variety of underlying syntactic structures, with considerable intra- and interlinguistic variation, but they are not syntactic primitives or building blocks themselves. This is perhaps most clearly evidenced by intralinguistic variation like the variation described for Icelandic in (10)–(14) and in (17)-(20), but it is also clearly demonstrated by comparison of related case languages, such as the Germanic and the Slavic languages. However, as for subject and object case (leaving

[24] An approach where both case star deletion and case star augmentation are available may seem architecturally "messy", but it is not obvious that a more economic alternative is available (recall that case star interpretation is a matter of externalization, which is in any event not "perfect"). Similarly, it seems unavoidable to assume both causativization and anticausativization (see Schäfer 2008).

nonargument case aside), basically accusative languages like English, Icelandic, German and Russian have certain recurring patterns in common.

First, in all these languages argument case is decided by Appl-, Voice- and v-type heads, and not by T "proper" (see (26)). Thus, Nom is an elsewhere case, assigned to NP_x in PF morphology whenever syntax has not transferred any instructions that would have been interpreted by another case feature. Nominative NPs include not only many subjects, but also some objects, predicative NPs, dislocated NPs, vocative NPs, listed NPs and so on, that is, they are syntactically heterogeneous despite their morphological homogeneity, a fact that tallies with an elsewhere case approach.

Second, Voice commonly alters the basic case assignment properties of v-type heads, that is, the overt case of an NP is often decided in tandem by v and Voice.[25] The syntactic [Voice ↔ v-V ↔ NP] Agree relations involved are recurrent across languages, but their interpretation in terms of morphological cases vary considerably from language to language and from construction to construction. Let me just briefly mention a few more patterns:

- The German *kriegen*/*bekommen* 'get' passive erases dative case, in contrast to the more central *werden* 'be(come)' passive. In this respect, the German *kriegen*/*bekommen* passive is reminiscent of some passives in Russian and of the Icelandic stative *vera* 'be' passive, exemplified in (28d).
- Icelandic does not have any monoclausal *kriegen*/*bekommen*-type passives, but is has passives in a *fá* 'get' ECM construction, such passives preserving the dative (as in *Ég fékk <u>þessu</u> breytt* 'I got this.DAT changed').
- The *be*-type passive regularly erases dative marking (general case star deletion) in Norwegian varieties, and it does so commonly in Faroese as well.
- The regular *be*-type passive preserves accusative case in the so-called New Passive (or New Impersonal) variety of Icelandic (no case star deletion, as in (13b), (14b)), and similar phenomena are found in, for instance, Polish, Ukrainian and Sahka (Turkic).[26]

All this variation within and across languages is interesting, demonstrating patterns that are telling about PF variation. It certainly *reflects* syntax, as I have demonstrated here, but it *is* not syntax. The mechanisms behind it canonically involve correlations between v and Voice, whereas they do not involve categories of the C/T-system (that is, they do not involve "abstract Case"). In contrast, boiling down to ϕ-licensing, high A-movement crucially involves C/T-categories. That is the topic of the next section.

[25] In addition, more categories than just Voice can affect the case assignment properties of v-V, for instance Person and Tense in split ergative systems and Neg in languages like Russian and Finnish.

[26] For some discussion of these phenomena, see Maling and Sigurjónsdóttir 2002, Thráinsson et al. 2004, Thráinsson 2007, Richardson 2007, Eythórsson 2008, Åfarli and Fjøsne 2009, Jónsson 2009, Alexiadou et al. 2010, Baker and Vinokurova 2010, Sigurðsson 2011b.

3. Finite T-licensing (nexus / "Case")

Morphological case marking of arguments reflects event-argument relations, syntactically encoded by Voice- and v-type heads, whereas it is unrelated to the structurally higher C/T-system. However, in addition to Voice- and v-matching, yielding case, overt subject NPs in finite clauses must also be licensed in relation to ϕ-complete Tense, T_{ϕ}. It is this relation that has been referred to as Case within the generative tradition (see, again, Lasnik 2008 and e.g. Bobaljik and Wurmbrand 2009). The distinguished Danish linguist Otto Jespersen used the term *nexus* in a similar sense, referring to finite subject-predicate relations as independent nexus and to a number of non-finite subject-predicate or NP-predicate relations, for instance in ECM constructions, as dependent nexus (Jespersen 1992/1924, Svenonius 1994:5ff). I will here use the descriptive term *T-licensing*, arguing (in section 4) that it is also at work in ECM constructions, albeit under slightly different conditions.[27]

CPs are A-islands, that is, A-relations, including T-licensing, are blocked from being established across C-boundaries. The reason is that the C-system contains categories that must be matched by TP-internal arguments, this C-matching leading to argument "freezing" (see Chomsky 2001:6). In the approach pursued by Chomsky (2007, 2008), see also Richards 2004, 2007, the relevant C-features are simply the Tense- and Agree-features, inherited by T from C (only the latter being a phase head).[28] Chomsky (2008:143–144) coins his ideas as follows:

> So, it makes sense to assume that Agree- and Tense-features are inherited from C, the phase head. If C-T agrees with the goal DP, the latter can remain in-situ under long-distance Agree, with all uninterpretable features valued; or it can raise as far as SPEC-T, at which point it is inactivated, with all features valued, and cannot raise further to SPEC-C.

C and T are "surrogates for richer systems" (Chomsky 2000:143, n. 31), "cover terms for a richer array of functional categories" (Chomsky 2001:43, n. 8). Thus, T_{ϕ} is an amalgam of several subcategories, including plain T, Mood, Number and Person (there being considerable variation across languages as to which of these categories are overtly marked). Similarly, C or C_{ϕ} is a short for a number of categories (Rizzi 1997 and much related work), including Force, Top(ic) and Fin. In the approach developed in Sigurðsson 2004b and subsequently (for

[27] The approach I will be pursuing here is partly reminiscent of but also rather different from the approach in Pesetsky and Torrego 2001.

[28] For closely related, even more general ideas, see Miyagawa 2009.

example in Sigurðsson 2010a, 2011a), the C-domain also contains "speaker" and "hearer" features, referred to as the logophoric agent, Λ_A, and the logophoric patient, Λ_P (see also, for example, Bianchi 2006, Baker 2008, Rezac 2008).

This can be accommodated in a cartographic approach, as sketched in (35), showing only those elements that are relevant for our purposes (Pn and Nr stand for Person and Number, respectively).

(35) $[_{CP}$ Force … Top ... Λ_A ... Λ_P ... $[_{TP}$ ... Pn ... Nr ... T ... Voice ... $[_{vP}$ ... v ...]]]

All the features in (35) are active syntactic elements, but they commonly get wrapped up and are thus often not clearly distinguishable as distinct features in PF. Thus, person and number inflected verbs are derived by T first raising to Nr, T/Nr subsequently raising to Pn, yielding T/Nr/Pn = T_ϕ (Sigurðsson and Holmberg 2008). Many languages lack verb agreement (see Nichols and Bickel 2008), but I assume, nevertheless, that the Pn and Nr categories themselves are universal, active in syntax regardless of whether they are overtly reflected in grammars and of whether or how they combine with other categories in PF.

NPs enter the derivation as ϕ-varibles.[29] Any argument must match a Pn head (subject Pn in T_ϕ, object Pn in v_ϕ) as being either +Pn or –Pn, +Pn arguments in turn entering a further matching relation with the Λ-features in the C-domain, this second and higher matching yielding the actual person values of a pronoun. This is sketched in (36) and (37), where the arrow reads 'gets valued as'.

(36) $NP_{\alpha Pn} \rightarrow NP_{+Pn}$ or NP_{-Pn}

(37) a. +Pn → $+\Lambda_A, -\Lambda_P$ = 1st person by computation
b. +Pn → $-\Lambda_A, +\Lambda_P$ = 2nd person by computation
c. +Pn → $-\Lambda_A, -\Lambda_P$ = 3rd person by computation ("true person")
d. –Pn: = 3rd person by default ("no person")

To get valued as +Pn and to subsequently match the Λ-features in the C-domain, a subject NP has to move into the vicinity of Pn (= high A-movement). The factors behind this will be explicated shortly. Nonhuman and indefinite NPs are canonically –Pn and hence 3rd person by default. Definite 3rd person arguments, in contrast, are canonically valued as +Pn, thus being 3rd person by computation.

[29] The evidence that NPs have computed rather than lexically fixed ϕ-values comes from crosslinguistically robust facts, including indexical shifting and fake indexicals. The references being copious here, I mention only Schlenker 2003, Rullmann 2004, Sigurðsson 2004b, 2011a, and Kratzer 2009.

Bringing the technical notation into line with the more general notation of Chomsky and others, we can denote the features of the C-domain and the T-domain that enter ϕ-computation as C_ϕ and T_ϕ. A-movement of a +Pn NP to T is driven by matching relations between the NP, T_ϕ, and C_ϕ, as sketched in (38).

(38) $[_{CP} \ldots C_\phi \ldots [_{TP} \ldots T_\phi / NP_{+Pn} \ldots [_{vP} \ldots \sout{NP} \ldots]]]$

The reason why NP has to move is that it does not have to match only T_ϕ but also C_ϕ, however being unable to do so across active T_ϕ. For expository reasons, I use the slash notation to indicate ("tell the story") that NP_{+Pn} has been attracted into the vicinity of T_ϕ. However, T_ϕ does not remain intact. A probe such as T_ϕ in (38), that has been fully exploited, is thereby inactivated, vanishing as a syntactic object. That is, for the purposes of further computation, $T_\phi/NP_{+Pn} = NP_{+Pn}$.

If the NP needed to match only T_ϕ, it should be able to do so under distant Agree. However, as exemplified in (39), this is impossible.

(39) * Would have been **we** elected?

That is, the derivation in (40) is excluded, active T_ϕ intervening between C_ϕ and NP:

(40) * $[_{CP} \ldots C_\phi \ldots [_{TP} \ldots T_\phi \ldots [_{vP} \ldots NP \ldots]]$

Movement thus complies with the generalization in (41).

(41) *The Double Matching Generalization:*
Given X … Y … ZP, X c-commanding Y, Y in turn c-commanding ZP:
if ZP matches Y, Y in turn matching X, then ZP has to raise to Y

Now, consider the Definiteness Effect (Safir 1985 and many works since), illustrated in (42).

(42) a. There have been *some criminals* arrested.
b. * There have been *the criminals* arrested.
c. * There have been *I/you/we/they* arrested.

Chomsky (2001:7) argues that "expletives must have the feature [person]". If so, *there* matches the Pn feature of T_{ϕ}, which is thus "taken" (Richards 2004, 2008). It follows that the expletive is incompatible with the Pn matching pronouns in (42c). Assume also that formal Pn valuing of definite 3rd person arguments tends to get grammaticalized or conventionalized as +Pn, yielding 3rd person by computation rather than by default. If so, the ungrammaticality of (42b) is accounted for along the same lines as that of (42c).[30]

However the issues at stake are more complex. The Definiteness Effect applies also in the absence of an expletive, as illustrated for Icelandic in (43)–(44). As in Germanic in general the finite verb raises to C in direct questions, Spec,T thus being post-verbal. The dashes indicate the base (object) position of the raised NPs.

(43) a. Voru ekki keyptar *þrjár lóðir* á fundinum?
were.3PL not bought three building.sites.N at meeting.the
'Weren't there tree building sites bought at the meeting?'

b * Voru ekki keyptar *lóðirnar* á fundinum?
were.3PL not bought building.sites.the.N at meeting.the

c. Voru *lóðirnar* / *þær* ekki keyptar___ á fundinum?
were.3PL building-sites.the. N / they.N not bought at meeting.the
'Weren't the building sites / they bought at the meeting?'

(44) a. * Vorum ekki kosnir *við báðir* í nefndina?
were.1PL not elected we.N both.N in committee.the

b. Vorum *við* ekki kosnir ___ *báðir* í nefndina?
were.1PL we.N not elected both.N in committee.the
'Weren't we both / both of us elected to the committee?'

Notice that only the "person part" of the subject is raised to Spec,T in (44b). The quantifier part is floated or stranded, illustrating, much as the example in (43a), that "nonpersonal" nominatives are "happy" low in clausal structure.[31]

These facts are rather troublesome for the standard minimalist approach to Agree and A-licensing (Chomsky 2001 and related work). As the examples in (43b) and (44a) do not contain any intervening NPs, it would seem that the Pn feature of T_{ϕ} should be able to probe the low nominatives, contrary to fact. As seen by the plural agreement of the finite verb (*voru*) in (43a), the Nr feature of T_{ϕ} does probe into vP, raising the question of why the Pn feature cannot do so as well.[32]

[30] But see Sigurðsson 2010a for a more detailed discussion of this rather moot issue.

[31] I will not discuss the exact position of the quantifier here (but see Bošković 2004).

[32] Assuming that Icelandic has a silent expletive in examples like (43b) is not a viable option. First, such an

Again, as in (39), the facts are accounted for by intervention. Unless a "personal" NP raises to T_ϕ (= T/Nr/Pn) the latter intervenes between the NP and C_ϕ, thereby blocking C_ϕ-matching and Pn valuation. Compare the well-formed structure in (38) and the ill-formed one in (40), repeated here as (45) and (46).

(45) $[_{CP} \ldots C_\phi \ldots [_{TP} \ldots T_\phi /NP_{+Pn} \ldots [_{vP} \ldots \cancel{NP} \ldots]]]$ ok Pn valuation

(46) * $[_{CP} \ldots C_\phi \ldots [_{TP} \ldots T_\phi \ldots [_{vP} \ldots NP \ldots]]]$ * Pn valuation

Indefinite or "non-personal" NPs do not require Pn valuation under C_ϕ matching, and no intervention arises with respect to Nr valuation, as seen in (43a). The reason why Nr behaves differently than Pn in this respect is that they are distinct probes, Nr probing applying from a lower position than Pn probing. That is, as illustrated in (35), Pn, Nr and T are distinct elements, brought together by T-raising to Nr and by subsequent Nr/T-raising to Pn, yielding T/Nr/Pn (=ϕ-complete T). Nr and Pn probing take place immediately after T-raising to Nr and T/Nr-raising to Pn, respectively (Sigurðsson and Holmberg 2008). It follows that Nr probing into vP, as in (43a), is well-formed, as illustrated in (47).

(47) $[_{TP} \ldots Pn \ldots T/Nr \ldots \cancel{T} \ldots [_{vP} \ldots NP \ldots]]$ ok Nr valuation

Subsequently, T/Nr raises to Pn, but, as clauses like (43a) contain no "personal" NP, Pn probing is not activated, yielding 3rd person morphology by default.[33]

That Person has a special status within the T complex is further suggested by the much discussed quirky agreement facts in Dat-Nom constructions.[34] The central fact is that the finite verb is blocked from agreeing with a 1st or 2nd person nominative object, yielding patterns as in (48).[35]

(48) a. * Henni vor*um* sendir *við*. *1st person agreement
her.D were.1PL sent we.N

---

analysis would not plausibly carry over to (44a). Second, even the overt Icelandic expletive *það* 'it, there' never interferes with or affects agreement (Sigurðsson 2006a).

[33] Alternatively, Pn probes the vP, such impersonal probing yielding 3rd person agreement (see the discussion in Sigurðsson and Holmberg 2008, Sigurðsson 2010a).

[34] See for instance Sigurðsson 1996, Boeckx 2000, Chomsky 2000, 2001, Hiraiwa 2005, Nomura 2005, López 2008, Richards 2008, Sigurðsson and Holmberg 2008.

[35] See the discussion of unambiguous person agreement in Sigurðsson and Holmberg 2008:269ff.

b. * Henni voru*ð* sendir *þið*. *2nd person agreement
her.D were.2PL sent you.N.PL
c. Henni voru sendir *hestarnir*/*þeir*.[36] ok 3rd person agreement
her.D were.3PL sent horses.the/they.N
'The horses/They were sent to her.'

Sigurðsson and Holmberg 2008 develop an analysis of these facts along the lines sketched in (49).

(49) a. [$_{TP}$ ... Pn ... Dat ... Nr ... T ... Nom ...] >
b. [$_{TP}$ ... Pn … Dat ... T/Nr … ~~*T*~~ ... Nom ...] Nr probing activated >
| _____|
c. [$_{TP}$ ... T/Nr/Pn ... Dat ... ~~*T/Nr*~~ ... ~~*T*~~ ... Nom ...] Pn probing activated
| _____|

As seen in (49c), Dat intervenes between T_ϕ (T/Nr/Pn) and Nom, thereby blocking "true" person agreement with Nom, cf. (48a, b), whereas number agreement freely applies in (48c)/(49b), much as in (43a)/(47) above. As for the quirky subject, it is licensed under C/T-matching, just like nominative subjects (the essence of the quirky phenomenon), but T_ϕ cannot overtly agree with it as overt verb agreement is restricted to noncased (nominative) NPs.[37]

In conclusion, high A-movement boils down to full ϕ-licensing, as explicitly stated in (50).

(50) High A-movement is driven by ϕ-licensing under Double Matching, NP_{+Pn} matching and raising to T_ϕ, from where it matches C_φ, thereby getting fully ϕ-licensed.[38]

[36] Pronominal 3rd person nominative objects are commonly excluded from having a +HUMAN reading (Maling and Jónsson 1995), a fact that suggests that their person is "no person" in the sense of Benveniste 1966 (but see Sigurðsson 2010a for a slight refinement).

[37] This restriction is a widespread phenomenon in accusative case systems, whereas ergative languages commonly do not show any strict correlation between (non)case and verb agreement (see Baker 2008:153ff, 248ff).

[38] Notice that even though high A-movement is ϕ-related and thus unrelated to case, the present approach is compatible with A-movement being cyclic, the raised NP passing through Spec,Voice or an outer Spec,v position on its way to Spec,T–or, in the case of indefinite NPs, not raising any further than to Spec,Voice or an outer Spec,v. In fact, Sigurðsson and Holmberg 2008:258ff present evidence from Icelandic in favor of such a low NP raising process, complying with the generalization (Alexiadou and Anagnostopoulou 2001, see also the observations in Maling 1988), that some argument NP always has to raise from a "full" verb phrase.

4. Inherited ϕ-licensing in infinitives

In this section, I will argue that my analysis of high A-movement in finite clauses as driven by full ϕ-licensing extends to subject licensing in ECM constructions. The constructions I will discuss include regular *believe*-type ECM infinitives, infinitives embedded under passivized ECM verbs, the Icelandic Experiencer ECM construction, and regular *seem*-type raising constructions. As we will see, these constructions have interesting properties that have not been generally noticed, nevertheless bearing crucially on the issues at stake here.

It has long been acknowledged, though, that ECM constructions bear on NP licensing. Data like the ones in (51) have thus been taken to suggest that local Acc assignment by the matrix V (v in more recent approaches) licenses the ECM subject:

(51) a. We believed [$_{TP}$ *her* to have been elected].
b. * We believed [$_{TP}$ __ to have been *her* elected].
c. We believed [$_{TP}$ *there* to have been some Democrats elected].

Either, the ECM subject has to raise into the vicinity of *believe*, as in (51a), or an expletive has to be merged there, as in (51c), and, at first sight, it would seem straightforward to assume that the licensing feature is the Acc feature assigned by the matrix v-V (see Lasnik 2003, among many).

However, the relevant facts are more complex, suggesting that Acc is not involved in Spec,T licensing in ECM, not any more than Nom is in finite Spec,T licensing. Thus, NP movement is sensitive to the Definiteness Effect in ECM constructions, much as in finite clauses. This is illustrated in (52):

(52) a. Við töldum [$_{TP}$ __ hafa verið selda *bíla*/*þá]. Acc
we believed have.INF been sold cars.A/them.A
'We believed there to have been cars (*them) sold.'
b. Við töldum [$_{TP}$ *þá* hafa verið selda].
we believed them.A have.INF been sold
'We believed them to have been sold.'

The accusative is assigned by the matrix ECM verb, but, as seen, the case assignment as such does not trigger NP movement, whereas pronominality does, indicating that defective T in ECM constructions, T_{def}, has a Person feature (as suggested by Chomsky 2001:7).

The pattern in (52) is not only seen for regular ECM accusatives but also for quirky NPs, as illustrated in (53).

(53) a. Við töldum [$_{TP}$ __ hafa verið stolið *bílum*/*þeim]. Dat

we believed have.INF been stolen cars.D/them.D
'We believed there to have been cars (*them) stolen.'

b. Við töldum [$_{TP}$ *þeim* hafa verið stolið].
we believed them.D have.INF been stolen
'We believed them to have been stolen.'

Thus, T in ECM would seem to license subject NPs in Spec,T, much as ϕ-complete T does in finite clauses, regardless of case. As we will see shortly, however, it does so only indirectly, by inheriting its ϕ-licensing property from the matrix v_{ϕ}.

Subject-to-subject raising constructions show a parallel pattern. This is illustrated in (54) (for Nom, but inherently case-marked NPs pattern in the same way); the dashes indicate empty subject positions, either vacated or not filled by A-movement:

(54) a. Þá virtust *þeir* [$_{TP}$ __ hafa verið kosnir]. Nom
then seemed they.N have.INF been elected
'Then they seemed to have been elected.'

b. Þá virtust [$_{TP}$ __ hafa verið kosnir *kommúnistar*/*þeir].
then seemed have.INF been elected communists.N/*they.N
'Then there seemed to have been communists elected.'

Parallel facts apply to unaccusative predicates (with both Nom and quirky subjects).

As indicated, the subject in (54a) has been raised into the matrix clause, that is, it is not licensed in the infinitival Spec,T.[39] In examples like (54a), this fact is masked by V2 raising of the main verb, but it is evident in examples with matrix auxiliaries, where it is the auxiliary and not the main verb that raises to C. This is illustrated in (55) for the nominative (the same holds for quirky subjects):

(55) a. Þá höfðu *þeir* virst [$_{TP}$ __ hafa verið kosnir].
then had they.N seemed have.INF been elected
'Then, they had seemed to have been elected.'

b. * Þá höfðu virst [$_{TP}$ *þeir* hafa verið kosnir].
then had seemed they.N have.INF been elected

[39] Similar examples with the expletive *það* 'there it' in the matrix clause-initial position and an indefinite subject NP (type *there would someone seem to be in the room*) have been interpreted as having multiple subjects (see Chomsky 1995:342ff). However, the Icelandic expletive does not have any clear subject properties, instead behaving much like an adverbial (obligatorily clause-initial). See Thráinsson 1979 and many others since, most recently Sigurðsson 2010a.

It would thus seem that raising infinitives differ from ECM infinitives in having a T-head that cannot license a lexical subject. However, there is evidence that infinitival T can only and always license an overt subject indirectly, with the support of a ϕ-complete matrix v, v_{ϕ}. That is, the difference between ECM and raising constructions is not located within the infinitives themselves but in their matrix clauses, ECM verbs providing v_{ϕ}-support, in contrast to regular raising verbs. The evidence suggesting this comes from "non-raising raising constructions", as it were, that is, from Experiencer ECM constructions of the type *Dat seems* $[_{TP}$ *NP* T_{INF} *...]*.

Icelandic has a number of raising verbs (with *seem/feel/experience*-like semantics) that come in two guises, with or without a matrix dative experiencer. In the absence of the matrix dative, regular (definite) NP raising has to apply, whereas it is blocked from taking place in the presence of the dative. This gives rise to variation of the following sort (*vera hæf* 'be competent' takes a nominative subject).[40]

(56) a. Hafði *hún* virst [__ vera hæf]?
had she.N seemed be.INF competent
'Did she seem competent?'
b. * Hafði __ virst [*hún* vera hæf]?
had seemed she.N be.INF competent
c. Hafði þér virst [*hún* vera hæf]?
had you.D seemed she.N be.INF competent
'Did she seem competent to you?'

Once again the same behavior is observed for quirky NPs, as illustrated in (57) (the verb *líða* 'feel' takes a dative subject):

(57) a. Hafði *henni* virst [__ líða vel]?
had her.D seemed feel.INF well
'Did she seem to feel well?'
b. * Hafði __ virst [*henni* líða vel]?
had seemed her.D feel.INF well
c. Hafði *þér* virst [*henni* líða vel]?
had you.D seemed her.D feel.INF well
'Did it seem to you that she she was feeling well?'

Thus, an overt infinitival Spec,T subject is licensed if a distinct matrix subject is licensed. Otherwise, the embedded (definite) subject has to raise, thereby 'standing in' for the matrix subject.

[40] Unless otherwise stated the infinitives below are TPs, so I will not mark them as such hereafter.

This is a "Burzio's Generalization patten", also seen in transitive/unaccusative and active/passive pairs, including regular active/passive ECM pairs, as illustrated in (58) for English and in (59) for Icelandic:

(58) a. Did *they* believe [*her* to be competent]?
b. Was *she* believed [__ to be competent]?
c. * Was (it) believed [*she* to be competent]?
d. * Was (it) believed [*her* to be competent]?
e. Was it believed [that *she* was competent]?
f. * Was *she* (it) believed [__ was competent]?

(59) a. Höfðu *þeir* talið [*hana* vera hæfa]?
had they.N believed her.A be.INF competent
'Did they believe her to be competent?'
b. Var *hún* talin [__ vera hæf]?
was she.N believed be.INF competent
'Was she believed to be competent?'
c. * Var __ talin [*hún* vera hæf]?
was believed she.N be.INF competent
d. * Var __ talið [*hana* vera hæfa]?
was believed her.A be.INF competent
e. Var __ talið [að *hún* væri hæf]?
was believed that she.N was competent
'Was it believed that she was competent?'
f. * Var *hún* talið/talin [að __ væri hæf]?[41]
was she.N believed that was competent

These facts suggest that the matrix T_ϕ enters a matching relation with the closest possible argument NP_x, thereby licensing it. This gives the impression that the NPs compete for the matrix subject status, that is, for entering the T-connection (by greed, see Chomsky 1995:200ff). However, the generalization is rather that T_ϕ is matched by NP_x unless NP_x is blocked from matching it.

T-licensing is generally blocked by intervention, that is, it observes minimality. The upstairs NPs in (58a) and (59a) are closer to T_ϕ than are the downstairs NPs, hence the upstairs NPs win out as matrix subjects – and the downstairs NPs must get licensed within the ECM infinitives (see further shortly). In the *b*-, *c*-, *d*-examples, in contrast, there is no upstairs

[41] Icelandic does not observe the *that*-trace filter, so the presence of the complementizer *að* is irrelevant here (that is, the example is not ruled out by its presence, nor does it get any better without it).

candidate for T-licensing, and thus T_ϕ probes into the ECM infinitive, for a "substitute" (triggering obligatory raising, as in the *b*-examples). In contrast, matrix T_ϕ-probing into the finite clauses in the *e*-, *f*-examples is prohibited.

Three issues need to be clarified:

A. T_ϕ-licensing is CP-bounded, suggesting that the C-system contains intervening features with respect to matrix T_ϕ-licensing, thereby blocking the downstairs subject from raising and 'standing in' for the matrix subject, even in the absence of a matrix subject candidate, see (50e, f).
B. In view of the fact that ECM and raising infinitives *cannot* license an overt subject in the absence of a distinct (thematic) matrix subject, cf. (55b), (56b), (57b), (58c,d) and (59c,d), we need to develop an account of the fact that they *can* in the presence of a matrix subject, as in as in (51a), (52b), (53b), (56c) and (57c), (58a) and (59a).
C. We also need to develop some understanding of how the dative experiencer in the Experiencer ECM construction, as in (56c) and (57c), is introduced into clausal structure or licensed, such that it can and must take precedence over the ECM subject as a candidate for T_ϕ-licensing.

The analysis developed in section 3 applies straightforwardly to issue A: a subject NP enters a ϕ-matching relation with its local C-T complex, thus being blocked from matching another C-T higher up. That is, phasehood follows from ϕ-licensing minimality. Hence the facts in the Icelandic (59e,f) above and the parallel English (58e,f). The Icelandic examples are repeated here as (60a,b), with additional morphological annotations (SUBJ = subjunctive).

(60)	a.	Var	__	talið	[$_{CP}$	að	*hún*	væri	hæf]?
		was.DFT		believed.DFT		that	she.N	was.3SG.SUBJ	competent
	b.	* Var	*hún*	talið/talin		[$_{CP}$	að	__	væri	hæf]?
		was.DFT	she.N	believed.DFT/N.F.SG			that	was.3SG.SUBJ	competent

As seen by this, the matrix T_ϕ cannot probe down into the subordinate clause, across an intervening C-T_ϕ, even in the absence of a local matrix subject candidate. That is, C-T_ϕ intervenes between the matrix T_ϕ and a potential NP goal in the subordinate clause, much as the matrix subject NP_ϕ in regular ECM intervenes between T_ϕ and the subject of the infinitive (as in e.g. (58a) and (59a)).

Next, consider issue B: ECM and raising infinitives both *can* and *cannot* license an overt subject in their Spec,T (cf. Chomsky 1995:345). They can if the matrix clause contains a distinct overt subject, as in e.g. (56c), (57c), (58a) and (59a), repeated below as (61)–(63), for convenience:

(61) Did *they* believe [*her* to be competent]?

(62) Höfðu *þeir* talið [*hana* vera hæfa]?
had they believed her.A be.INF competent
'Did they believe her to be competent?'

(63) a. Hafði *þér* virst [*hún* vera hæf]?
had you.D seemed she.N be.INF competent
'Did she seem competent to you?'
b. Hafði *þér* virst [*henni* líða vel]?
had you.D seemed her.D feel.INF well
'Did it seem to you that she she was feeling well?

However, in the absence of a distinct overt matrix subject, the very same types of infinitives cannot license a subject in Spec,T. This was seen in many of the examples above. I repeat some of them in (64)–(66).

(64) a. Was *she* believed [__ to be competent]?
b. * Was (it) believed [*she* to be competent]?

(65) a. Var *hún* talin [__ vera hæf]?
was she.N believed be.INF competent
'Was she believed to be competent?'
d. * Var __ talin [*hún* vera hæf]?

(66) a. Hafði *hún* virst [__ vera hæf]?
had she.N seemed be.INF competent
'Did she seem competent?'
b. * Hafði __ virst [*hún* vera hæf]?
had seemed she.N be.INF competent

Notice, first, that the well-formedness of overt subjects in finite subordinate clauses is independent of the argument structure in their matrix clauses (see (58e) and (59e) above). That is, patterns like these are special for ECM/raising infinitives, thus requiring a special account. Second, the nominatives selected by *virðast* 'seem', whether raised, as in (66a), or non-raised, as in (63a), are not assigned "inherent" Nom by *virðast*, as seen by the fact that they shift to Acc when embedded under an ECM verb (type /we believed *her*.ACC seem be competent/). Third, the subject position in raising infinitives (including infinitival

complements of passivized ECM-verbs) differs from their vP-internal argument position in being insensitive to definiteness. Recall from (52)-(54) above that indefinite derived subjects are allowed in a vP-internal position in raising infinitives, as further illustrated in the *a*-examples in (67)–(69) below, but this does not extend to the subject position, as seen in the *b*-examples.

(67) a. Were there believed [__ to have been *any Democrats* elected]?
b. * Were (there) believed [*any Democrats* to have been elected]?[42]

(68) a. There seems [__ to be *someone* in the room].
b. * There seems (to me, often) [*someone* to be in the room].
(from Chomsky 1995:344)

(69) a. Voru taldir [__ hafa horfið *einhverjir hermenn* í stríðinu]?
were believed have disappeared some soldiers.N in war.the
b. * Voru taldir [*einhverjir hermenn* hafa horfið í stríðunu]?
were believed some soldiers.N have disappeared in war.the

The same applies to Icelandic *seem*-type raising infinitives. To cut it short, an overt subject is only licensed in the Spec,T position of ECM and raising infinitives if the matrix clause contains a distinct (thematic) subject. In other words, the head that event licenses the matrix subject (Voice) has the transitive effect or property of also activating the factor or factors that license lexicalization of the infinitival Spec,T. Call this *transitive licensing*.

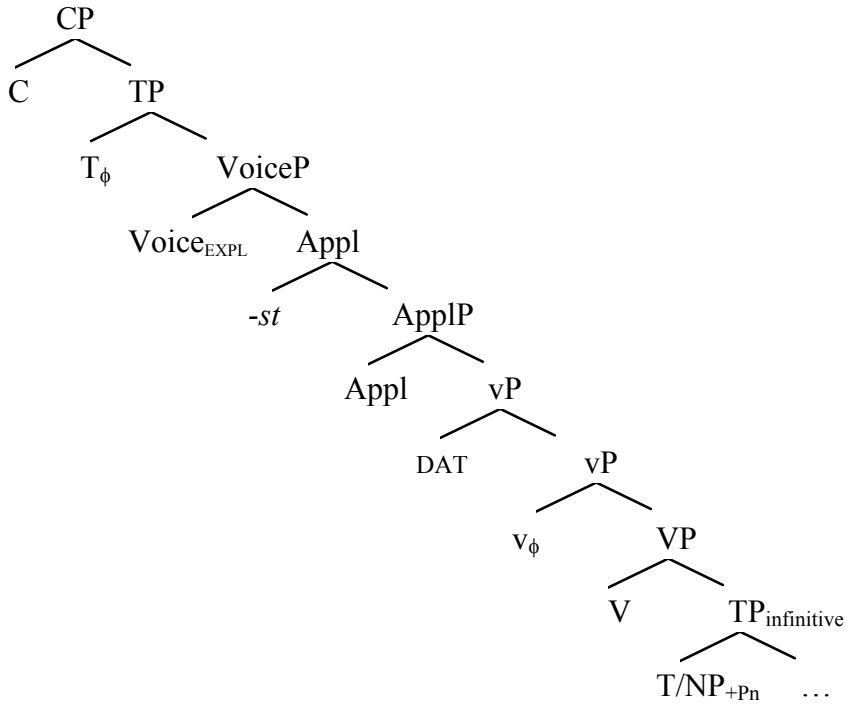
This leads us to issue C. The subject of an active ECM verb like *believe* is event-licensed by $\text{Voice}_{\text{ACT}}$, like subjects of most other transitive verbs, but how is the dative matrix subject in the Experiencer ECM construction introduced into clausal structure, such that it takes precedence over the ECM subject as a candidate for T_{ϕ}-licensing, simultaneously triggering licensing of the latter in the ECM Spec,T? Understanding issue C will eventually lead us to an understanding of transitive licensing (issue B).

The structural properties of the Experiencer ECM construction have remained murky (see Boeckx 2000, Frank 2002:119). However, in the approach pursued here, the construction can be analyzed as formed by interaction of Appl and anticausative Voice. Recall that Icelandic anticausative verbs are commonly marked with the (historically reflexive) *-st* suffix. This is also true of Experiencer ECM verbs, including *finnast* 'think, feel, find, consider', *sýnast* 'seem (to see/look)', *virðast* ´seem', *heyrast* '(believe to) hear', 'sound as if', *reynast* 'prove (to be ...)' and *skiljast* '(get to) understand' (see Sigurðsson 1989:95ff, Thráinsson

[42] The example is slightly "better" with *there* than without it (Dianne Jonas, pers. comm.).

2007:440–441).[43] Largely adopting the approach in Schäfer (2008), where reflexive markers in anticausative constructions are introduced by $\text{Voice}_{\text{EXPL}}$, I thus analyze the Experiencer ECM construction as in (70) below, where Appl takes *-st* as a nonreferential or dummy external argument, *-st* in turn being event-licensed by $\text{Voice}_{\text{EXPL}}$.[44] Notice that the *-st*-element lacks valued ϕ-features (like 3 person reflexives, see Schäfer 2008, 2009), hence not intervening between the T_{ϕ}-complex and the experiencer dative, thus not blocking the latter from being T-licensed.

(70)



Recall, from section 2, that the case assignment property of v (*) must be severed from its licensing property (ϕ). Recall also that $\text{Voice}_{\text{EXPL}}$ deletes all case-stars on v while it leaves the applicative Dat intact. Accordingly, the matrix experiencer shows up in the dative, whereas

[43] The only exception is *þykja* 'find, seem, think (that)'.

[44] In fact, the language has two competing tensed forms of *-st*-verbs, a classical problem in Icelandic studies (see Andersson 1990, Ottósson 1992). This is exemplified for the 1 person plural past (indicative and subjunctive) in (i) (the additional *u* in *vir-tu-st-u-m* in (ib) is arguably due to epenthesis):

(i)	a.	*vir-t-u-m-st*	=	*v*/V-T-Nr-Pn-*st*	'we seemed'	standard
	b.	*vir-tu-st-u-m*	=	*v*/V-T-*st*-Nr-Pn	'we seemed'	colloquial

In the older standard variety, the *-st*-element cliticizes onto the finite verb after roll-up *v*/V-to-T-to-Nr-to-Pn, first yielding *v*/V-T, then *v*/V-T-Nr, then *v*/V-T-Nr-Pn, and finally *v*/V-T-Nr-Pn-*st* by shallow cliticization (I disregard silent categories, such as Gender and Voice itself). In the colloquial variety, *-st* cliticizes onto T prior to *v*/V-raising, first yielding T-*st*, then *v*/V-T-*st*, then *v*/V-T-*st*-Nr, and finally *v*/V-T-*st*-Nr-Pn. It seems possible that constructions with *-st*-verbs historically developed out of biclausal structures, where the *-st*-marker was a C-element, but I will not discuss this here.

the infinitive-internal subject shows up in the nominative in examples like (63a) above. Notice that if it were not for case star deletion, we would expect the infinitival subject to show up in Acc, just as in regular ECM constructions. That the type /*us.DAT seemed *her*.ACC be competent/ is excluded, in contrast to /us.DAT seemed *she*.NOM be competent/, tallies with the case star deletion approach.

Merging the experiencer Dat requires that Appl be activated (to event-license the dative), and an active Appl selects a ϕ-complete v, v_{ϕ}, which in turn transfers its ϕ-licensing to the infinitival T, thereby licensing an overt NP in Spec,T.[45] The crucial property that licenses the infinitival subject is thus the ϕ-completeness of v (transmitted to infinitival T) and not its (unrelated) case-marking properties (if it has any–as just stated v becomes a nonassigner of case by $\text{Voice}_{\text{EXPL}}$ triggered case star deletion).[46] If Appl is inherently ϕ-complete, we can conclude that the "final" or the highest licensing of an argument NP with an active person feature is always ϕ-licensing.

Regular subjects of ECM predicates like *believe* are event-licensed by $\text{Voice}_{\text{ACT}}$, which by standard minimalist assumptions selects v_{ϕ} (Chomsky 2001:9), the latter in turn transmitting its ϕ-licensing to the infinitival T. In contrast, $\text{Voice}_{\text{PASS}}$, selects ϕ-incomplete v, regardless of case, with no ϕ-licensing properties to transmit. Similarly, plain raising verbs (without an applicative dative) are headed by ϕ-incomplete v, selected by $\text{Voice}_{\text{EXPL}}$. Hence the ungrammaticality of examples like the b-examples in (66) and (68) above (that is, being ϕ-incomplete, the matrix v cannot transmit ϕ-licensing to the infinitival T, hence lexicalization of the infinitival Spec,T is not licensed).

Given that English expletive *there* has active ϕ-features, its behavior tallies with the present analysis.[47] Consider (71) and (72).[48]

(71) a. *We* never believed [*there* to have been ghosts in the house].
b. Were *there* ever believed [__to have been ghosts in the house]?
c. * Were (it) ever believed [*there* to have been ghosts in the house]?

(72) a. Would *there* seem [__ to be ghosts in the house]?

[45] Here it makes perfect sense to talk about ϕ-inheritance, the infinitival T inheriting its abstract Agree features from v_{ϕ}.

[46] Notice that the relation between a verb and its prepositional complement (as in Icelandic /walk to GEN/, /walk from DAT/, /walk around ACC/, etc.) can be analyzed as involving ϕ-transmission from v to P, while P, in contrast, assigns a case of "its own". That is, this is yet another instantiation of ϕ- and case-licensing having disjoint sources.

[47] In contrast, the Icelandic expletive *það* 'there, it' is not a subject, thus being generally excluded from Spec,T, a much discussed fact that I will however set aside here (but see Thráinsson 1979, Sigurðsson 2010a and references there).

[48] Thanks to Dianne Jonas and Joan Maling for native speaker judgments.

b. * Would (it) seem [*there* to be ghosts in the house]?

Chomsky (2001:7) suggests that *there* "must have the feature [person]" but "no other formal features" (as it does not trigger number agreement), further suggesting that infinitival T_{def}, licensing *there* in examples such as (71a), has Pn but "no other ϕ-features". However, this is not evidently a minimal or a necessary assumption. English *there* might be analyzed as Icelandic quirky subjects (in Sigurðsson and Holmberg 2008, see also Richards 2004, 2007, 2008), such that it raises out of the scope of T/Nr prior to number agreement (cf. (48) above). If so, T_{def} licenses an overt NP in Spec-T iff it inherits a complete ϕ-feature set from v_{ϕ}, that is, it is unnecessary to make the extra assumption that v_{ϕ} transmits only its Pn-feature to T_{def}, somehow trapping or holding back its other ϕ-features.

Returning to the structure in (70), it should be noted that an applicative analysis also applies to some dative taking *-st*-verbs that do not take a TP complement. That is, while dative subjects of passive and many unaccusative verbs are derived by regular NP-movement from object to subject (Sigurðsson 1989, Jónsson 1996, among many), dative subjects of at least many *-st*-verbs are applicatives. Consider the following verb pairs:

(73)	NOM-V	DAT-V*st*
	bera 'carry'	*berast* 'get something carried, receive'
	birta 'reveal, publish'	*birtast* 'get to see, get something revealed/seen'
	græða 'profit'	*græðast fé* 'get wealthy'
	heyra 'hear'	*heyrast* 'get to hear, believe oneself to hear'
	læra 'learn, study'	*lærast* 'get to learn'
	opinbera 'reveal, make public'	*opinberast* 'get something revealed'
	reikna 'calculate'	*reiknast til* 'get to understand by calculation'
	skilja 'understand'	*skiljast* 'get to understand'
	telja 'count; believe, consider'	*teljast til* 'estimate'

The examples in (74) illustrate the contrast for one of these pairs (see also Jónsson 2003:131).

(74) a. *Ólafur* lærði að hlýða skipunum.
Olaf.N learnt to obey orders.D
'Olaf learnt to obey orders (by his own actions, efforts, etc.).'

b. *Ólafi* lærðist að hlýða skipunum.
Olaf.D learnt.ST to obey orders.D
'Olaf (gradually) learnt to obey orders (by experience, circumstances, etc.).'

In the *b*-example, the structure is the same as in (70) (except that the complement is a CP here), that is, Appl is activated, taking *-st* as a nonreferential external argument, which in turn

is event-licensed by $\text{Voice}_{\text{EXPL}}$. The *a*-example in contrast is a regular transitive example, where the active nominative subject is event licensed by $\text{Voice}_{\text{ACT}}$, whereas Appl is not activated. Ditransitives, as we have seen, combine the properties of these constructions, as it were, by activating both Appl and $\text{Voice}_{\text{ACT}}$, as in for instance (75).

(75) *Ólafur* kenndi *Eiríki* að hlýða skipunum.
Olaf.N tought Eric.D to obey orders.D

As for PRO-infinitives, C intervenes between a matrix ϕ-probe and the infinitival T, call it T_{PRO}, blocking control predicates from transmitting their ϕ-licensing properties onto T_{PRO}. In Sigurðsson (2008) it is argued that T_{PRO} is Person defective, hence incapable of licensing an overt Spec,T. While that seems plausible, it would also seem that PRO is like spelled-out subjects in being locally C-T related. If PRO undergoes A-movement, as argued in Chomsky and Lasnik 1993 and in Chomsky 1995:116–117, then the movement trigger must be located in C, whereas the spell-out licensing property is located in T_{ϕ}. If so, movement tucks-in (as argued in Sigurðsson 2006a, 2010a), that is, C attracts PRO and overt subject NPs, but the landing site is not Spec,C but Spec,T, allowing lexicalization if T is ϕ-complete. Similarly, it is the matrix v_{ϕ} that triggers raising in ECM infinitives, whereas the landing site is the infinitival Spec,T.[49]

In sum, overt subjects must be ϕ-licensed in ECM and Experiencer ECM infinitives, much as in finite clauses, whereas case licensing takes place lower in the structure. As for ECM and Experiencer ECM infinitives, however, ϕ-licensing of Spec,T is only available under transitive ϕ-licensing, whereby T_{def} inherits its ϕ-licensing from the matrix v_{ϕ}, regardless of the case properties of v_{ϕ}.

5. Concluding remarks

Recall that Vergnaud's Conjecture in Lasnik's (2008:18) formulation suggests that "even languages like English with very little case morphology pattern with richly inflected languages in providing characteristic positions in which NPs with particular cases occur." In the late 1970s, the leading idea behind this conjecture was pioneering. It highlighted the question of what features or feature might be involved in the licensing of overt NPs, thereby paving the way for feature based research of a great number of syntactic phenomena. Simultaneously, however, the Icelandic quirky case facts presented and analyzed by Andrews (1976) became more and more intimidating for the conjecture, as was made clear in numerous generative studies, including

[49] This is compatible with further movement from infinitival Spec,T to the matrix v (traditionally referred to as Subject-to-Object Raising), triggered by the matrix Voice, but I have to put this much debated issue aside here.

Thráinsson 1979, Zaenen et al. 1985, Sigurðsson 1988, 1989, 1991, 1992, and Marantz 1991. In the early 1990s, it had become evident that the original conjecture did not hold up to scrutiny.

As a matter of fact, though, the term abstract Case or just "Case" has undergone a meaning shift, from suggesting a link between morphology and "Case" or NP-licensing in morphological case languages (Chomsky 1980:24, 1981), to referring exclusively to NP-licensing (Chomsky 2001:6ff). That is, without changing the terminology, Chomsky has in effect abandoned Vergnaud's Conjecture, contending that "structural Case is demoted in significance" (2000:127) and that "Case assignment is divorced from movement" (2001:17).

Despite this historical shift, many researchers still use the term abstract Case in the first sense, assuming that there is a direct link between morphology and NP-licensing, at least internal to individual case languages (see for example Legate 2008, Markman 2009). As succinctly put by Bobaljik and Wurmbrand (2009:44):

> … after prominent attention was given to quirky case in Icelandic and ergative case systems, the connection between Case (a formal feature underlying syntactic licensing of NPs) and case (the morphological category) became more tenuous, though the connection between the two is still a live topic of inquiry, with views spanning the spectrum of possibilities.

The general understanding of NP-licensing and its putative correlation with morphology has suffered from lacking attention to the abstract mechanism behind morphological case. In this paper, I have scrutinized this mechanism with respect to argument case, showing that it reflects matching of categories that are structurally lower than T, most commonly and centrally v- and Voice-categories. In addition to that, however, the subject of a finite clause has to match C-T_{ϕ}, and it is this ϕ-licensing that has been called "abstract nominative Case" in the generative literature. In a parallel fashion, T_{def} in ECM constructions (including the Experiencer ECM construction) licenses an overt subject NP in Spec,T by ϕ-inheritance from the matrix v_{ϕ}, whereas this is blocked by CP-intervention in control infinitives (that is, the ECM v-T/NP matching parallels finite C-T/NP matching, ragardless of morphological case). Important evidence in favor of this approach comes from the subject licensing properties of active versus passive ECM constructions as well as the Icelandic Experiencer ECM construction (type /us.DAT would then seem she.NOM be competent/), discussed in considerable detail in section 4 of this article.

While morphological argument case commonly reflects event-argument relations that are syntactically encoded by Voice- and v-type heads, the overt marking itself is a shallow strategy of marking different NP functions in PF (including various nonargument functions), good for expressive and processing purposes in those languages that apply it. In contrast, the ϕ-licensing of arguments, syntactically encoded by abstract computational relations between edge

categories (finite C-T and ECM v-T), is a prerequisite for their speech act and context anchoring (Sigurðsson 2004b, 2007, 2011a), plausibly a principled universal phenomenon.

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