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# Minimalist C/case

*Halldór Ármann Sigurðsson*

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*, *case licensing*, and  *$\phi$ -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, 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  $\phi$ -licensing from the matrix  $v_{\phi}$ , regardless of the case properties of  $v_{\phi}$ .

*Keywords:* A-licensing, A-movement, Case, morphological case, exceptional case marking (ECM), experiencer ECM

## 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."<sup>1</sup> The central phenomena that illustrate this are quirky subjects and a number of related phenomena, including case agreement in PRO infinitives. See Andrews 1976, Thráinsson 1979, Zaenen, Maling, and Thráinsson 1985, Yip, Maling, and Jackendoff 1987, Sigurðsson 1989, Marantz 1991, and Jónsson 1996, to mention only a few milestones from the twentieth century. Since Chomsky 2000, generative research into the nature of the relevant Icelandic data has increased explosively.

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<sup>1</sup> Ergative systems illustrate this as well, but the issues are complex (see Legate 2008, Müller 2008, Bobaljik and Wurmbrand 2009), so I largely refrain from considering ergativity.

The Icelandic facts are voluminous and complex, but the core facts can be sketched as follows:<sup>2</sup>

- (1) *Quirky subjects with a rich variety of predicate types*
- a. Var þeim ekki hjálpað? Dat  
 was.DFT them.DAT not helped.DFT  
 ‘Were they not helped?’
- b. Hafði þá rekið að landi? Acc  
 had.DFT them.ACC drifted.DFT to land  
 ‘Had they drifted ashore?’
- (2) *Quirky raising to subject and object (exceptional case marking (ECM))*
- a. Þeim/\*Þeir virtist ekki hafa verið hjálpað. Raising  
 them.DAT/\*NOM 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.NOM believed.1PL them.DAT/\*ACC not have.INF been helped.DFT  
 ‘We did not believe them to have been helped.’
- (3) *Overt (quirky or Nom) subjects in the experiencer ECM construction*
- a. Mér sýndist þeim hafa verið hjálpað. Dat  
 me.DAT appeared.DFT them.DAT have.INF been helped  
 ‘They appeared/seemed to me to have been helped.’
- b. Mér sýndust þeir hafa bjargast. Nom  
 me.DAT appeared.3PL they.NOM have.INF got.rescued  
 ‘They appeared/seemed to me to have been rescued/made it.’
- (4) *Nonraising of case-marked indefinite NPs*
- a. Virtust [<sub>TP</sub> hafa verið seldir bílar á uppboðinu]? Nom  
 seemed have.INF been sold cars.NOM at auction.the  
 ‘Did it seem that there had been cars sold at the auction?’
- b. Við töldum [<sub>TP</sub> hafa verið selda bíla á uppboðinu]. Acc  
 we believed.1PL have.INF been sold cars.ACC at auction.the  
 ‘We believed there to have been cars sold at the auction.’
- (5) *Case agreement with PRO*
- Bræðurnir vonuðust til [<sub>CP</sub> að PRO verða báðum/\*báðir hjálpað]. Dat  
 brothers.the.NOM hoped.3PL for to DAT be both.DAT/\*NOM helped.DFT  
 ‘The brothers hoped to be both helped.’

<sup>2</sup> Both finite verbs and participles agree with nominative as opposed to quirky subjects, the latter being accompanied by default agreement morphology (3SG in finite verbs, NOM/ACC.N.SG in participles).

I use the following abbreviations in glosses: NOM, ACC, DAT, and GEN for nominative, dative, accusative, and genitive; M, F, and N for masculine, feminine, and neuter; SG and PL for singular and plural; DFT (‘‘default’’) for both nonagreeing default finite verb forms (3SG) and past participles (NOM/ACC.N.SG); INF for infinitive; and SUBJ for subjunctive mood.

In early approaches, including that of Zaenen, Maling, and Thráinsson (1985), the question of whether quirky subjects (in Spec,T) are derived by A-movement was not a central issue, whereas this was argued to be the case across the board in Sigurðsson 1989, an analysis adopted in Marantz 1991, Holmberg and Platzack 1995, and many works since (e.g., Jónsson 1996, McFadden 2004).

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, 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 Legate 2008, Bobaljik and Wurmbrand 2009, Markman 2009). I will try here to shed some fresh light on them, from a minimalist point of view, pursuing an approach where argument NPs enter into a number of A-relations, rather than just one, yielding *event licensing*, *case licensing*, and *ϕ-licensing*.<sup>3</sup>

I will be focusing on canonical high A-movement of subjects, leaving aside object shift and low subject raising out of vP.<sup>4</sup> 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. Following much recent work (e.g., Sigurðsson 2000, 2004a, Burton-Roberts 2009, Boeckx 2011), 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 (nonlinguistic) principles (the 2nd and 3rd factors in the sense of Chomsky 2005).

Within the minimalist framework as it has developed in recent years (Chomsky 2004 et seq.), these assumptions are coherent and reasonable (see, e.g., Chomsky 2010, Berwick and Chomsky 2011). 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 by far the most common “case system” (found in 100 of the 261 languages in Irgesen 2008).

A note of historical clarification is in order here. In Sigurðsson 1988, 1989, 1991, 1992, I argued extensively that A-licensing 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 [Extended Projection Principle]” (p. 252).<sup>5</sup> However, Icelandic is like many other case languages in not having any general

<sup>3</sup> Event licensing (see Pykkänen 2008) entails  $\theta$ -licensing. While thus being syntactically licensed,  $\theta$ -roles are interpreted or read off at the C-I (conceptual-intentional) 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  $\theta$ -roles, the reason being that semantic  $\theta$ -interpretation and morphological case interpretation are read off from a common underlying structure. See further section 2.

<sup>4</sup> But see Sigurðsson 2000, Bošković 2004, and Thráinsson 2001, 2007 on Icelandic, and, more generally, Moro 2008 and Chomsky 2010.

<sup>5</sup> See also Lasnik 2001. For arguments against an EPP account of A-movement even in English (and more generally), see Bošković 2002.

EPP requirement (Sigurðsson 1989, 2010). Thus, abstract Case cannot be replaced by the EPP (which is in any event an epiphenomenon) and must instead be taken seriously, as a crucial property of language, as argued by 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  $\phi$ -licensing.

Section 2 sketches a novel approach to the event licensing of arguments and the nature of PF case licensing. Section 3 discusses  $\phi$ -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 that an overt Spec,T in these infinitive types is licensed by  $\phi$ -transmission from the matrix  $v_\phi$  to the infinitival T (following the spirit if not all the analytical details of Chomsky 2001). Section 5 concludes the article.

## 2 Little v, Case, Voice

In this section, I will discuss and analyze the mechanisms that underlie 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 Voice heads. Since case assignment is a (morphological) PF process, many of the facts described here are language-specific. My purpose in analyzing these facts is thus not to develop a general *syntactic* theory of morphological case—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 languages. Instead, my aim in 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.

At first sight, it would seem that subject case has a  $v$ P-external source, whereas direct object case originates  $v$ P-internally. Thus, Chomsky (2001:6) suggests that Acc in regular accusative systems is the responsibility of  $\phi$ -complete  $v$ , designated as  $v^*$ , whereas Nom is activated or ‘‘assigned a value under agreement’’ with  $\phi$ -complete T,  $T_\phi$ . Defective  $v$ , in contrast, has been analyzed as not assigning or licensing any case value, thereby rendering the underlying object in passive and other defective  $v$ P-types accessible to  $v$ P-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 <i>them</i> . | transitive $v^*$ -V: | Nom – Acc <sub><i>i</i></sub> |
| b. <i>They</i> were sunk.    | passive $v$ -V:      | Nom <sub><i>i</i></sub>       |
| c. <i>They</i> sank.         | unaccusative $v$ -V: | Nom <sub><i>i</i></sub>       |

The assumption that Nom originates in  $T_\phi$  has commonly been taken to account for finite verb agreement, as in (6b). However, it is even simpler to assume that  $\phi$ - and case *relations* are syntactic, whereas  $\phi$ - and case *feature values* are assigned in 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. In this article, I will 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

$\phi$ -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  $v_{\phi}^*$  and  $v^*$  and between  $v_{\phi}$  and  $v$ .

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, comitative, etc.), 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. Icelandic, in fact, has hundreds of ordinary verbs that take dative direct objects, including for instance *ausa* ‘scoop’, *bjarga* ‘rescue’, *eyða* ‘spend, eliminate’, *fleygja* ‘throw away’, *fljúga* ‘fly’, *hjálpa* ‘help’, *róa* ‘row’, *stjórna* ‘control, govern’, *ýta* ‘push’ (see Barðdal 2001, Maling 2002, Svenonius 2002, Jónsson 2003, 2005, Thráinsson 2007:208ff.). Verbs taking genitive direct objects are much fewer, but those that do are not particularly rare or peripheral, including for instance the common *bíða* ‘wait for’, *geta* ‘mention’, *krefjast* ‘demand’, *leita* ‘look for, 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. | hrósa ‘praise’  | lyfta ‘lift’      | fylgja ‘follow’ | ljúka ‘finish’      | Dat |
| b.     | lofa ‘praise’   | hækka ‘raise’     | 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 |

If the accusative objects in (7) and (8) are licensed in relation to a  $\phi$ -complete  $v$ , it would seem that the dative and genitive objects are, as well. That is, it seems that  $v^*$  comes in several flavors in individual case languages: 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.

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 ‘yields’ (in PF morphology).<sup>6</sup>

- |        |                       |                                  |
|--------|-----------------------|----------------------------------|
| (9) a. | $v_{(\phi)}^{*++}$ -V | → Gen                            |
| b.     | $v_{(\phi)}^{*+}$ -V  | → Dat                            |
| c.     | $v_{(\phi)}^*$ -V     | → Acc                            |
| d.     | $v_{(\phi)}$ -V       | → $\emptyset$ (Nom) <sup>7</sup> |

<sup>6</sup> In Sigurðsson 2011b, I assumed that  $v$  derives from  $v^*$ , a less coherent analysis that nevertheless yields the same general results as the present one. Informally, the plus notation may be interpreted as ‘more marked’,  $v^{*++}$  thus being ‘more marked’ than  $v^{*+}$  and the latter in turn being ‘more marked’ than  $v^*$ . A number of issues arise, but I must put them aside here.

<sup>7</sup> Many others have argued that Nom is ‘no case’ in some sense (see, e.g., the discussion and references in Markman 2009:402ff.), but the suggestion has different implications in different approaches. 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, factors in addition to v-type heads decide the case of an argument NP, a central issue I will return to.<sup>8</sup>

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 been taken to be a single property (e.g., 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  $v_{\phi}$ , the v\*-flavors being activated in the externalization process, as language-specific PF interpretations (recall that the most common ‘‘case system’’ is not to have any cases at all). 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.

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  $v_{(\phi)}^{\text{Dat}}$ , and so on. 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).<sup>9</sup> A third, 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 semantics (see, e.g., Ramchand 2008, Svenonius, to appear), but, as shown 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 easily observable ‘‘semantic case tendencies’’ in many case languages, but the putative correlations between the cases and semantic categories 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,

<sup>8</sup> The literature is flooded by different suggestions about how to analyze the morphological cases (see the overview in McFadden 2004 and the proposals in, for example, Caha 2009 and Pesetsky 2010). Distinct v\*-types could be analyzed as distinct ‘‘prepositions’’ or extra K(ase)-heads in extended v-projections in morphology (see Bayer, Bader, and Meng 2001), but I will not adopt or develop any such approach here.

<sup>9</sup> Thus, ‘‘dative case’’ is something different in a four-case system, such as the German/Icelandic one, than in, say, a six-case system like the Turkish one or a nine-case system like the one found in some Dravidian languages (see Blake 2001:158)—not to mention case systems, like the Finnish one, that are traditionally assumed to lack ‘‘dative case.’’



it seems). Many speakers use both the standard and the nonstandard options (without any semantic distinctions, as far as can be judged).<sup>10</sup>

- (10) a. *Ég hlakka til þess.* *Nom*  
 I.NOM look.1SG to it.GEN  
 b. *Mig/Mér hlakkar til þess.* *Acc/Dat*  
 me.ACC/DAT looks.DFT to it.GEN  
 ‘I am looking forward to it.’
- (11) a. *Okkur rak að landi.* *Acc*  
 us.ACC drifted.DFT to land.DAT  
 b. *Við rákum að landi.* *Nom*  
 we.NOM drifted.1PL to land.DAT  
 ‘We drifted ashore.’
- (12) a. *Mig langar þangað.* *Acc*  
 me.ACC longs.DFT there  
 b. *Mér langar þangað.* *Dat*  
 me.DAT longs.DFT there  
 ‘I want to/would like to go there.’
- (13) a. *Voruð þið barðir?* *Nom*  
 were.2PL you.NOM.PL hit.NOM.M.PL  
 b. *Var barið ykkur?* *Acc*  
 was.DFT hit.DFT you.ACC.PL  
 ‘Were you hit (by somebody)?’
- (14) a. *Mér voru gefnir bílarnir.* *Nom*  
 me.DAT were.3PL given.NOM.M.PL cars.the.NOM.M.PL  
 b. *Mér var gefið bílana.* *Acc*  
 me.DAT was.DFT given.DFT cars.the.ACC  
 ‘I was given the cars.’

Historical case changes—say, *Acc* > *Dat* in some constructions—often relate to some semantics; however, such correlations are typically vague and incomplete, thus not being amenable to true generalizations but only to descriptive approximations, commonly mistaken to be of analytical value.<sup>11</sup>

<sup>10</sup> 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 agreement morphology has no semantic correlates, being just an automatic reflection of the shifted case morphology (see Sigurðsson 2006a).

<sup>11</sup> A widespread misinterpretation of this sort is that the experiencer role should trigger dative marking, yielding ‘‘dative sickness’’ in Icelandic. However, *Nom* is the most common case of experiencer subjects in the language, in modern as well as older times (see Barðdal 2001:100, 187).

Some further explanations and caveats are in order here. First, what I have to say applies to core argument case. The mechanisms underlying the case marking of complements of prepositions and adverbial NPs (see the lists in (17)–(20)) are different from those underlying core argument case, but I will not discuss the differences here.

Second, verbs or verb roots may combine with more than one v-type head, thus taking objects with different cases, yielding contrasts like ‘wash car.the.ACC’ versus ‘wash child.the.DAT’ (see Barðdal 2001, 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 vs. “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 idiosyncrasy.<sup>12</sup>

Third, languages split the v-domain differently between their cases. Thus, Russian instrumental direct objects, for instance (see Richardson 2007:27), typically correspond to dative objects of verbs of controlling and directing in Icelandic (such as the verbs meaning ‘control’ and ‘guide’). Even closely related languages with *identical* case inventories, such as German and Icelandic, 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).

- (15) a. Hún kastaði *steininum*/\*steininn. Icelandic *Dat*  
 she threw stone.the.DAT/\*ACC  
 b. Sie hat *den Stein*/\*dem Stein geworfen. German *Acc*  
 she has the stone.ACC/\*DAT thrown  
 ‘She threw the stone.’
- (16) a. Hún stýrði *skipinu*/\*skipið. Icelandic *Dat*  
 she steered ship.the.DAT/\*ACC  
 b. Sie hat *das Schiff*/\*dem Schiff gesteuert. German *Acc*  
 she has the ship.ACC/\*DAT steered  
 ‘She steered the ship.’

Importantly, there are no discernible semantic differences between the languages in the numerous pairs of this sort.<sup>13</sup> A few more examples illustrating this: the verbs meaning ‘spill’, ‘forget’, ‘invite’, ‘change’, ‘sink’, ‘exterminate’ (*hella niður*, *gleyma*, *bjóða*, *breyta*, *sökkva*, *tortíma*) all

<sup>12</sup> As suggested by many facts: 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 point of view are nevertheless largely predictable within a given language community.

<sup>13</sup> 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.”

take dative case in Icelandic, while corresponding verbs in German all take accusative case (*verschütten, vergessen, einladen, verändern, versenken, vernichten*), the German accusatives nevertheless expressing 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.<sup>14</sup>

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

- (17) *Nominative*: agentive subjects; most nonagentive subjects; most subjects in experiencer ECM complements (*Okkur mundu virðast þeir vera gáfaðir* ‘us would seem they.NOM be intelligent’ = ‘It would seem to us that they are intelligent’); most raised NPs; objects of certain predicates (*Mér hafa alltaf líkað þeir* ‘me have always liked they.NOM’ = ‘I have always liked them’); most predicative NPs; many dislocated NPs; vocative NPs; most listed NPs; many exclamative NPs
- (18) *Accusative*: some subjects; most direct objects; some indirect (or “first”) objects (*Þeir rændu mig veskinu* ‘they robbed me.ACC wallet.the’ = ‘They robbed me of my wallet’); regular ECM subjects; most ECM predicative NPs; subjects in some experiencer ECM complements; some raised NPs; complements of certain prepositions; some dislocated NPs; certain adverbial NPs
- (19) *Dative*: some subjects; agentive NPs in passive *af*- ‘by’ phrases; many direct objects; most indirect objects; some ECM subjects; subjects in some experiencer ECM complements; some raised NPs; complements of most prepositions; free benefactives; some dislocated NPs; a few adnominal NPs (*Hún horfði í augu mér* ‘she looked in eyes me.DAT’ = ‘She looked into my eyes’); complements of certain adjectives (*Hún var mér góð* ‘she was me.DAT good’ = ‘She was kind to me’); certain adverbial NPs
- (20) *Genitive*: a few subjects; some direct objects; a few direct or “second” objects of double object verbs; some ECM subjects; subjects in some experiencer ECM complements; a few raised NPs; complements of some prepositions; most adnominal NPs, reflecting an array of semantic/syntactic relations;<sup>15</sup> some dislocated NPs; bare partitive NPs (*flestir þeirra* ‘most them.GEN’ = ‘most of them’); NPs in various other adverbial or adverbial-like functions (see Kress 1982:228ff.)

<sup>14</sup> This is expected if case features (in contrast to the relations they interpret or express) are language-specific 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 that correspond to nominative (or noncased) adverbial NPs in German, and so on. For further comparative details, see Maling 2001, 2002, Wunderlich 2003, Sigurðsson 2009.

<sup>15</sup> That is, like most other case languages, Icelandic has many adnominal genitives, morphologically homogeneous but syntactically heterogeneous.

These lists are nonexhaustive, 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 not primitives of language.<sup>16</sup>

Thus, both crosslinguistic and intralinguistic observations suggest that individual cases are language-specific morphological entities, interpreting or reflecting various complex syntactic structures, rather than being syntactic units or building blocks themselves.

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 factors in addition to v-type heads decide the case of an argument NP. Most centrally, the ‘‘final’’ case of the underlying object of v-V is affected by Voice. The well-known type is the Burzio’s Generalization type, that is, the Acc-to-Nom conversion typical of active-passive pairs, such as the English (and the corresponding Icelandic) one in (21).

- (21) a. They arrested *her*.  
 b. *She* was arrested.

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

Suppose that all passive vPs in case languages like Icelandic and German have a case-triggering v, either v\*, v\*+, or v\*++. If so, passive Acc-to-Nom conversion can be analyzed such that passive Voice,  $\text{Voice}_{\text{Pass}}$ , deletes the accusative-case-triggering property of v\* (as opposed to v\*+ and v\*++). Call this PF process *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.<sup>17</sup> As we will see, though, 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 a syntactic process, instead taking place in PF.<sup>18</sup>

<sup>16</sup> 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 1,100 years ago.

<sup>17</sup> However, in languages ‘‘burdened’’ with the peculiarity of having v-V combinations that yield oblique case, the single argument of the predicate will wind up with the oblique case in question unless the predicate is embedded under a case-altering head.

<sup>18</sup> PF externalization scans the whole phase, thus having access to lexical verbs that often affect case marking, either by idiosyncratically linking to an unexpected v-type (as mentioned above) or by blocking an otherwise expected case star deletion process. Notice, however, that even though the lexical verb may affect case marking, it does not follow that semantics is or should be directly involved as a triggering factor—it is evidently not. The widespread idea that case marking may be semantic stems from the trivial fact that lexical elements get interpreted at the semantic interface.

Case star deletion is a common phenomenon, found not only 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 mediopassive or middle. Importantly, different Voice types have different effects upon case marking: for instance, *-st* anticausatives trigger *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 effect of two Voice types upon Acc*
- |  |                                   |
|--|-----------------------------------|
| a. Þeir löguðu hana.                         | Active Nom-Acc <sub>i</sub>       |
| they mended her/it.ACC (e.g., ‘the machine’) |                                   |
| b. Hún var löguð.                            | Passive Nom <sub>i</sub>          |
| she/it.NOM was mended                        |                                   |
| c. Hún lagaðist.                             | Anticausative-ST Nom <sub>i</sub> |
| she/it.NOM mended.ST                         |                                   |
| ‘It (got) mended.’/‘She recovered.’          |                                   |
- (23) *The effect of two Voice types upon Dat*
- |  |                                   |
|--|-----------------------------------|
| a. Þeir breyttu henni.                     | Active Nom-Dat <sub>i</sub>       |
| they changed her/it.DAT                    |                                   |
| b. Henni var breytt.                       | Passive Dat <sub>i</sub>          |
| her/it.DAT was changed                     |                                   |
| ‘It/She was changed/alterd (by somebody).’ |                                   |
| c. Hún breyttist.                          | Anticausative-ST Nom <sub>i</sub> |
| she/it.NOM changed.ST                      |                                   |
- (24) *The effect of two Voice types upon Gen*<sup>19</sup>
- |  |                                   |
|--|-----------------------------------|
| a. Þeir óska hennar.                         | Active Nom-Gen <sub>i</sub>       |
| they wish.for her/it.GEN                     |                                   |
| b. Hennar er óskað.                          | Passive Gen <sub>i</sub>          |
| her/it.GEN is wished.for                     |                                   |
| ‘She/It is wished for (by somebody).’        |                                   |
| c. Hún óskast.                               | Anticausative-ST Nom <sub>i</sub> |
| she/it.NOM wishes.ST                         |                                   |
| ‘She/It is being sought/wished for/desired.’ |                                   |

Passive Voice has been extensively studied within the generative tradition (e.g., Chomsky 1981, Jaeggli 1986, Baker, Johnson, and Roberts 1989, Emonds 2000, Collins 2005). Other Voice types and the category of Voice in general are not as well understood. However, there is emerging

<sup>19</sup> Only some genitive-assigning verbs are amenable to anticausative *-st*-formation—but those that are erase the genitive marking, as in (24c) (see 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.); this behavior is also observed for Icelandic *stative* passives (see further below). 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.

consensus that Voice is a clausal head, located between *v* and T proper, as the highest category in the *v*-system or the lowest one in the T-system, either morphologically unmarked or marked, commonly on the main verb (Kratzer 1996, Cuervo 2003, Diaconescu and Rivero 2007, Pykkänen 2008, Schäfer 2008). Second, *Voice* is a cover term, much like *Aspect* in Cinque 1999 and related work; that is, there are a number of mutually exclusive Voice-type heads, including passive and active Voice,  $Voice_{Pass}$  and  $Voice_{Act}$ .

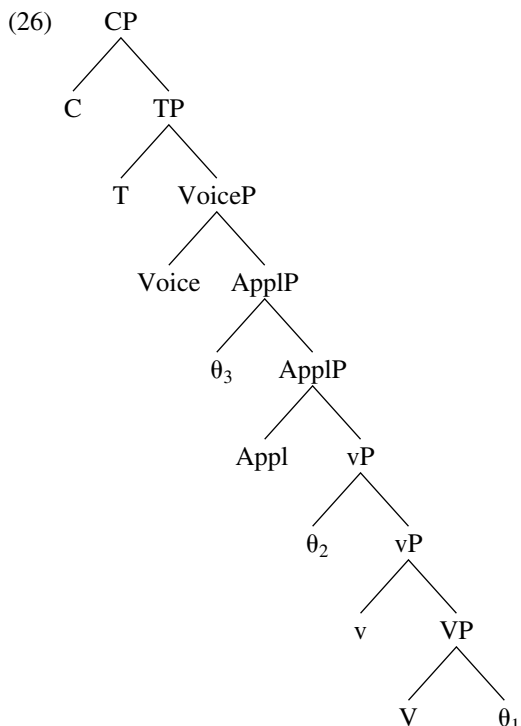
I assume that any predicate is embedded under some Voice head, either content-related or expletive, matched by the *v*-head of the predicate. Voice commonly alters the argument structure of basic predicates. A number of such processes are frequently observed (see Silverstein 1976, Klaiman 1991, Palmer 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; e.g., Cuervo 2003, Pykkänen 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 nonexternal  $\theta$  (see also Pykkänen 2008). Following Alexiadou, Anagnostopoulou, and Schäfer (2006) and Schäfer (2008), I will refer to anticausative Voice as *expletive Voice*,  $Voice_{Expl}$ , otherwise using more traditional terms,  $Voice_{Act}$  and  $Voice_{Pass}$ , 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, Pykkänen 2008) 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 (see Pykkänen 2008): direct objects by *v*-type heads (in relation to V), indirect objects by *Appl*, and regular agentive or active subjects by  $Voice_{Act}$ . 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:  $\theta_1$   
 b. Event-license  $\theta_1$ :  $v-V \theta_1$   
 c. Add a participant:  $\theta_2 [v-V \theta_1]$   
 d. Event-license  $\theta_2$ :  $Appl \theta_2 [v-V \theta_1]$   
 e. Add a participant:  $\theta_3 [Appl \theta_2 [v-V \theta_1]]$   
 f. Event-license  $\theta_3$ :  $Voice \theta_3 [Appl \theta_2 [v-V \theta_1]]$

This yields the structure in (26), where, canonically,  $\theta_3 = \text{Nom}$ ,  $\theta_2 = \text{Dat}$ ,  $\theta_1 = \text{Acc}$  (in most monotransitive constructions, on the other hand, *Appl* is inactive,  $\theta_2$  thus being locally licensed by Voice and showing up as *Nom*).<sup>20</sup>

<sup>20</sup> The assumptions behind (26) are rather orthodox. An alternative, argued for in Sigurðsson 2006c, is that the subject is merged as the lowest argument, subsequently being raised across the object or objects for independent ( $\phi$ -related) reasons. See also Bowers 2010.



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 other types of Voice heads affect case marking. Thus, Icelandic so-called *fate (un)accusatives*, typical of fate predicates like ‘drift’, ‘swamp’, and ‘get swept overboard’, are embedded under Voice<sub>Fate</sub> (Sigurðsson 2009, 2011b). Importantly, Voice<sub>Fate</sub> commonly differs from Voice<sub>Pass</sub> and Voice<sub>Expl</sub> in not triggering case star deletion, thereby preserving accusative (in violation of Burzio’s Generalization). This is illustrated for *fylla* ‘fill; swamp’ in (27).

- (27) a. Þeir fylltu bátinn. Transitive Nom-Acc<sub>i</sub>  
 they filled boat.the.ACC  
 ‘They filled the boat (with some cargo).’
- b. *Báturinn* var fylltur. Dynamic passive Nom<sub>i</sub>  
 boat.the.NOM was filled  
 ‘The boat was filled (with some cargo).’
- c. *Báturinn* fylltist. Anticausative Nom<sub>i</sub>  
 boat.the.NOM filled.ST  
 ‘The boat got full (of something).’



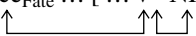
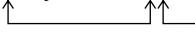
- d. *Bátinn* fyllti. Fate (un)accusative  $Acc_i$   
 boat.the.ACC filled  
 ‘The boat swamped.’

The fate reading of fate (un)accusative predicates is never shared by the “same” predicate when transitive, passive, or anticausative (Ottósson 1988:147–148, Sigurðsson 2006b:25). This 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 “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 Faroese, which has lost all fate accusatives, applying nominative instead, again without any concomitant semantic change (see Thráinsson et al. 2004:277, 427–428, Thráinsson 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.NOM closed.1PL windows.the.DAT  
 b. *Gluggunum* var lokað þjösnalega. Dynamic passive  $Dat_i$   
 windows.the.DAT was.DFT closed.DFT brutally  
 ‘The windows were forcefully closed.’  
 c. *Gluggarnir* lokuðust. Anticausative  $Nom_i$   
 windows.the.NOM closed.3PL.ST  
 ‘The windows closed.’  
 d. *Gluggarnir* voru lengi lokaðir. Stative passive  $Nom_i$   
 windows.the.NOM were.3PL long closed.NOM.M.PL  
 ‘The windows were closed for a long time.’

Stative passives are thus like *-st*-anticausatives in being embedded under  $Voice_{Expl}$  (even though these predicate types have different vP-internal properties). 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.  $Voice_{Pass} \dots [ \dots v^* NP \dots ] > \dots v \dots NP_{Nom} \dots$  (\* deletion)  
  
 b.  $Voice_{Pass} \dots [ \dots v^{*+} NP \dots ] > \dots v^{*+} \dots NP_{Dat} \dots$  (no \*+ deletion)  
  
 (30)  $Voice_{Fate} \dots [ \dots v^* NP \dots ] > \dots v^* \dots NP_{Acc} \dots$  (no \* deletion)  
  
 (31)  $Voice_{Expl} \dots [ \dots v^{*(+)} NP \dots ] > \dots v \dots NP_{Nom} \dots$  (\* and \*+ deletion)  




Interestingly, anticausative Voice<sub>Expl</sub> erases dative marking of direct objects (see (23c), (28c)), whereas it does not alter the benefactive dative of ditransitives, as illustrated in (32) (from Sigurðsson 1989:260).<sup>21</sup>

- (32) a. Pétur bauð mér vinnu.  
Peter.NOM offered me.DAT job.ACC  
'Peter offered me a job.'  
b. Mér bauðst vinna.  
me.DAT offered.ST job.NOM  
'I got a job opportunity/a job offer.'

That is, Voice<sub>Expl</sub> erases the dative-marking property of  $v^{*+}$ , whereas it leaves the dative assigned by Appl intact. 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 (see (9)). However, some Voice-related processes can be analyzed as inducing case star augmentation (yielding oblique case).<sup>22</sup> Thus, the Germanic languages form certain causative weak verbs on the basis of (historically and structurally basic) intransitive, unaccusative strong verbs, yielding pairs like strong *rise* versus weak *raise*. 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.NOM slid.STRONG across table.the  
b. Hann renndi glasinu/\*glasið yfir borðið.  
he.NOM slid.WEAK glass.the.DAT/\*ACC across table.the  
(34) a. Baturinn sökk.  
boat.the.NOM sank.STRONG  
b. Þeir söktu bátnum/\*bátinn.  
they.NOM sank.WEAK boat.the.DAT/\*ACC

Demotion in ergative systems, yielding for example 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 be as well. Ergative is less direct or less central than absolutive, much as dative is less direct than nominative and accusative in accusative systems (see Woolford 1997). It thus seems possible that Voice<sub>Act</sub> in ergative systems not only event-licenses ergative subjects

<sup>21</sup> Only some ditransitives undergo *-st*-formation, but those that do undergo it show this behavior. See Thráinsson 2007:290ff.

<sup>22</sup> 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 economical alternative is available (recall that case star interpretation is a matter of externalization, which is in any event 'imperfect'). Similarly, it seems unavoidable to assume both causativization and anticausativization (see Sigurðsson 1989, Schäfer 2008).

but also triggers their ergative marking, much 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 evidenced most clearly by intralinguistic variation like that described for Icelandic in (10)–(14) and (17)–(20), but it is also demonstrated by comparing related case languages, such as the Germanic and Slavic languages. However, as for core argument case, 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<sub>x</sub> in PF whenever syntax has not transferred any specific case instructions for NP<sub>x</sub>.

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.<sup>23</sup> The syntactic [Voice ↔ v-V ↔ NP] Agree relations that are involved recur across languages, but their interpretation in terms of morphological cases varies 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 it has passives in a *fá* ‘get’ ECM construction, such passives preserving the dative (as in *Ég fékk þessu 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 *be*-type passive preserves accusative case in the “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 Sakha (Turkic).<sup>24</sup>

All this variation within and across languages is interesting, demonstrating patterns that are telling about PF externalization. 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

<sup>23</sup> 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. A reviewer asks why different cases are variably amenable to “case alteration processes”—why, for example, the Russian accusative, as opposed to the instrumental, gets “overwritten” by the genitive of negation. The present framework suggests that Russian Neg affects v\* as opposed to other v-types.

<sup>24</sup> For some discussion of these phenomena, see Maling and Sigurjónsdóttir 2002, Thráinsson et al. 2004, Richardson 2007, Thráinsson 2007, Eythórsson 2008, Áfarli and Fjøsne 2009, Jónsson 2009, Alexiadou, Anagnostopoulou, and Sevdali 2010, Baker and Vinokurova 2010, Sigurðsson 2011b.

they do not involve categories of the C-T system (that is, they do not involve “abstract Case”). In contrast, boiling down to  $\phi$ -licensing, high A-movement crucially involves C-T categories. This is the topic of the next section.

### 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 entering into Voice matching and v-matching, yielding case, overt subject NPs in finite clauses must be licensed in relation to  $\phi$ -complete Tense,  $T_\phi$ . It is this relation that has been referred to as nominative Case within the generative tradition (see Lasnik 2008 and, e.g., Bobaljik and Wurmbrand 2009). Otto Jespersen used the term *nexus* in a similar sense, referring to finite subject-predicate relations as *independent nexus* and to a number of nonfinite NP-predicate relations—for instance, in ECM constructions—as *dependent nexus* (Jespersen 1924, Svenonius 1994:5ff.). Here, I will use the descriptive term *T-licensing*, arguing (in section 4) that it is also at work in ECM constructions, albeit under slightly different conditions.<sup>25</sup>

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). 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 “cover terms for a richer array of functional categories” (Chomsky 2001:43n8). Thus,  $T_\phi$  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  $C_\phi$  is a cover term for a number of categories (Rizzi 1997 and much related work), including Force, Top(ic), and Fin(ite). In the approach developed in Sigurðsson 2004b, 2011a, the C-domain also contains “speaker” and “hearer” features, referred to as the logophoric agent,  $\Lambda_A$ , and the logophoric patient,  $\Lambda_P$  (see also, e.g., 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) [<sub>CP</sub> Force ... Top ...  $\Lambda_A$  ...  $\Lambda_P$  ... [<sub>TP</sub> ... Pn ... Nr ... T ... Voice ... [<sub>VP</sub> ... v ... ]]]

<sup>25</sup> The approach I will pursue here is partly reminiscent of but also rather different from the approach in Pesetsky and Torrego 2001.

All the features in (35) are active syntactic elements, but they commonly get bundled together and are thus often not clearly identifiable as distinct features in PF.<sup>26</sup> Thus, person- and number-inflected verbs are derived by T first raising to Nr, and T/Nr subsequently raising to Pn, yielding  $T/Nr/Pn = T_\phi$  (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 regardless of whether or how they combine with other categories in PF.

NPs enter the derivation as  $\phi$ -variables.<sup>27</sup> Any argument must match a Pn head (subject Pn in  $T_\phi$ , object Pn in  $v_\phi$ ) as being either +Pn or -Pn. +Pn arguments in turn enter a further matching relation with the  $\Lambda$ -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.  $+Pn \rightarrow +\Lambda_A, -\Lambda_P =$  1st person by computation

b.  $+Pn \rightarrow -\Lambda_A, +\Lambda_P =$  2nd person by computation

c.  $+Pn \rightarrow -\Lambda_A, -\Lambda_P =$  3rd person by computation (“true person”)

d.  $-Pn =$  3rd person by default (“no person”)

If a subject NP is to get valued as +Pn and to subsequently match the  $\Lambda$ -features in the C-domain, it has to move into the vicinity of Pn. 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.

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  $\phi$ -computation as  $C_\phi$  and  $T_\phi$ . A-movement of a ‘personal NP’ to T is driven by matching relations between the NP,  $T_\phi$ , and  $C_\phi$ , as sketched in (38).

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

The reason why the NP has to move is that it has to match not only  $T_\phi$  but also  $C_\phi$ ; however, it is unable to do so across active  $T_\phi$ . For expository reasons, I use the slash notation to indicate (‘tell the story’) that  $NP_{+Pn}$  has been attracted into the vicinity of  $T_\phi$ . However,  $T_\phi$  does not remain intact. A probe such as  $T_\phi$  in (38), which has been fully exploited, is thereby inactivated,

<sup>26</sup> More precisely, they are active in narrow syntax but they are not stored in Universal Grammar, instead being universally ‘manufactured’ or transformed out of general 3rd factor substance into elements in the internal language lexicon (see the discussion in Sigurðsson 2004a, 2011c).

<sup>27</sup> The evidence that NPs have computed rather than lexically fixed  $\phi$ -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.

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  $T_\phi$ , 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, as active  $T_\phi$  intervenes between  $C_\phi$  and NP.

- (40) \* $[_{CP} \dots C_\phi \dots [_{TP} \dots T_\phi \dots [_{VP} \dots NP \dots ]]]$
- 

Movement thus complies with the generalization in (41).

- (41) *The Double Matching Generalization*

Given  $X \dots Y \dots ZP$ ,  $X$  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), 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  $T_\phi$ , 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 valuation of definite 3rd person arguments tends to get 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).<sup>28</sup>

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 postverbal. 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.NOM at meeting.the  
 ‘Weren’t there three building sites bought at the meeting?’  
 b. \*Voru ekki keyptar lóðirnar á fundinum?  
 were.3PL not bought building.sites.the.NOM at meeting.the  
 c. Voru lóðirnar / þær ekki keyptar — á fundinum?  
 were.3PL building.sites.the.NOM / they.NOM not bought at meeting.the  
 ‘Weren’t the building sites/they bought at the meeting?’

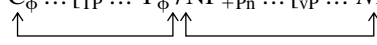
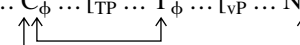
<sup>28</sup> But see Sigurðsson 2010 for a more detailed discussion of this rather moot issue.

- (44) a. \*Vorum ekki kosnir *við báðir* í nefndina?  
 were.1PL not elected we.NOM both.NOM in committee.the  
 b. Vorum *við* ekki kosnir — *báðir* í nefndina?  
 were.1PL we.NOM not elected both.NOM in committee.the  
 ‘Weren’t we both/both of us elected to the committee?’

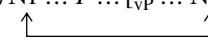
Notice that only the ‘‘person part’’ of the subject is raised to Spec,T in (44b). The quantifier part is floated or stranded, illustrating, much as (43a) does, that ‘‘nonpersonal’’ nominatives are ‘‘happy’’ low in clausal structure.

These facts are rather troublesome for the standard minimalist approach to Agree and A-licensing (Chomsky 2001 and related work). As (43b) and (44a) do not contain any intervening NPs, it would seem that the Pn feature of  $T_\phi$  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  $T_\phi$  does probe into vP, raising the question of why the Pn feature cannot do so as well.

Again, as in (39), the facts are accounted for by intervention. Unless a ‘‘personal’’ NP raises to  $T_\phi$  (= T/Nr/Pn), the latter intervenes between the NP and  $C_\phi$ , thereby blocking  $C_\phi$ -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) [ $C_\phi$  ... [ $T_P$  ... [ $T_\phi$  /NP+Pn ... [vP ... ~~NP~~ ... ]]]] OKPn valuation  
  
 (46) \*[ $C_\phi$  ... [ $T_P$  ... [ $T_\phi$  ... [vP ... NP ... ]]]] \*Pn valuation  


Indefinite or ‘‘nonpersonal’’ NPs do not require Pn valuation under  $C_\phi$ -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 Nr and Pn are distinct probes, Nr probing from a lower position than Pn does. That is, Pn, Nr, and T are distinct elements (as illustrated in (35)), brought together by T-raising to Nr and by subsequent Nr/T-raising to Pn, yielding T/Nr/Pn (=  $\phi$ -complete T). Nr probing 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) [ $T_P$  ... Pn ... T/Nr ...  $\mathcal{F}$  ... [vP ... NP ... ]]] OKNr 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.<sup>29</sup>

<sup>29</sup> Alternatively, Pn probes the vP, such impersonal probing yielding 3rd person agreement (see the discussion in Sigurðsson and Holmberg 2008, Sigurðsson 2010).

That Person has a special status within the T-complex is further suggested by the much-discussed quirky agreement facts in Dat-Nom constructions.<sup>30</sup> The central fact is that the finite verb is blocked from agreeing with a 1st or 2nd person nominative object, yielding the patterns in (48).<sup>31</sup>

- (48) a. \*Henni vorum sendir við. \*1st person agreement  
 her.DAT were.1PL sent we.NOM  
 b. \*Henni voruð sendir þið. \*2nd person agreement  
 her.DAT were.2PL sent you.NOM.PL  
 c. Henni voru sendir hestarnir/þeir.<sup>32</sup> OK 3rd person agreement  
 her.DAT were.3PL sent horses.the/they.NOM  
 ‘The horses/They were sent to her.’

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

- (49) a. [<sub>TP</sub> ... Pn ... Dat ... Nr ... T ... Nom ... ] >  
 b. [<sub>TP</sub> ... Pn ... Dat ... T/Nr ... F ... Nom ... ] Nr probing activated >  
 c. [<sub>TP</sub> ... T/Nr/Pn ... Dat ... ~~T/Nr~~ ... F ... Nom ... ] Pn probing activated
- 

As seen in (49c), Dat intervenes between  $T_\phi$  (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). As for the quirky subject, it is licensed under C-T matching, just as nominative subjects are (the essence of the quirky phenomenon), but  $T_\phi$  cannot overtly agree with it because overt verb agreement is restricted to noncased (nominative) NPs.<sup>33</sup>

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

- (50) High A-movement is driven by  $\phi$ -licensing under Double Matching,  $NP_{+Pn}$  matching, and raising to  $T_\phi$ , from where  $NP_{+Pn}$  matches  $C_\phi$ , thereby getting fully  $\phi$ -licensed.<sup>34</sup>

#### 4 Inherited $\phi$ -Licensing in Infinitives

In this section, I will argue that my analysis of high A-movement in finite clauses as driven by full  $\phi$ -licensing extends to subject licensing in ECM constructions. The constructions I discuss

<sup>30</sup> See, for instance, Taraldsen 1995, Sigurðsson 1996, Boeckx 2000, Chomsky 2000, 2001, Hiraiwa 2005, Nomura 2005, López 2008, Richards 2008, Sigurðsson and Holmberg 2008.

<sup>31</sup> See the discussion of unambiguous person agreement in Sigurðsson and Holmberg 2008:269ff.

<sup>32</sup> 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 2010 for a slight refinement).

<sup>33</sup> This restriction is a widespread phenomenon in accusative case systems, whereas ergative languages do not commonly show any comparable restriction (see Baker 2008:153ff., 248ff.).

<sup>34</sup> Even though high A-movement is  $\phi$ -related, the present approach is compatible with A-movement’s 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.

include *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 (see Lasnik 2003).

- (51) a. We believed [<sub>TP</sub> *her* to have been elected].  
 b. \*We believed [<sub>TP</sub> \_\_\_\_ to have been *her* elected].  
 c. We believed [<sub>TP</sub> *there* to have been some Democrats elected].

However, the relevant facts are more complex, suggesting that Acc is not involved in Spec,T licensing in ECM, no more than Nom is involved 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 [<sub>TP</sub> \_\_\_\_ hafa verið selda *bíla*/\*þá]. Acc  
 we believed have.INF been sold cars.ACC/\*them.ACC  
 ‘We believed there to have been cars (\*them) sold.’  
 b. Við töldum [<sub>TP</sub> *þá* hafa verið selda].  
 we believed them.ACC 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<sub>Def</sub>, has a Person feature (as suggested in Chomsky 2001:7).

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

- (53) a. Við töldum [<sub>TP</sub> \_\_\_\_ hafa verið stolið *bílum*/\*þeim]. Dat  
 we believed have.INF been stolen cars.DAT/\*them.DAT  
 ‘We believed there to have been cars (\*them) stolen.’  
 b. Við töldum [<sub>TP</sub> *þeim* hafa verið stolið].  
 we believed them.DAT 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  $\phi$ -complete T does in finite clauses. As we will see shortly, however, it does so only indirectly, by inheriting its  $\phi$ -licensing property from the matrix v $\phi$ . Importantly, as we will also see, this type of  $\phi$ -licensing is unrelated to case, much like  $\phi$ -licensing in finite clauses.

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.NOM 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.NOM/\*they.NOM  
 ‘Then there seemed to have been communists (\*they) 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. In examples like (54a), this fact is masked by verb-second 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.NOM 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.NOM have.INF been elected

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  $\phi$ -complete matrix  $v$ ,  $v_\phi$ . That is, the difference between ECM and raising constructions is not located within the infinitives themselves but in their matrix clauses, ECM verbs providing  $v_\phi$ -support, in contrast to regular raising verbs. The evidence suggesting this comes from ‘nonraising raising constructions,’ as it were—that is, from experiencer ECM constructions of the type *Dat seems* [<sub>TP</sub> NP T<sub>Inf</sub> ...].

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 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:<sup>35</sup>

- (56) a. Hafði hún virst [ \_\_\_\_ vera hæf]?  
 had she.NOM seemed be.INF competent  
 ‘Did she seem competent?’  
 b. \*Hafði \_\_\_\_ virst [hún vera hæf]?  
 had seemed she.NOM be.INF competent  
 c. Hafði þér virst [hún vera hæf]?  
 had you.DAT seemed she.NOM be.INF competent  
 ‘Did she seem competent to you?’

<sup>35</sup> Unless otherwise stated, the infinitives below are TPs, so I will not mark them as such hereafter.

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.DAT seemed feel.INF well  
 ‘Did she seem to feel well?’  
 b. \*Hafði \_\_\_\_ virst [*henni* líða vel]?  
 had seemed her.DAT feel.INF well  
 c. Hafði *þér* virst [*henni* líða vel]?  
 had you.DAT seemed her.DAT feel.INF well  
 ‘Did it seem to you that 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.

This is a “Burzio’s Generalization pattern,” also seen in transitive/unaccusative and active/passive pairs, including 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.NOM believed her.ACC be.INF competent  
 ‘Did they believe her to be competent?’  
 b. Var *hún* talin [ \_\_\_\_ vera hæf]?  
 was she.NOM believed be.INF competent  
 ‘Was she believed to be competent?’  
 c. \*Var \_\_\_\_ talin [*hún* vera hæf]?  
 was believed she.NOM be.INF competent  
 d. \*Var \_\_\_\_ talið [*hana* vera hæfa]?  
 was believed her.ACC be.INF competent  
 e. Var \_\_\_\_ talið [að *hún* væri hæf]?  
 was believed that she.NOM was competent  
 ‘Was it believed that she was competent?’  
 f. \*Var *hún* talið/talin [að \_\_\_\_ væri hæf]?<sup>36</sup>  
 was she.NOM believed that was competent

<sup>36</sup> Icelandic does not observe the *That-Trace* Filter, so the presence of the complementizer *að* is irrelevant here (i.e., the example is not ruled out by its presence nor does it get any better without it).

These facts suggest that the matrix  $T_\phi$  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. However, the generalization is rather that  $T_\phi$  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  $T_\phi$  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 (more on this shortly). In the (b), (c), and (d) examples, in contrast, there is no upstairs candidate for T-licensing, and thus  $T_\phi$  probes into the ECM infinitive, seeking a “substitute” (triggering obligatory raising as in the (b) examples). In contrast, matrix  $T_\phi$ -probing into the finite clauses in the (e) and (f) examples is prohibited.

Three issues need to be clarified:

1.  $T_\phi$ -licensing is CP-bounded, suggesting that the C-system contains intervening features with respect to matrix  $T_\phi$ -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 (59e–f).
2. In view of the fact that ECM and raising infinitives *cannot* license an overt subject in the absence of a distinct (thematic) matrix subject (see (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 (see (51a), (52b), (53b), (56c), (57c), (58a), and (59a)).
3. 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  $T_\phi$ -licensing.

The analysis developed in section 3 applies straightforwardly to issue 1: a subject NP enters a  $\phi$ -matching relation with its local C-T complex, thus being blocked from matching another C-T higher up. That is, phasehood follows from  $\phi$ -licensing minimality—hence the facts in the Icelandic examples (59e–f) and the parallel English examples (58e–f). The Icelandic examples are repeated here as (60a–b), with additional morphological annotations.

- (60) a. Var \_\_\_\_\_ talið [CP að hún væri hæf]?  
 was.DFT believed.DFT that she.NOM was.3SG.SUBJ competent  
 ‘Was it believed that she was competent?’
- b. \*Var hún talið/talin [CP að \_\_\_\_\_ væri hæf]?  
 was.DFT she.NOM believed.DFT/NOM.F.SG that was.3SG.SUBJ competent

As this contrast shows, the matrix  $T_\phi$  cannot probe down into the subordinate clause, across an intervening C- $T_\phi$ , even in the absence of a local matrix subject candidate. That is, C- $T_\phi$  intervenes between the matrix  $T_\phi$  and a potential NP goal in the subordinate clause, much as the matrix subject  $NP_\phi$  in regular ECM examples intervenes between  $T_\phi$  and the subject of the infinitive (as in, e.g., (58a) and (59a)).

Next, consider issue 2: 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 for example (56c), (57c), (58a), and (59a), repeated here in (61)–(63).

- (61) Did *they* believe [*her* to be competent]?
- (62) Höfðu *þeir* talið [*hana* vera hæfa]?  
 had they believed her.ACC be.INF competent  
 ‘Did they believe her to be competent?’
- (63) a. Hafði *þér* virst [*hún* vera hæf]?  
 had you.DAT seemed she.NOM be.INF competent  
 ‘Did she seem competent to you?’  
 b. Hafði *þér* virst [*henni* líða vel]?  
 had you.DAT seemed her.DAT feel.INF well  
 ‘Did it seem to you that 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.NOM believed be.INF competent  
 ‘Was she believed to be competent?’  
 b. \*Var \_\_\_\_ talin [*hún* vera hæf]?  
 was believed she.NOM be.INF competent
- (66) a. Hafði *hún* virst [ \_\_\_\_ vera hæf]?  
 had she.NOM seemed be.INF competent  
 ‘Did she seem competent?’  
 b. \*Hafði \_\_\_\_ virst [*hún* vera hæf]?  
 had seemed she.NOM 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)). 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 nonraised, 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 *Við töldum hana virðast hæfa* ‘we believed her.ACC seem competent’ = ‘We believed her to seem 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) that indefinite derived subjects are

allowed in a vP-internal position in raising infinitives, as further illustrated in the (a) examples in (67)–(69), 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]?<sup>37</sup>
- (68) a. There seems [ \_\_\_\_ to be *someone* in the room].  
 b. \*There seems (to me, often) [*someone* to be in the room].  
 (Chomsky 1995:344)
- (69) a. Voru taldir [ \_\_\_\_ hafa horfið *einhverjir hermenn* í stríðinu]?  
 were believed have disappeared some soldiers.NOM in war.the  
 ‘Were there some soldiers believed to have disappeared in the war?’  
 b. \*Voru taldir [*einhverjir hermenn* hafa horfið í stríðinu]?  
 were believed some soldiers.NOM have disappeared in war.the

The same applies to Icelandic *seem*-type raising infinitives. To put it briefly, an overt subject is licensed in the Spec,T position of ECM and raising infinitives only if the matrix clause contains a distinct (thematic) subject. In other words, the head that event-licenses the matrix subject (Voice<sub>Act</sub> in for example (61) and (62)) has the transitive effect of also activating the factor or factors that license lexicalization of the infinitival Spec,T. Call this *transitive licensing*. It arguably stems from the simple fact that matrix subject licensers (Voice<sub>Act</sub> and Appl; see below) select v<sub>φ</sub> and not v, v<sub>φ</sub> in turn transmitting its licensing power to the infinitival T.

This leads us to issue 3. The subject of an active ECM verb like *believe* is event-licensed by Voice<sub>Act</sub>, 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<sub>φ</sub>-licensing, simultaneously triggering licensing of the latter in the ECM Spec,T?

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, such as *virðast* ‘seem’ (*þykja* ‘find, seem, think (that)’ being the only exception; see Thráinsson 2007:440–441).<sup>38</sup> Largely adopting the approach in Schäfer 2008,

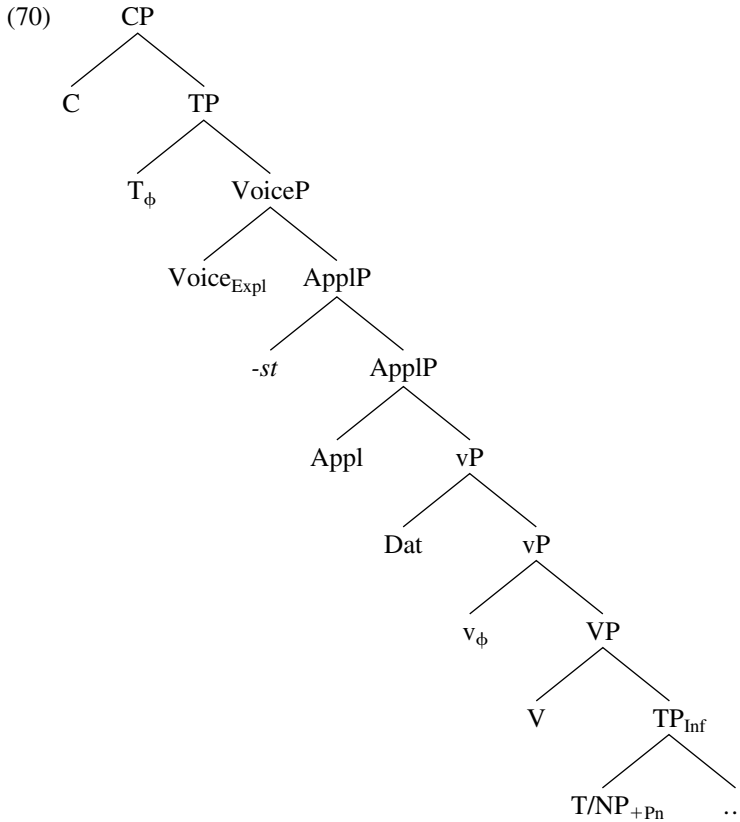
<sup>37</sup> The example is slightly “better” with *there* than without it (Dianne Jonas, pers. comm.).

<sup>38</sup> The language has two competing tensed forms of *-st*-verbs, a classical problem in Icelandic studies (see Anderson 1990, Ottósson 1992). This is exemplified for the 1st 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 (but on the retreat)

In the older, standard variety, the *-st*-element cliticizes onto the finite verb after roll-up; these processes yield first 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 Voice itself). In the other variety, *-st* cliticizes onto T prior to v/V-raising; these processes yield first T-st, then v/V-T-st, then v/V-T-st-Nr, and finally v/V-T-st-Nr-Pn.

where reflexive markers in anticausative constructions are introduced by  $\text{Voice}_{\text{Expl}}$ , I thus analyze the experiencer ECM construction as in (70), where  $\text{Appl}$  takes  $-st$  as a nonreferential or dummy external argument,  $-st$  in turn being event-licensed by  $\text{Voice}_{\text{Expl}}$ . Notice that the  $-st$ -element lacks valued  $\phi$ -features (like 3rd person reflexives; see Schäfer 2008, 2009); hence, it does not intervene between the  $T_\phi$ -complex and the experiencer dative and does not block the latter from being T-licensed.



Recall from section 2 that the case assignment property of  $v^*$  must be severed from its licensing property ( $\phi$ ). Recall also that  $\text{Voice}_{\text{Expl}}$  deletes all case stars on  $v$  while it leaves the applicative  $\text{Dat}$  intact. Accordingly, the matrix experiencer shows up in the dative, whereas the infinitive-internal subject shows up in the nominative in examples like (63a). If it were not for case star deletion, we would expect the infinitival subject to show up in the accusative, just as in regular ECM constructions.

Merging the experiencer  $\text{Dat}$  requires that  $\text{Appl}$  be activated (to event-license the dative), and an active  $\text{Appl}$  selects a  $\phi$ -complete  $v$ ,  $v_\phi$ , which in turn transfers its  $\phi$ -licensing to the infinitival  $T$ , thereby licensing an overt NP in  $\text{Spec},T$ . The crucial property that licenses the

infinitival subject is thus the  $\phi$ -completeness of  $v$  (transmitted to infinitival T) and not its (unrelated) case-marking properties. If Appl is inherently  $\phi$ -complete, we can conclude that the ‘‘final’’ or the highest licensing of an argument NP with an active person feature is always  $\phi$ -licensing.<sup>39</sup>

Regular subjects of ECM predicates like *believe* are event-licensed by Voice<sub>Act</sub>, which by standard assumptions selects  $v_\phi$  (see Chomsky 2001:9), the latter in turn transmitting its  $\phi$ -licensing to the infinitival T. In contrast, Voice<sub>Pass</sub> selects  $\phi$ -incomplete  $v$ , regardless of case, with no  $\phi$ -licensing properties to transmit. Similarly, plain raising verbs (without an applicative dative) are headed by  $\phi$ -incomplete  $v$ , selected by Voice<sub>Expl</sub>. Hence the ungrammaticality of examples like (66b) and (68b) (i.e., being  $\phi$ -incomplete, the matrix  $v$  cannot transmit  $\phi$ -licensing to the infinitival T, lexicalization of the infinitival Spec,T thus being unlicensed).

Given that English expletive *there* has active  $\phi$ -features, its behavior tallies with the present analysis.<sup>40</sup> Consider (71) and (72).<sup>41</sup>

- (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]?  
 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,’’ further suggesting that infinitival T<sub>Def</sub>, licensing *there* in examples such as (71a), has Pn but ‘‘no other  $\phi$ -features.’’ However, this is not evidently a minimal or a necessary assumption. English *there* might be analyzed as Icelandic quirky subjects are (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. (49) above). If so, T<sub>Def</sub> licenses an overt NP in Spec,T if and only if it inherits a complete  $\phi$ -feature set from  $v_\phi$ ; that is, it is unnecessary to make the extra assumption that  $v_\phi$  transmits only its Pn feature to T<sub>Def</sub>, somehow trapping or holding back its other  $\phi$ -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), dative subjects of at least many *-st*-verbs are applicatives. Consider the following verb pairs:

<sup>39</sup> 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  $\phi$ -transmission from  $v$  to P, while P, in contrast, assigns a case of ‘‘its own.’’ That is, this is yet another instantiation of  $\phi$ -licensing and case licensing having disjoint sources.

<sup>40</sup> In contrast, the Icelandic expletive *það* ‘there, it’ is invisible to  $\phi$ -probing, thus being generally excluded from Spec,T (see Thráinsson 1979, Sigurðsson 2010).

<sup>41</sup> Thanks to Dianne Jonas and Joan Maling for native-speaker judgments.

(73) <i>Nom-V</i>	<i>Dat-Vst</i>
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.NOM learned to obey orders.DAT  
 ‘Olaf learned to obey orders (by his own actions, efforts, etc.).’
- b. *Ólafí lærdist að hlýða skipunum.*  
 Olaf.DAT learned.ST to obey orders.DAT  
 ‘Olaf (gradually) learned to obey orders (by experience, circumstances, etc.).’

In (74b), 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 Voice<sub>Expl</sub>. In contrast, (74a) is a regular transitive example, where the active nominative subject is event-licensed by Voice<sub>Act</sub>, whereas Appl is not activated. Ditransitives, as we have seen, combine the properties of these constructions, as it were, by activating both Appl and Voice<sub>Act</sub>, as for example in (75).

- (75) *Ólafur kenndi Eiríki að hlýða skipunum.*  
 Olaf.NOM taught Erik.DAT to obey orders.DAT

In PRO-infinitives, C intervenes between a matrix  $\phi$ -probe and the infinitival T (call it T<sub>PRO</sub>), blocking control predicates from transmitting their  $\phi$ -licensing properties onto T<sub>PRO</sub>. In Sigurðsson 2008, I argued that T<sub>PRO</sub> is Person-defective, hence incapable of licensing an overt Spec,T. While that is 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 by Chomsky and Lasnik (see Chomsky 1995: 116–117), then the movement trigger must be located in C, whereas the spell-out-licensing property is located in T <sub>$\phi$</sub> . If so, movement tucks in; 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  $\phi$ -complete. Similarly, it is the matrix  $v_{\phi}$  that triggers raising in ECM infinitives, whereas the landing site is the infinitival Spec,T.<sup>42</sup>

<sup>42</sup> 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. However, I must put this much-debated issue aside here.



In sum, overt subjects must be  $\phi$ -licensed in ECM and experiencer ECM infinitives, much as in finite clauses, whereas case licensing takes place lower in the structure. In ECM and experiencer ECM infinitives, however,  $\phi$ -licensing of Spec,T is only available under transitive  $\phi$ -licensing, whereby  $T_{\text{Def}}$  inherits its  $\phi$ -licensing from the matrix  $v_{\phi}$ , regardless of the case properties of  $v_{\phi}$ . The transitivity of  $\phi$ -licensing, in turn, arises from the fact that higher subject licensors (Voice, Appl) select for  $v_{\phi}$  (and not for  $\phi$ -defective  $v$ ).

## 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, 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 a number of generative studies. By 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 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, e.g., Legate 2008, Markman 2009). As succinctly put by Bobaljik and Wurmbrand (2009:44):

[A]fter 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 lack of attention to the abstract mechanism behind morphological case. In this article, I have scrutinized this mechanism with respect to argument case, showing that it reflects matching of categories that are structurally lower than T, most centrally  $v$ - and Voice-type categories. In addition to that, however, the subject of a finite clause has to match C- $T_{\phi}$ , and it is this  $\phi$ -licensing that has been called "abstract nominative Case" in the generative literature. In a parallel fashion,  $T_{\text{Def}}$  in ECM constructions licenses an overt subject NP in Spec,T by  $\phi$ -inheritance from the matrix  $v_{\phi}$ , whereas this is blocked by C-intervention in control infinitives (i.e.,  $v$ -T  $\leftrightarrow$  NP matching in ECM parallels finite C-T  $\leftrightarrow$  NP matching, regardless 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, 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 PF strategy of marking different NPs, good for expressive and processing purposes in those languages that apply it. In contrast, the  $\phi$ -licensing of arguments, syntactically encoded by abstract computational relations between edge categories, is a prerequisite for their speech act/context anchoring (Sigurðsson 2004b, 2011a), plausibly a principled universal phenomenon.

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