Minimalist C/case

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This article discusses NP-licensing and case from a minimalist perspective, pursuing the idea that argument NPs cyclically enter a number of A-relations, rather than just a single one, resulting in *event-licensing* (entailing θ-licensing), *case-licensing* and *φ-licensing*. While argument case commonly reflects Voice/*v*-relations, canonical A-movement is driven by higher elements, either in the C-T system or in a superordinate *v*-system (in ECM constructions). In addition, there is a distinction to be drawn between the triggering of A-movement, by e.g. C, and the licensing of the landing site, by e.g. T_φ, C-probing leading to tucking-in into Spec-T. Much of the evidence presented comes from quirky case constructions in Icelandic and from ECM and raising constructions in Icelandic and English. It is argued, among other things, that T in ECM constructions and in transitive 'non-raising' constructions (type *us.DAT would then seem she.NOM be competent*) inherits φ-licensing from the matrix v_φ, regardless of the case properties of v_φ.

1. Introduction[*]

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

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

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

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

Sigurðsson (1989, 1991), and Jónsson (1996), to mention only a few milestones from the 20th century. Since Chomsky (2000), generative research into the nature of the relevant Icelandic data has increased explosively (cf. the references in Sigurðsson 2009b and in Sigurðsson & Holmberg 2008).

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

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

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

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

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

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

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

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

(3)   *Overt (quirky or NOM) subjects in ECM-like constructions*, e.g.:

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

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

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

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

    a.   Þá höfðu verið seldir **bílar** á uppboðinu.   NOM

        then had   been   sold   cars.N at auction.the

        'Then cars had been sold at the auction.'

    a.   Þá virtust [TP hafa   verið seldir **bílar** á uppboðinu].   NOM

        then seemed   have.INF been   sold   cars.N at auction.the]

        'It then seemed that there had been cars sold at the auction.'

    b.   Við töldum   [TP hafa   verið selda **bíla** á uppboðinu].   ACC

        we   believed.1PL   have.INF been   sold   cars.A at auction.the

        'We believed there to have been cars sold at the auction.'

(5)   *Case agreement with PRO,* as in e.g.:

    Bræðurnir   vonuðust til [CP að PRO   verða **báðum**/*báðir hjálpað].

    brothers.the.N hoped.3PL for   to D   be   both.D/*N   helped.DFT

    'The brothers hoped to be both helped.'

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

    Apparently, overt NP placement is largely independent of the morphological marking of NPs (Sigurðsson 1988, 1989, 1991, Marantz 1991, McFadden 2004), raising the question of what it is that licenses overt (argument) NPs, including quirky subjects, and also the question of whether NP-licensing is somehow indirectly related to case-marking. These questions are central and much debated in generative syntax (see for instance Legate 2008, Markman 2009, Bobaljik & Wurmbrand 2009). I will here try to shed some fresh light on them, from a minimalist point of view, pursuing an approach where argument NPs enter a number of A-relations, rather than just a single one, yielding *event-licensing, case-licensing* and *φ-licensing.*[3] This is not a trivial task, but I will nonetheless try to develop a coherent general approach to these phenomena. As it turns out,

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[3] Event-licensing (cf. Pylkkänen 2008) entails θ-licensing. While thus being syntactically licensed, θ-roles are interpreted or read off at the C-I interface, on the basis of structural (mainly Voice-*v*) and lexical information transferred from syntax. As has been widely discussed, there are commonly observable language-specific correlations between cases and θ-roles, the reason being that semantic θ-interpretation and morphological case-interpretation are read off from a common underlying structure. The interpretation takes place at the interpretative interfaces, that is, syntax does not contain or operate with θ- or case-features – it provides the abstract information that forms the basis for case-and θ-interpretation. See further section 2 below and the discussion in e.g. Platzack 2006 and Sigurðsson 2003 *et seq*.

argument case commonly reflects Voice/*v*-relations, whereas canonical A-movement is driven by abstract φ-features in the C-T-system (or in a superordinate *v*-system). However, in caseless languages like Chinese and in case-poor languages like English, there are no or only marginal overt indications that these variably high licensing relations are distinct (Vergnaud's Conjecture thus being 'historically understandable').

I adopt the Strong Minimalist Thesis and hence the *single cycle hypothesis* (Chomsky 2000, 2001, 2004, 2005, 2007, 2008), i.e., the hypothesis that the syntactic computation proceeds in a single cycle, deriving a representation that is legible to both the interfaces (albeit in different terms, semantic vs. expressive). Following Sigurðsson (2000, 2004b, 2006a, 2009a) and some other recent work (e.g. Burton-Roberts 2009), I furthermore adopt the thesis that syntax is uniform across languages and individuals, Universal Grammar thus containing no parameters (for instance no case parameters). On this approach, linguistic variation is confined to the externalization component, that is to say to broad PF, including morphology, where variation arises in an interplay of experience and general (non-linguistic) principles – the 2nd and the 3rd factors in the sense of Chomsky (2005). It follows that all languages and individuals operate with the same set of abstract syntactic features, even though they show great variation in feature externalization.[4] See the discussion of the Uniformity Principle (of Chomsky 2001:2) in e.g. Sigurðsson (2004b) and Boeckx (2009).

Within the minimalist/biolinguistic framework as it has developed in recent years (Chomsky 2004 *et seq.*), these assumptions are coherent and reasonable. None of them are self-evident or innocent (see the discussion in Holmberg 2009), but I will defend them here with respect to case and NP-licensing. If they are on the right track, syntax does not operate with case-features, instead building structures that are interpreted in terms of overt case in the externalization component of individual case languages.

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

2. Case, *v* and Voice

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[4] The fundamental externalization 'decisions' are whether or not a universal feature is PF-active and, if it is, how it bundles up with structurally adjacent features, cf. Sigurðsson 2004b and Boeckx 2009.

At first sight, it would seem that (direct) object case originates vP-internally, whereas subject case has a vP-external source (cf. Chomsky 1981, 1995, 2001, etc.). Thus, Chomsky (2001) suggested that ACC in (regular accusative systems) is the responsibility of φ-complete v, designated as v_φ or v^*, whereas NOM is activated or "assigned a value under agreement" with φ-complete T, T_φ (Chomsky 2001:6). Plain or defective v, in constrast, was analyzed as not assigning or licensing any case value, thereby rendering the underlying object in passive, unaccusative and other defective vP-types accessible to vP-external NOM. As illustrated in (6), this yields Burzio's Generalization (for English), that is to say, the 'ACC-to-NOM conversion' typical of defective predicate types:

(6) a.   We sank **them**.   transitive v^*-V: $\text{NOM}_k - \textbf{ACC}_i$

    b.   **They** were sunk.   passive v-V: $\textbf{NOM}_i$

    c.   **They** sunk.   unaccusative v-V: $\textbf{NOM}_i$

The assumption that NOM originates in or with T_φ has commonly been taken to account for finite werb agreement, as in (6b). However, it is even simpler to assume that φ- and case-*relations* are syntactic, whereas φ- and case-*feature values* are assigned in post-syntactic 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 sucessfully probes a 'non-cased' NP. If so, morphological case of subjects and direct objects in accusative case systems reflects v-relations (or rather Voice/v-relations, see below) plus 'no case relations', as it were.

      The system proposed by Chomsky applies to the 'structural' cases, ACC and NOM. 'Inherent' case-marking, for instance dative and genitive marking of direct objects in Germanic and Slavic, is commonly taken to be either θ-related or lexical in some sense or both (e.g. Zaenen et al. 1985, Richardson 2007). Thus, many dative direct objects in Icelandic are benefactive or denote themes that are under external directing/control or put into movement. Consider (7), based on Sigurðsson (2009b:268f), listing a few verbs that assign dative to their direct objects. The list is only meant to give a general idea, but for further facts and discussions, see Barðdal (2001), Maling (2002), Svenonius (2002), Jónsson (2003, 2005), Thráinsson (2007:208ff):[5]

(7) a.   THE OBJECT (AS A WHOLE) IS PUT INTO MOVEMENT:

      ausa 'scoop'   *bylta* 'overturn'   *dreifa* 'spread'

      fleygja 'throw away'   *fleyta* 'float'   *hella* 'pour'

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[5] 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 ..."

| | *henda* 'throw, throw away' | *ýta* 'push, shift' | etc. |

b. THE OBJECT (AS A WHOLE) IS EXTERNALLAY DIRECTED OR CONTROLLED:

beina 'direct'	*fljúga* 'fly' (e.g. an aeroplain)	*ráða* 'decide'
ríða 'ride' (e.g. a horse)	*róa* 'row'	*sigla* 'sail'
snúa 'turn'	*stjórna* 'control, govern'	etc.

c. THE OBJECT IS BENEFACTIVE:

bjarga 'rescue'	*borga* 'pay'	*hjálpa* 'help'
hjúkra 'nurse'	*hlífa* 'protect, spare'	*launa* 'pay, reward'
þjóna 'serve'	*þóknast* 'please'	etc.

d. SOME FURTHER INTERACTIVE VERBS:

andmæla 'contradict'	*blandast* 'get mixed with'	*fagna* 'welcome'
giftast 'marry'	*hafna* 'reject'	*heilsa* 'greet'
skrifa 'write to'	*svara* 'answer'	etc.

Genitive is much rarer than dative as an object case, but those objects that are marked genitive are commonly (but not exclusively) unaffected themes. A few genitive assigning verbs are listed in (8):

(8) *biðja* 'ask for', *bíða* 'wait for', *geta* 'mention', *gæta* 'heed, notice; take care, look after', *krefjast* 'demand', *leita* 'look for, search for', *minnast* '(be able to) remember', *neyta* 'consume, use', *njóta* 'enjoy', *óska* 'wish for', *sakna* 'miss', *spyrja* 'ask (something)', *þarfnast* 'need', *æskja* 'wish for', etc.

One way to accommodate facts of this sort is to assume that there are a number of mutually exclusive *v*-type heads (or *v*-subdomains, see below), each licensing a different case. Extending the star notation of Chomsky, we can refer to DAT and GEN licensing *v*-heads as *v***, and *v**** respectively. The basics of the core argumental case system in nominative-accusative/dative/genitive languages can then be simply described as in (8), where the arrow reads as 'yields' (in PF morphology):

(9) a.   … *v****-V   →   GEN

b.   … *v***-V   →   DAT

c.   … *v**-V   →   ACC

d.   … *v*-V   →   Ø (NOM)[6]

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[6] Elsewhere relations are commonly but not necessarily interpreted or reflected by morphological nulls. Icelandic masculine 'strong' nouns, for instance, typically have the nominative singular ending *-ur*, while most 'strong' neuter and feminine nouns in the language have no nominative singular ending. A reviewer reminds me that many others have argued that NOM is 'no case' in some sense, which is of course very true and widely known (see e.g. the discussion and references in Markman 2009:402ff). However, the suggestion has different

Importantly, however, further factors than just v-type heads, decide the case of an argument NP, a central issue I will return to.

As we will see, the star notation has expository advantages. Plausibly, there is also internal logic to it, the (verbal) cases being the more oblique the more stars they represent, but I will not explore that issue here.[7] For most of my present purrposes, v^{GEN}, v^{DAT}, v^{ACC}, and v would also do. Whatever notation we adopt, operating with only four v-type heads is a simplification, that is, the v-heads are "surrogates for richer systems", much as C and T (cf. Chomsky 2000:143). Thus, to mention only one case, v^{**} would seem to conflate or cover several v-type heads, such as v^{gain}, yielding benefactive datives, and v^{motion}, yielding, in tandem with $v^{wholeness}$, dative themes put into motion as a whole. In other words, each of the v- heads in (9) seems to represent or stand for a v-subdomain.

Some further caveats are in order here. First, what I have to say here applies to argument case. The mechanisms underlying the case-marking of adverbial and other non-argument NPs (see the lists in (12)–(15) below) are different from those underlying argument case, but I will not pursue the issue here, that is, I will not present any coherent analysis of non-argument case.

Second, verbs or verb roots may combine with more than one v-type heads (correlating with semantic factors), thus taking objects with different cases, yielding contrasts like *wash car.the.ACC* vs. *wash child.the.DAT* (Barðdal 2001 and others since, e.g. Thráinsson 2007:212ff, Sigurðsson 2009b).

Third, languages (obviously) 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/directing in Icelandic. Even closely related languages like German and Icelandic, with identical case inventories, can have a rather different case distribution, German for instance usually assigning accusative to object themes that get dative marking in Icelandic, as briefly illustrated in (10) and (11) (from Sigurðsson 2009b:267f):

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

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

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implications in different approaches (i.e., it is not a single or a coherent suggestion across the board). In the present approach it means that whenever an NP is transferred from syntax to PF without any specific case-instructions, it will wind up as nominative, regardless of the morphological shape of nominative forms.

[7] For suggestive approaches to putative interrelations between different cases, see e.g. Bayer et al. 2001 and Caha 2009.

(11) a.　Hún　stýrði　**skipinu**/*skipið.　　　　　　　Icelandic DAT

　　　　she　steered　ship.the.DAT/*ACC

　　　　'She steered the ship.'

　　b.　Sie　hat　**das Schiff**/*dem Schiff　gesteuert.　　German ACC

　　　　she　has　the　ship.ACC/*DAT　　　steered

There are no discernible semantic differences between the languages in (the numerous) pairs of this sort, that is, the German accusatives are moved and directed/controlled themes just as much as the Icelandic datives are.[8]

　　Fourth, a 'single' case usually has multiple functions language-internally. Thus, the Icelandic cases are used to mark the NP-relations listed in (12)-(15).

(12)　　*Nominative*:

　　a.　agentive subjects

　　b.　most non-agentive subjects

　　c.　subjects of certain ECM-like complements (e.g. *me had seemed **they** be intelligent*), here referred to as the *Experiencer ECM construction* (see section 4)

　　d.　most raised NPs (e.g. ***they** had seemed be intelligent*)

　　e.　objects of certain predicates (e.g. *me have always liked **they***)

　　f.　most predicative NPs (e.g. *this is **she**, she is **priest***)

　　g.　many dislocated NPs (e.g. ***Olaf**, I didn't think of him*)

　　h.　vocative NPs (e.g. ***Mary**, what say you?*)

　　i.　most listed NPs

　　j.　many exclamative NPs (e.g. ***she** president!*)

(13)　　*Accusative*:

　　a.　subjects of certain predicates (e.g. ***us** lacks food, **them** drifted ashore*)

　　b.　most direct objects

　　c.　some indirect (or 'first') objects (e.g. *they robbed **me** my wallet*)

　　d.　subjects of regular ECM complements (e.g. *they considered **her** be smart*)

　　e.　most predicative NPs in ECM-contexts (e.g. *we believed her be **priest***)

　　f.　subjects of certain ECM-like complements (e.g. *us had seemed **them** lack food*)

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[8] There are numerous other examples of different distribution or function of the 'same' case in Icelandic and German, including GEN objects in Icelandic that correspond to ACC (or prepositional) objects of synonymous (even cognate) verbs in German, GEN or DAT complements of prepositions that correspond to ACC complements of synonymous (even cognate) prepositions in German, DAT marked adverbial NPs corresponding to NOM (or non-cased) adverbial NPs in German, and so on. However, I will not go into further comparative details here (but see e.g. Maling 2001, Wunderlich 2003, Sigurðsson 2009b).

g. some raised NPs (e.g. ***them** had seemed lack food*)

h. complements of certain prepositions

i. some dislocated NPs

j. certain adverbial NPs (e.g. *she stayed **two days**, they ran **all way.the***)

(14) *Dative*:

a. certain experiencer subjects (e.g. ***us** bores; **us** is cold* = 'we are bored; we are cold')

b. certain theme subjects (e.g. ***them** delayed* = 'they got delayed/late')

c. agentive NPs in passive *af-* 'by' phrases

d. many direct objects

e. most indirect objects

f. subjects of some ECM complements (e.g. *we had believed **him** be ill*)

g. subjects of some ECM-like complements (e.g. *us had seemed **him** be ill*)

h. some raised NPs (e.g. ***him** had seemed be ill*)

i. complements of most prepositions

j. free benefactives (e.g. *she made **herself** coffee*)

k. some dislocated NPs

l. a few adnominal NPs (e.g. *she looked in eyes **me*** = 'she looked into my eyes')

m. complements of certain adjectives (e.g. *she was **me** kind* = 'she was kind to me')

n. certain adverbial NPs (e.g. *she came here **four times**, she is **foot** taller than I*)

(15) *Genitive*:

a. a few subjects (e.g. ***them** ('their') noticed* = 'they were noticeable')

b. some direct objects (mostly unaffected themes, e.g. *we expected **them** ('their')*)

c. a few direct or 'second' objects of double object verbs (e.g. *we asked him **question** ('question's')*) – but no indirect or 'first' objects of double object verbs

d. subjects of some ECM complements (e.g. *we had believed **them** ('their') notice*)

e. subjects of some ECM-like complements (e.g. *us had seemed **them** ('their') notice*)

f. some raised NPs (e.g. ***them** ('their') had seemed notice*)

g. complements of some prepositions

h. most adnominal NPs, reflecting a wide array of semantic/syntactic relations[9]

i. some dislocated NPs

j. bare partitive NPs (e.g. *most **them** ('their')* = 'most of them') and NPs in various other adverbial or adverbial-like functions (see Kress 1982:228ff)

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

These lists are non-exhaustive and a number of case agreement phenomena are also not taken into account.[10] It should furthermore be noticed that many of the listed relations are complex, involving a number of factors and relations ('subject', 'object', etc.) that are themselves not primitives of language.

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

Now, reconsider the description in (9) of direct object case in a nominative-accusative/dative/genitive language like e.g. Icelandic and German. It only describes the basic object case system, not taking into account the fact that further factors than just v-type heads decide the case of an argument NP. Most centrally, the actual or the 'final' case of the underlying object of v-V is adjusted by Voice. The well-know case or type is the Burzio's Generalization type (or the Sibling Correlation type, cf. Sigurðsson 2003), that is, the ACC-to-NOM conversion typical of active-passive pairs, as the Icelandic (and the corresponding English) one in (16):

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

At first sight, it might seem straightforward to assume (with Chomsky 2001) that passive verbs, V_{PASS}, simply combine with a defective non-case assigning v-type head (by selection or abstract Agree), yielding v-V_{PASS}. However, as passives are compatible with non-accusative marking of their underlying objects (DAT and GEN in e.g. Icelandic and German), something more is needed to account for the facts.

Assume that defective v differs from other v-types in not being a lexical category, instead being derived. If so, passive Voice, $Voice_{PASS}$, may combine with any lexical v-type (v^*, v^{**}, etc.), subsequently deleting the ACC case assignment property of v^* at PF, yielding non-case assigning v (passive subjects thus showing up as NOM 'instead of' ACC). Following Sigurðsson (2009b, 2010b, inspired by Svenonius 2006, building, in turn, on observations in Zaenen &

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

Maling 1984), we may refer to this process as single *case-star deletion* (case-star *addition* will be discussed shortly). The rationale behind it is that whenever there is no need for case to distinguish between arguments in PF (cf. Sigurðsson 2006c), the case-star may be deleted in the externalization process. However, as we will see, there are certain constructions where the case-star is not deleted even though the syntactic argument structure preconditions are met (= a defective *v*P, with only a single argument), showing that case-star deletion is not an automatic or an obligatory syntactic process, instead taking place in PF.[11]

Case-star deletion is a common phenomenon, that is, it is not only found in the regular passive Voice but also in other Voices, most pervasively in the *anticausative Voice*, marked with the (historically reflexive) *-st* marker on the main verb and traditionally referred to as 'mediopassive' or 'middle'.[12] Importantly, different Voice types have different effects upon case-marking, *-st* anticausatives, for instance, triggering *general* case-star deletion (affecting DAT and GEN as well as ACC), whereas (standard) passive Voice triggers *single* case-star deletion (affecting only ACC). This difference between these Voice types is illustrated in (17)-(19) for Icelandic ACC, DAT and GEN, respectively:

(17)   *The impact of two Voice-types upon ACC*
     a.   Þeir löguðu **hana**.   Active NOM-**ACC$_i$**
            they mended her(/it).A (e.g. 'the machine')
     b.   **Hún**   var löguð.   Passive **NOM$_i$**
            she(/it).N was mended
            'It/She was mended / fixed (by someone).'
     c.   **Hún**   lagað<u>ist</u>.   Anticausative-ST **NOM$_i$**
            she(/it).N mended.ST
            'It (got) mended' / 'She recovered.'

(18)   *The impact of two Voice-types upon DAT*
     a.   Þeir breyttu **henni**.   Active NOM-**DAT$_i$**
            they changed her(/it).D
     b.   **Henni**   var breytt.   Passive **DAT$_i$**
            her(/it).D was changed
            'It/She was changed/altered (by someone).'

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[11] PF externalization scans the whole phase, thus having access to idiosyncratic properites of lexical verbs that often affect case-marking, for instance by irregularly linking to an unexpected *v*-type or by not triggering an otherwise expected case-star deletion process. I will not discuss idiosyncratic case in any detail here (but see e.g. Sigurðsson 2003, Jónsson 2005, Thráinsson 2007).

[12] Anticausatives enter a transitive-intransitive alternation (type *They <u>broke</u> the window* vs. *The window <u>broke</u>*, see e.g. Schäfer 2008). The analysis below applies only to those *-st* verbs that enter such an alternation and therefore count as anticausatives. Icelandic has a number of other classes or types of *-st* verbs, including unaccusative *-st* verbs, some of which take a dative subject (Sigurðsson 1989:259ff). Conversely, it also has unaccusatives (not discussed here) that are not derived by *-st* formation but share semantic properties with *-st* anticausatives.

    c.   **Hún**   breytti<u>st</u>.   Anticausative-ST **NOM$_i$**

          she(/it).N changed.ST

(19)   *The impact of two Voice-types upon GEN*

    a.   Þeir óska   **hennar**.   Active NOM-**GEN$_i$**

          they wish-for her(/it).G

    b.   **Hennar**   er   óskað.   Passive **GEN$_i$**

          her(/it).G is wished-for

          'She/It is wished for (by someone).'

    c.   **Hún**   óska<u>st</u>.   Anticausative-ST **NOM$_i$**

          she(/it).N wishes.ST

          'She/It is being sought/wished for/desired.'

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

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

    I adopt the hypothesis (of Sigurðsson 2010b) that any predicate is embedded under some Voice head (either contentful or expletive), matched by the *v* head of the predicate. Voice commonly alters the argument structure of basic (i.e., lexical, non-derived) predicates. Four such processes are frequently observed (see Sigurðsson 1989:246ff, Schäfer 2008 and the references cited there):

(20)   *Common Voice-related processes*:

    a.   Add θ   as in e.g. causatives

    b.   Incorporate/Suppress θ   as in passives and some antipassives

    c.   Expletivize θ   as in anticausatives

    d.   Demote θ   as in some antipassives

It is often assumed that indirect objects in the double object construction are introduced by an applicative head, Appl (Marantz 1993 and many since, see Cuervo 2003, Pylkkänen 2008, Schäfer 2008 and the references there). I adopt the essence of this view here, pointing out, however, that Appl is actually a 'Voice' category on the present understanding, adding non-external θ (see also Pylkkänen 2008). Similarly, Incorporate/Suppress θ, Expletivize θ and Demote θ may apply to non-external arguments, as in some antipassives (cf. Polinsky 2008), even though they seem to apply more commonly to external arguments.

      Demotion is a moot notion, but it commonly leads to a less direct relation between an argument and a predicate. Thus, embedding agents under passive *by*-phrases is a demotion of sorts and so is 'preposition assignment', yielding variation like English *He struck <u>at me</u>* vs. *He struck me* (cf. Trask 1993:17). Demotion in ergative languages typically involves a similar marginalization, commonly expressed by some kind of an oblique/peripheral case-marking, such as ERG-DAT instead of ERG-ABS (Silverstein 1976 and many since, e.g. Plamer 1994:16ff). Genitive marking of unaffected themes in Icelandic is demotion-like, but, as there is no productive alternation between the genitive and the more central accusative, this is not traditionally referred to as an instance of demotion.

      Other phenomena than just the processes in (20) have been taken to be Voice related (see Klaiman 1991, Palmer 1994), but I will not go into further details here. What matters for our purposes is that processes of this kind are triggered by various Voice-type heads. It would seem logical to refer to the Voice-types simply as $\text{Voice}_{\text{ADD } \theta}$, $\text{Voice}_{\text{EXPLETIVIZE } \theta}$ and so on, but for expository reasons I opt for more traditional terms, $\text{Voice}_{\text{ACT}}$, $\text{Voice}_{\text{PASS}}$, and so on, as well as Appl for the applicative 'Voice' in the double object construction (and elsewhere, see below). Following Alexiadou et al. (2006) and Schäfer (2008), I will refer to anticausative Voice as *expletive Voice*, $\text{Voice}_{\text{EXPL}}$.

      It is commonly assumed that subjects are introduced into clausal structure by Voice (Kratzer 1996 and many since), and, as just mentioned, that indirect objects are introduced or licensed by an applicative head. Similarly, direct objects are licensed by predicates. Assume therefore that any argument must be *event-licensed* by a specialized head (cf. also Pylkkänen 2008): direct objects by *v*-type heads (in relation to V), indirect objects by Appl, and regular agentive or 'active' subjects by $\text{Voice}_{\text{ACT}}$. Ordinary ditransitive structures like *She gave me the book* can then be analyzed as derived by recursive external Merge, as illustrated in (21):

(21) a.   Introduce a participant:[13] θ_1

       b.   Event-license θ_1: v-V θ_1

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

c.	Add a participant:	θ_2 [v-V θ_1]
d.	Event-license θ_2:	Appl θ_2 [v-V θ_1]
e.	Add a participant:	θ_3 [Appl θ_2 [v-V θ_1]]
f.	Event-license θ_3:	Voice θ_3 [Appl θ_2 [v-V θ_1]]

It is not obvious in which order these operations apply, but I assume the order in (21), yielding the structure in (22), where, canonically, θ_3 = NOM, θ_2 = DAT, θ_2 = ACC (in most monotransitive constructions, on the other hand, Appl is inactive, θ_2 thus being locally licensed by Voice and showing up as NOM):

(22)
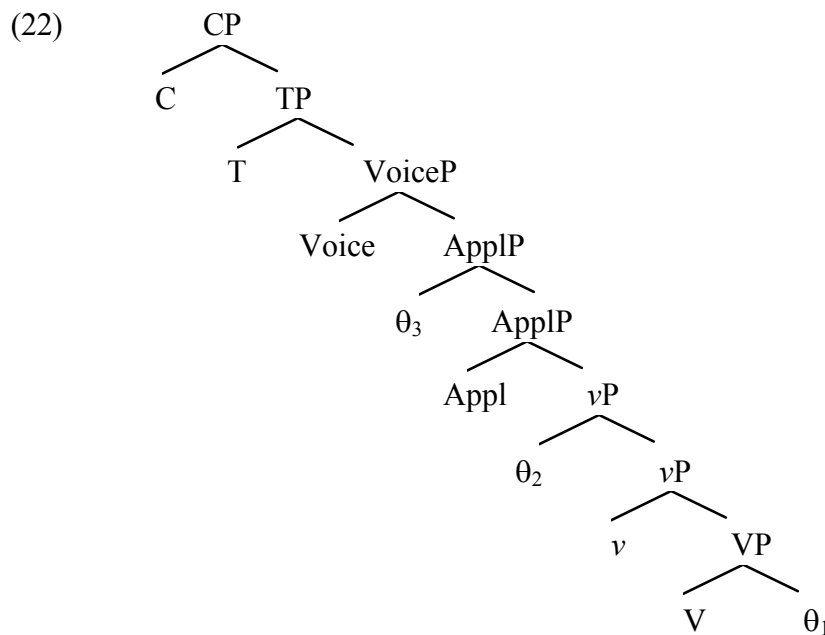
It is commonly assumed that the clausal spine (the extended V-projection) is primary in relation to arguments. I deviate from this view by assuming that arguments or participants 'come first', calling for event-licensing by a head.[14] In other respects, the assumptions behind (22) are rather orthodox, closely following Chomsky (2000, 2001).[15]

In view of the fact that case-marking distinguishes between different NPs, it does not come as a surprise that heads that event-license different argument types affect their case-marking. We saw this above for some v-type heads and also for passive and anticausative Voice. Even further types of Voice heads affect case-marking. Thus Icelandic so-called fate (un)accusatives, typical of fate predicates like *drift*, *swamp*, *get swept overboard*, etc., are embedded under Voice$_{FATE}$

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[14] This suggests that impersonal constructions without an overt expletive have a silent dummy argument (as commonly assumed, cf. e.g. Holmberg 2005) or passive or some other special type of morphology that functions as a dummy argument (see the discussion in Sigurðsson 2010a, 2010b; cf. also Schäfer 2009).

[15] An alternative, argued for in Sigurðsson 2006b, is that subjects are merged as first arguments, subsequently being raised across the object or objects for independent (φ-related) reasons.

(Sigurðsson 2009b, 2010b). Importantly, Voice_FATE differs from Voice_PASS and Voice_EXPL in not triggering case-star deletion, thereby 'preserving' ACC (in violation of Burzio's Generalization). This is illustrated for *fylla* 'fill; swamp' in (23):

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

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

     c.   **Báturinn**   fyllti<u>st</u>.   Anticausative **Nom_i**
          boat.the.N   filled.ST
          'The boat got full (of something).'

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

The fate reading of fate (un)accusative predicates is never shared by the 'same' predicate when either transitive, passive or anticausative (Ottósson 1988:147f, Sigurðsson 2006c:25). That follows if different Voice types are mutually exclusive, active, passive and anticausative readings thus being incompatible with Voice_FATE.

    Stative passives regularly behave like *-st* anticausatives but unlike dynamic passives in erasing not only ACC but also DAT marking of themes. This is illustrated in (24):

(24) a.   Við   lokuðum   **gluggunum**.   Active NOM-**DAT_i**
          we.N closed.1PL   windows.the.D

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

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

     d.   **Gluggarnir**   voru   lengi lokaðir   Stative passive **NOM_i**
          windows.the.N were.3PL long   closed.N.M.PL
          'The windows were closed for long.'

Sigurðsson (2010b) suggests that stative passives are like *-st* anticausatives in being embedded under Voice_EXPL (even though these predicate types have different *v*P-internal properties). If so, most of the variation discussed above can be simply analyzed as below

(where GEN is disregarded, for simplicity); the arrows indicate matching (Agree) relations (presupposing the theory of Agree and control developed in Landau 2004 and related work):

(25) a. Voice$_{PASS}$ … [… v^* NP …]   > … v … NP$_{NOM}$ …   (* deletion)

b. Voice$_{PASS}$ … [… v^{**} NP …]   > … v^{**} … NP$_{DAT}$ … (no ** deletion)

(26)   Voice$_{FATE}$ … [… v^* NP …]   > … v^* … NP$_{ACC}$ …   (no * deletion)

(27)   Voice$_{EXPL}$ … [… $v^{*(*)}$ NP …]   > … v … NP$_{NOM}$ …   (* & ** deletion)

Interestingly, anticausative Voice$_{EXPL}$ erases DAT marking of direct objects (cf. (18c), (24c)), whereas it does not alter the benefactive DAT of ditransitives, as illustrated in (28) (from Sigurðsson 1989:260):[16]

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

  b. **Mér**   bauð<u>st</u>   vinna.
       me.D   offered.ST   job.N
       'I got a job opportunity / a job offer.'

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

   Case-star addition is not as commonly observed as case-star deletion, at least not in accusative case systems.[17] However, some Voice related processes can be analyzed as inducing case-star addition (yielding oblique case-marking). Thus, the Germanic languages

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

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

form certain causative weak verbs on the basis of (historically and structurally basic) intransitive, unaccusative strong verbs, leading to pairs like strong *rise* vs. weak *raise*. Many such pairs have disappeared from English, whereas they are still numerous in the Scandinavian languages, in particular Icelandic. This weak verb causativization may lead to DAT marking, as illustrated in (29) and (30) (from Sigurðsson 1989:280):

(29) a. **Glasið**   <u>rann</u>   yfir   borðið.
      glass.the.N   slid.STRONG across   table.the
      'The glass slid across the table.'

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

(30) a. **Báturinn**   <u>sökk</u>.
      boat.the.N   sank.STRONG
      'The boat sank.'

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

Demotion in ergative systems, yielding e.g ERG-DAT 'instead of' ERG-ABS, can also be analyzed as involving case star addition, and perhaps ergative case-marking of agentive or active subjects (A) can as well. ERG is 'less direct' or less central than ABS, similarly as DAT is 'less direct' than NOM and ACC in accusative systems (cf. Woolford 1997). It thus seems possible that Voice$_{ACT}$ in ergative systems not only event-licenses ergative subjects but also triggers their ERG marking, similarly as the Appl 'Voice' head event-licenses indirect objects and also triggers their (commonly DAT) case-marking.

    To summarize, the morphological cases reflect or interpret a wide variety of underlying syntactic structures, with considerable intra- and interlinguistic variation, but they are not syntactic primitives or building blocks themselves. This is perhaps most clearly evidenced by intralinguistic variation like the one described for Icelandic by the lists in (12)-(15) above, but it is also demonstrated by comparison of related case languages, like the Germanic and the Slavic languages (as briefly discussed in relation to (9) above, see also fn. 8). However, as for subject and object case (leaving non-argument case aside), basically accusative languages like English, Icelandic, German and Russian have certain recurring patterns in common.

    First, in all these languages argument case is decided by Appl-, Voice- and *v*-type heads, and not by T 'proper' (see (22) above). Thus, NOM is an elsewhere case, assigned to NP$_x$ in PF morphology whenever syntax has not transferred any instructions that would have been interpreted by another case-feature. Nominative NPs include not only many subjects, but

also some objects, predicative NPs, dislocated NPs, vocative NPs, listed NPs and so on, that is, they are syntactically heterogeneous despite their morphological homogeneity, a fact that tallies with an elsewhere case approach.

Second, Voice commonly alters the basic case assignment properties of *v*-type heads, that is, the overt case of an NP is often decided in tandem by *v* and Voice.[18] The syntactic *[Voice ↔ v ↔ NP]* Agree relations involved are recurrent across languages, but their interpretation in terms of morphological cases (case-stars) vary considerably from language to language and from construction to construction. Thus, to mention only two more patterns, Voice$_{PASS}$ preserves ACC in the so-called New Passive variety of Icelandic (no case-star deletion), whereas it erases DAT marking (double case-star deletion) in e.g. Norwegian varieties and (reluctantly in) Russian, and also commonly in Faroese.[19]

3. T$_\varphi$-licensing (nexus / 'Case')

Morphological case-marking of arguments interprets event-argument relations, syntactically encoded by Voice- and *v*-type heads, whereas it is unrelated to the structurally higher category of Tense. However, in addition to Voice- and *v*-matching, yielding case, overt subject NPs in finite clauses must also be licensed by φ-complete Tense, T$_\varphi$. It is this relation that has been referred to as *Case* within the generative tradition (see, again, Lasnik 2008 and e.g. Bobaljik & Wurmbrand 2009). The distinguished Danish linguist Otto Jespersen used the term *nexus* in a similar sense, referring to finite subject-predicate relations as independent nexus and to a number of non-finite subject-predicate or NP-predicate relations, for instance in ECM constructions, as dependent nexus (Jespersen 1992/1924, Svenonius 1994:5ff). I will here use the descriptive term *T$_\varphi$-licensing*, arguing that (dependent or inherited) T$_\varphi$-licensing is also at work in ECM constructions.[20] When discussing the relation itself, and not specifically the resulting licensing, I will use the terms *T$_\varphi$-connection* and the more general *T-connection*.

As mentioned in the introduction, Icelandic demonstrates that PRO is case-marked but must nevertheless not be spelled out. This is illustrated for nominative vs. dative PRO in

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[18] 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.

[19] Yielding the types *then was hit her.ACC*, instead of *she.NOM was then hit* (in the Icelandic New Passive variety), and *she.NOM was helped* instead of *her.DAT was helped* (in e.g. Norwegian varieties). For some discussion of these phenomena, see Thráinsson et al. 2004 on Faroese, Richardson 2007 on Russian, Maling & Sigurjónsdóttir 2002, Thráinsson 2007, Eythórsson 2008, Sigurðsson 2010b on Icelandic, and Åfarli & Fjøsne 2009 on Norwegian DAT dialects.

[20] Many languages do not have any verb agreement (cf. Nichols & Bickel 2008). This might seem to suggest that T$_{+FIN}$ is a more pertinent notation than T$_\varphi$, but I adopt T$_\varphi$ here (from Chomsky 2001), assuming that all languages have syntactically active φ-features, regardless of whether and where they are spelled out.

(31b,c) and (32b,c) below, respectively.[21] The *a*-examples show the case-marking of overt subjects in corresponding finite clauses. Case agreeing quantifiers are set boldface, whereas their local (agreement controlling) subject is underlined. Notice also that the matrix subjects in the *b*- an *c*-examples are case-distinct from PRO, showing that the case of PRO is not transmitted or copied from the matrix subject:[22]

(31) a.   <u>Þeir</u>   voru ekki **báðir**   kosnir í   stjórnina.
            they.N were not   both.N   elected to board.the
            'They were not both elected to the board.'

      b.   Þeim   líkaði illa [að <u>PRO</u> vera ekki **báðir**   kosnir].
            them.D liked ill   to   N   be.INF not   both.N   elected
            'They disliked not being both elected.'

      c. * Þeim   líkaði illa [að <u>þeir</u>   vera   ekki **báðir**   kosnir].
            them.D liked ill   to   they.N be.INF not both.N   elected

(32) a.   <u>Þeim</u>   var **báðum** boðið   á   fundinn.
            them.D was both.D   invited to meeting.the
            'They were both invited to the meeting.'

      b.   <u>Þeir</u>   æsktu   þess [að <u>PRO</u> vera   **báðum** boðið].
            they.N wished(for) it   to   D   be.INF both.D   invited
            'They wished to be both invited.'

      c. * Þeir   æsktu   þess [að <u>þeim</u>   vera   **báðum** boðið].
            they.N wished(for) it   to   them.D be.INF both.D   invited

These facts illustrate, first, that PRO is case-marked, and, second, that overt subjects need not only be case-marked but must in addition be licensed in relation to T_φ, hence the ungrammaticality of the *c*-examples, where the overt subjects do not locally match any T_φ.[23]

    In contrast to *v*- and Voice-matching, the T-connection does not trigger any marking on the subject, whereas it commonly results in φ-marking (agreement) on the finite T or some other clausal head. Thus, in languages that have verb agreement, T_φ-licensing is usually preconditioned by agreement, agreement in turn being preconditioned by 'null-case' (NOM).

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[21] For speaker judgments and a more detailed discussion of similar examples, see Sigurðsson 2008:410.

[22] However, as seen by e.g. predicate and semi-predicate case-agreement, the case of an NP in the matrix clause sometimes transmits into PRO infinitives in e.g. Icelandic and Russian, albeit somewhat differently and under somewhat different conditions (Landau 2008, Sigurðsson 2008). Even in such examples, PRO cannot be lexicalized.

[23] Case is also distinct from licensing under the movement theory of control, MTC (Boeckx & Hornstein 2006, Boeckx et al. 2010, and related work). MTC is compatible with the present φ-licensing approach, although it meets other problems (cf. Sigurðsson 2008).

Icelandic deviates from this canonical pattern by being able to T_φ-license even NPs which it cannot overtly agree with. This is the famous quirky subject and quirky agreement phenomenon (see further below), call it the *Quirky Property*.

Many or most languages that have inherent case, have constructions that are at least superficially similar to Icelandic quirky constructions, including many Germanic, Romance, Slavic, Finno-Ugric and South-Asian languages (see for instance Bhaskararao & Subbarao 2004, Rivero 2004, Eythórsson & Barðdal 2005). However, it is unclear to what extent these languages share the Quirky Property with Icelandic, that is, it is unclear whether their quirky NPs are T_φ-licensed. In German, for instance, quirky datives are compatible with expletives, while this is excluded in Icelandic (cf. Sigurðsson 1992, Habaerli 2002:291):

(34) a. **Es** wurde **uns** geholfen.   *German*
          it was.DFT us.D helped

      b. **Uns** wurde geholfen.   *German*
          'We were helped (by somebody).'

      c. * **Það** var **okkur** hjálpað.   *Icelandic*
          it was.DFT us.D helped

      d. **Okkur** var hjálpað.   *Icelandic*
          'We were helped (by somebody).'

Thus, there seem to be two types of quirky NP languages, one where quirky NPs are topicalized rather than A-moved, matching Top(ic) or some other high C-system feature (the German type), and another where such NPs are T_φ-licensed and A-moved (the Icelandic type).[24]

Matching of T_φ under distant Agree, preconditions A-movement, but it does not trigger it. Thus, non-specific indefinite subjects, whether nominative or quirky, commonly remain low in A-movement environments, as illustrated in (36). As seen by the verb and participle agreement in (36a), T_φ successfully probes the *v*P-internal NP:

(36) a. Voru   keyptar   **lóðir**?
          were.3PL bought.N.F.PL building_sites.N.F.PL
          'Were (there) some building sites bought?'

      b. Var   úthlutað   **lóðum**?
          was.DFT allocated.DFT building_sites.D.F.PL
          'Were (there) some building sites allocated?'

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[24] Alternatively, German might perhaps be analyzed as a mixed language, such that datives that do raise into the clausal left periphery, like *uns* in (34b), are T_φ-licensed ('true' subjects), whereas datives in examples like (34a) are simply *v*P-internal objects (German being an OV language), not entering any matching relation with T_φ.

In contrast, pronominal subjects have to A-move, as illustrated for a nominative subject in (37) and for a dative one in (38):

(37) a. * Voru   keyptar   **þær**?
           were.3PL   bought.N.F.PL   they.N.F.PL
     b.   Voru   **þær**   keyptar?
           were.3PL   they.N.F.PL bought.N.F.PL
           'Were they bought?'

(38) a. * Var   úthlutað   **þeim**?
           was.DFT   allocated.DFT   them.D.PL
     b.   Var   **þeim**   úthlutað?
           was.DFT   them.D.PL allocated.DFT
           'Were they allocated?'

Thus, A-movement is triggered by some more specific property than just successful T_φ-matching – such matching applying in (36) as well as in (37) and (38).

Recall that C and T are "surrogates for richer systems" (Chomsky 2000:143, n. 31) – "cover terms for a richer array of functional categories" (Chomsky 2001:43, n. 8). T_φ is an amalgam of several subcategories, including plain T, Mood, Gender, Number and Person (there being considerable variation across languages as to which of these categories are overtly marked). Presumably, plain T itself is the probe that establishes the subject Agree relation (e.g. in infinitives), other categories of the T complex getting a 'free ride' as probes. However, as for overt A-movement, the pattern in (36)-(38) suggests that 'pronominality', that is to say, Person, is the active EPP category.[25] This is also suggested by *there*-type expletives, which show the quirky behavior of being licensed by T_φ while not interfering with number agreement (see Chomsky 2001:7, 2007, 2008, Richards 2004, 2007, Sigurðsson 2004a, 2010a).[26]

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[25] Many or most definite full NPs may or must undergo A-movement, but there are also interesting exceptions from this general pattern. The issue is too complex to go into here, but for a concise presentation of the Icelandic facts, see Thráinsson 2007:317ff. Sigurðsson 2010a discusses the interaction of definiteness and Person in some detail, pursuing an approach where indefinite as opposed to most definite NPs lack a person feature and are thus exempted from Person matching, hence also from canonical A-movement. The approach accounts for the core facts, and I adopt it here, but there are certain mismatches between definiteness and 'true' Person, suggesting that the analysis might need to be made more fine-grained (as pointed out in Sigurðsson 2010a).

[26] However, like many other languages, Icelandic has a weaker EPP requirement than English (and e.g. French), that is, Spec-T in (mainly) impersonal finite clauses does not have to be lexicalized. It would seem that default verb morphology sometimes is 'EPP-visible' in languages like Icelandic, German and Finnish (see Holmberg 2005 and the discussion in Sigurðsson 2010b).

That Person has a special status within the T complex is further suggested by the much discussed quirky agreement facts in DAT-NOM constructions.[27] The central fact is that the finite verb is blocked from agreeing with a 1 or 2 person nominative object, yielding patterns as in (39):[28]

(39) a. * Henni   vor**um**   sendir   **við**.   *1P AGR

          her.DAT   were.1PL   sent   we.NOM

    b. * Henni   vor**uð**   sendir   **þið**.   *2P AGR

          her.DAT   were.2PL   sent   you.NOM.PL

    c.   Henni   vor**u**   sendir   **hestarnir/þeir**.[29]   ok3P AGR

          her.DAT   were.3PL   sent   horses.the/they.NOM

          'The horses/They were sent to her.'

Sigurðsson & Holmberg (2008) develop an analysis of these and related facts where Person and Number, Pn and Nr, are merged separately and activated as probes in the course of the derivation by roll-up T raising, first yielding T/Nr and then T/Nr/Pn (φ-complete T), as sketched in (40):

(40) a.   [$_{TP}$ ... Pn ... DAT ... Nr ... T ... NOM ..]   >

    b.   [$_{TP}$ ... Pn … DAT ... T/Nr … ~~T~~... NOM ..]   Nr agreement activated   >

    c.   [$_{TP}$ ... T/Nr/Pn ... DAT ... ~~T/Nr~~ ... ~~T~~... NOM ..]   Pn agreement activated

Raising of T to Nr activates number agreement (as in (39c) and subsequent raising of T/Nr to Pn activates person agreement. However, as seen in (40c), DAT intervenes between T_{φ} (T/Nr/Pn) and NOM, thereby bocking 'true' person agreement with NOM, cf. (39a,b). T_{φ} probes the dative subject and T_{φ}-licenses it, but it cannot overtly agree with it as overt verb agreement is restricted to nominative NPs.[30]

Finally, notice that even though canonical A-movement, call it High A-movement, is φ-related and thus unrelated to case, nothing in the present approach prevents A-movement from

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

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

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

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

being cyclic, the raised NP 'passing through' Spec-Voice on its way to Spec-T – or, in the case of indefinite NPs, not raising any further than to Spec-Voice. In fact, Sigurðsson & Holmberg (2008:258ff) present evidence from Icelandic in favor of such Low A-movement complying with the generalization (Alexiadou & Anagnostopoulou 2001, see also the observations in Maling 1988), that the subject always has to raise from a 'full' verb phrase.

4. Inherited φ-licensing in infinitives

It has long been acknowledged (Chomsky 1981 *et seq.*) that ECM constructions bear crucially on NP licensing. Data like the ones in (41) have thus been taken to suggest that local ACC assignment by the matrix V (*v** in more recent approaches) licenses the ECM subject:

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

Either, the ECM subject has to raise into the vicinity of *believe,* as in (41a), or an expletive has to be merged there, as in (41c), and it would seem straightforward to assume that the licensing feature is the ACC feature assigned by the matrix *v**-V (cf. Lasnik 2003, among many).

    However, the relevant facts are more complex, suggesting that ACC is not involved in Spec-T licensing in ECM, not any more than NOM is in finite Spec-T licensing. Thus, NP movement is sensitive to the Definiteness Effect in ECM constructions, much as in finite clauses. This is illustrated in (42):

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

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

    The pattern in (42) is not only seen for regular ECM accusatives but also for quirky NPs, as illustrated in (43):

(43) a. Við töldum   [$_{TP}$__ hafa   verið stolið **bílum**/*þeim].   DAT
      we   believed   have.INF been stolen cars.D/them.D
      'We believed there to have been cars (*them) stolen.'

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

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

    Subject-to-subject raising constructions show a parallel pattern. This is illustrated for NOM in (44) and for DAT in (45); as above, the dashes indicate empty subject positions, either vacated or not filled by A-movement:

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

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

(45) a. Þá virtist **þeim**   [$_{TP}$__ hafa   verið boðið].   DAT
      then seemed them.D   have.INF been invited
      'Then they seemed to have been invited.'

     b. Þá virtist   [$_{TP}$__ hafa   verið boðið **kommúnistum**/*þeim].
      then seemed   have.INF been invited communists.D/*them.D
      'Then there seemed to have been communists invited.'

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

    As indicated, the subjects in (44a) and (45a) have been raised into the matrix clause, that is, they are not licensed in the infinitival Spec-T.[31] In examples like (44a) and (45a), this fact is masked by V2 raising of the main verb, but it is evident in examples with matrix auxiliaries, where it is the auxiliary and not the main verb that raises to C. This is illustrated in (46) for the nominative (the same holds for quirky subjects):

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

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

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

It would thus seem that raising infinitives differ from ECM infinitives in having a T head that cannot license a lexical subject. However, there is evidence that infinitival T can only and always license an overt subject indirectly, with the 'support' of a φ-complete matrix v, v_φ (in the sense of Chomsky 2001). That is, the difference between ECM and raising constructions is not located within the infinitives themselves but in their matrix clauses, ECM verbs providing v_φ support, in contrast to regular raising verbs. The evidence suggesting this comes from 'non-raising raising constructions', as it were, that is, from constructions of the type *DAT seems [$_{TP}$ NP T_{INF} ...].*

   Icelandic has a number of raising verbs (with *seem/feel/experience*-like semantics) that come in two guises, with or without a matrix dative experiencer. In the absence of the matrix dative, regular (definite) NP raising has to apply, whereas it is blocked from taking place in the presence of the dative. This gives rise to variation of the following sort (*vera hæf* 'be competent' takes a nominative subject):[32]

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

   b. * Hafði __ virst [**hún** vera hæf]?
         had seemed she.N be.INF competent

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

   d. * Hafði **þér** **hún** virst [__ vera hæf]?[33]
         had you.D she.N seemed be.INF competent

   e. * Hafði **hún** **þér** virst [__ vera hæf]?
         had she.N you.D seemed be.INF competent

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

[33] Remarkably, the embedded subject may raise or scramble into the matrix subject position if the matrix dative is *wh*-moved to Spec,CP, indicating that *wh*-movement may (at least sometimes) be a 'one fell swoop' movement. See the discussion in Sigurðsson & Holmberg 2008:266ff.

For convenience, we may refer to the experiencer non-raising construction as the *Experiencer ECM construction*.

Once again the same behavior is observed for quirky NPs, as illustrated in (48) (the verb *líða* 'feel' takes a dative subject):

(48) a. Hafði **henni** virst [__ líða vel]?
　　　　 had her.D seemed feel.INF well
　　　　 'Did she seem to feel well?'

　　 b. * Hafði __ virst [**henni** líða vel]?
　　　　 had seemed her.D feel.INF well

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

　　 d. * Hafði **þér** **henni** virst [__ líða vel]?
　　　　 had you.D her.D seemed feel.INF well

　　 e. * Hafði **henni** **þér** virst [__ líða vel]?
　　　　 had her.D you.D seemed feel.INF 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 patten', also seen in e.g. transitive/unaccusative and active/passive pairs, including regular active/passive ECM pairs, as illustrated in (49) for English and in (50) for Icelandic:

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

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

　　 b. * Höfðu **þeir** **hana** / **hana** **þeir** talið [__ vera hæfa]?
　　　　 had they.N her.A her.A they.N believed be.INF competent

　　 c. Var **hún** talin [__ vera hæf]?

was   she.N   believed   be.INF   competent

'Was she believed to be competent?'

d. * Var __ talin [**hún** vera hæf]?

e. * Var __ talið [**hana** vera hæfa]?[34]

f.   Var   __   talið   [að   **hún**   væri   hæf]?

was   believed   that   she.N   was   competent

'Was it believed that she was competent?'

g. * Var **hún**   talið/talin [að   __   væri   hæf]?[35]

was   she.N   believed   that   was   competent

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

T_φ-licensing is generally blocked by intervention, that is, it observes minimality. The upstairs NPs in (49a) and (50a) are closer to T_φ than are the downstairs NPs, hence the upstairs NPs win out as matrix subjects – and the downstairs NPs must get licensed within the ECM infinitives (see further shortly). In the *c-*, *d-*, *e*-examples, in contrast, there is no upstairs candidate for T_φ-licensing, and thus T_φ probes into the ECM infinitive, for a 'substitute'.

Three issues need to be clarified:

A. T_φ-licensing is CP-bounded, suggesting that the C-system contains intervening features with respect to matrix T_φ-licensing, thereby blocking the downstairs subject from raising and 'standing in' for the matrix subject, even in the absence of a matrix subject candidate, cf. (50f, g). We need to develop some understanding of this CP-intervention.

B. In view of the fact that ECM and raising infinitives *cannot* license an overt subject in the absence of a distinct (thematic) matrix subject, cf. (46b), (47b), (48b), (49d,e) and (50d,e), we need to develop an account of the fact that they *can* in the presence of a matrix subject, as in (41a), (42b), (43b), (47c) and (48c), (49a) and (50a).

C. We also need to develop some understanding of how the dative experiencer in the Experiencer ECM construction, as in (47c) and (48c), is introduced into clausal

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[34] However, this is presumably grammatical in the so-called New Passive variety (see Eythórsson 2008 and the references cited there). On the analysis developed in Sigurðsson 2010b, this peculiar fact is compatible with the present approach.

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

structure or licensed, such that it can and must take precedence over the ECM subject as a candidate for T_φ-licensing.

CP-phases 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 CP-internal elements, this C-matching leading to a 'freezing' or grounding of CP-internal arguments (cf. Chomsky 2001:6). In the approach developed by Sigurðsson (2004a *et seq*.) the C-features in question are abstract *context-linkers* (or *edge-linkers*) including the tense and location of speech, T_S and L_S,[36] Top(ic), and 'speaker' and 'hearer' features, referred to as the logophoric agent, Λ_A, and the logophoric patient, Λ_P (cf. also Bianchi 2006, Rezac 2008, Zanuttini 2008, Baker 2008). In the less specific 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.[37] Chomsky coins his ideas as follows (2008:143f):

> 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. We thus derive the A-A' distinction.

There is abundant evidence that the features of the finite T-system are *valued* in relation to the C-system, rather than merely inherited from it (Sigurðsson 2004a *et seq*., e.g. 2010a), but the difference does not really matter here, so I put it aside. Importantly, however, T in ECM infinitives does seem to plainly inherit argument licensing Agree features from v_φ, as will be discussed shortly.

Regardless of how one conceives of the exact content and nature of the C-features, they enter an (abstract) Agree relation with features of the T-system, the latter in turn being partly matched by the subject NP of the clause (commonly triggering morphological agreement in PF, with quirky (non-)agreement as an exception). This is simply sketched in (51):

(51) C … T … NP
    ↑__↑↑___↑

The subject NP enters a matching relation with its local C-T complex, and thus it cannot also match another C-T higher up. Hence the facts in the Icelandic (50f,g) above and the parallel

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[36] Corresponding (jointly) to Fin in Rizzi 1997.

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

English (49f,g). The Icelandic examples are repeated here as (52a,b), with additional morphological annotations:

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

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

As seen by this, the matrix T$_φ$ cannot probe down into the subordinate clause, across an intervening C-T$_φ$, even in the absence of a local matrix subject candidate.[38] That is, C-T$_φ$ intervenes between the matrix T$_φ$ and a potential NP goal in the subordinate clause, much as the matrix subject NP$_φ$ in regular ECM intervenes between T$_φ$ and the subject of the infinitive (as in e.g. (49a) and (50a)).

    Next, consider issue B: ECM and raising infinitives both *can* and *cannot* license an overt subject in their Spec-T (cf. Chomsky 1995:345). They can if the matrix clause contains a distinct overt subject, as in e.g. (47c), (48c), (49a) and (50a), repeated below as (53)-(55), for convenience:

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

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

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

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

However, in the absence of a distinct overt matrix subject, the very same types of infinitives cannot license a subject in Spec-T. This was seen in many of the examples above; I repeat some of them in (56)-(58):

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[38] Either, the theory has to allow the matrix T$_φ$ to probe vacuously, yielding default morphology – or the subject features, incorporated into the past participle (on standard assumptions, cf. Jaeggli 1986 and others), count as a sufficiently visible goal in the absence of a more prominent goal (see Sigurðsson 2010a, 2010b for a discussion of these options).

(56) a.　　Was **she** believed [＿ to be competent]?

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

(57) a.　　Var **hún**　　talin　　　[＿　vera　　hæf]?

　　　　　was　she.N　believed　　　be.INF　competent

　　　　　'Was she believed to be competent?'

　　d.　* Var ＿ talin [**hún** vera hæf]?

(58) a.　　Hafði **hún**　　virst　　　[＿　vera　　hæf]?

　　　　　had　　she.N　seemed　　　　be.INF　competent

　　　　　'Did she seem competent?'

　　b.　* Hafði ＿ virst　　　[**hún**　vera　　hæf]?

　　　　　had　　　　seemed　she.N　be.INF　competent

Notice, first, that the well-formedness of overt subjects in finite subordinate clauses is independent of the argument structure in their matrix clauses (see (49f) and (50f) above). That is, patterns like these are special for ECM/raising infinitives, thus requiring a special account. Second, the nominatives selected by *virðast* 'seem', whether raised, as in (58a), or non-raised, as in (55a), are not assigned 'lexical' or 'inherent' NOM by *virðast*, as seen by the fact that they shift to ACC when embedded under an ECM verb (type *we believed **her**.ACC seem be competent*). Third, the subject position in raising infinitives (including infinitival complements of passivized ECM-verbs) differs from their *v*P-internal argument position in being insensitive to definiteness. Recall from (43)-(45) above that indefinite derived subjects are allowed in a *v*P-internal position in raising infinitives, as further illustrated in the *a*-examples in (59)-(61) below, but this does not extend to the subject position, as seen in the *b*-examples:

(59) a.　　Were there believed [＿ to have been **any Democrats** elected]?

　　b.　* Were (there) believed [**any Democrats** to have been elected]?[39]

(60) a.　　There seems [＿ to be **someone** in the room].

　　b.　* There seems (to me, often) [**someone** to be in the room].

　　　　　(from Chomsky 1995:344)

(61) a.　　Voru　taldir　　　[＿　hafa　　horfið　　**einhverjir hermenn** í　　stríðinu?

　　　　　were　believed　　　　　have　　disappeared　some　　　　soldiers.N　in　war.the

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[39] The example is slightly 'better' with *there* than without it (Dianne Jonas p.c.).

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

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

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

The structural properties of (the matrix clause in) the experiencer ECM construction have remained murky (see e.g. Boeckx 2000). However, in the approach assumed 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 nearly all Experiencer ECM verbs, including *finna<u>st</u>* 'think, feel, find, consider', s*ýna<u>st</u>* 'seem (to see/look)', *virða<u>st</u>* ´seem', *heyra<u>st</u>* '(believe to) hear', 'sound as if', *reyna<u>st</u>* 'prove (to be ...)' and *skilja<u>st</u>* '(get to) understand' (see Sigurðsson 1989:95ff, Thráinsson 2007:440f).[40] Largely adopting the approach in Schäfer (2008), where reflexive markers in anticausative constructions are introduced by Voice$_{EXPL}$, I thus analyze the Experiencer ECM construction as in (62) below, where Appl takes -*st* as a nonreferential or dummy external argument, -*st* in turn being event-licensed by Voice$_{EXPL}$.[41] Notice that the -*st*-element lacks valued φ-features (like 3 person reflexives, cf. e.g. Schäfer 2008, 2009), hence
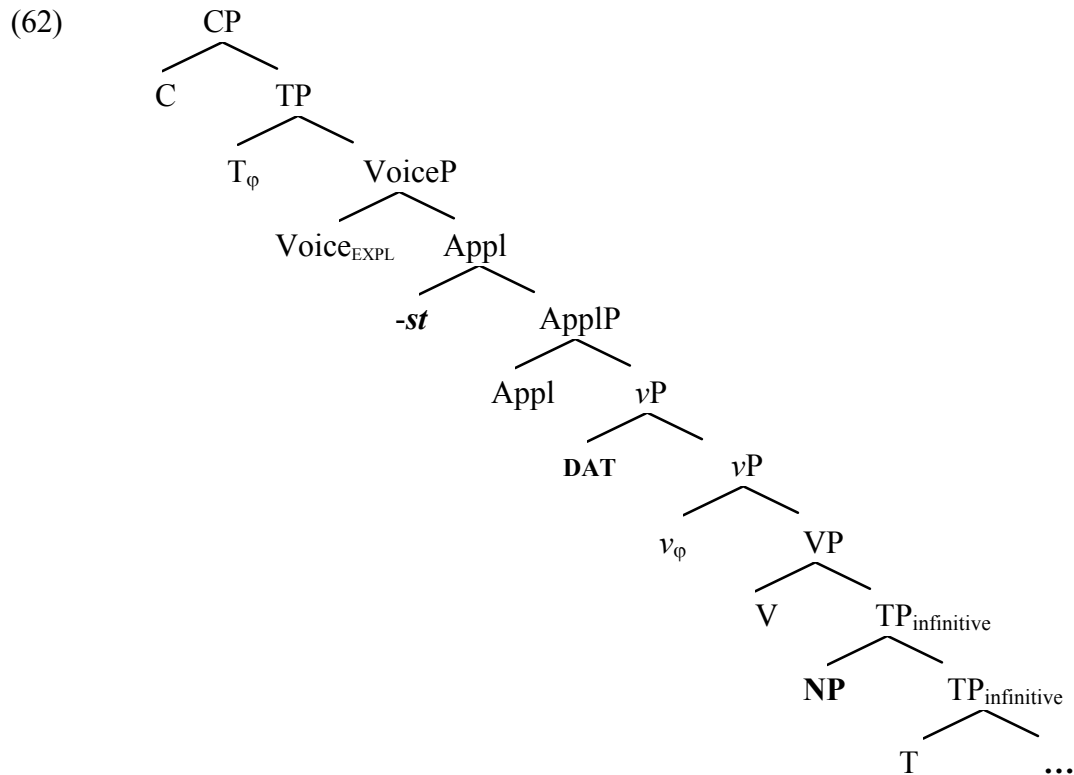
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[40] The only exception is *þykja* 'find, seem, think (that)'.

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

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

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

not intervening between the T_φ-complex and the experiencer dative, thus not blocking the latter from being T_φ-licensed:

(62)

```
                CP
              /    \
            C       TP
                  /    \
               T_φ      VoiceP
                      /        \
               Voice_EXPL       Appl
                              /      \
                           -st        ApplP
                                    /       \
                                 Appl        vP
                                           /    \
                                        DAT      vP
                                               /    \
                                             v_φ      VP
                                                    /    \
                                                   V      TP_infinitive
                                                         /          \
                                                       NP            TP_infinitive
                                                                   /          \
                                                                  T            …
```

As we saw in section 2, Voice$_{EXPL}$ deletes all case-stars on v while it leaves the applicative DAT intact. Accordingly, the matrix experiencer shows up in the dative, whereas the infinitive-internal subject shows up in the nominative in examples like (55a) above. Notice that if it were not for case-star deletion, one would expect the infinitival subject to show up in ACC, just as in regular ECM constructions. That the type *us.DAT seemed **her**.ACC be competent* is excluded, in contrast to *us.DAT seemed **she**.NOM be competent*, tallies with the case-star deletion approach.

Merging the experiencer DAT requires that Appl be activated (to event-license the dative), and an active Appl selects a φ-complete v, v_φ, which in turn transfers its φ-licensing to the infinitival T, thereby licensing an overt NP in Spec-T.[42] The crucial property that licenses the infinitival subject is thus the φ-completeness of v (transmitted to infinitival T) and not its (unrelated) case-marking properties (if it has any – as just stated v becomes a non-assigner of case by Voice$_{EXPL}$ triggered case-star deletion).[43,44] If Appl is inherently φ-

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

[43] Scandinavian Object Shift has commonly been taken to provide evidence in favor of an active AgrO or v_φ (Chomsky 1995, 2000 *inter alia*). However, it should be noticed that languages like Icelandic, without general object agreement, do not offer any straightforward morphological evidence in favor of the φ-completeness of

complete, we can conclude that the 'final' or the 'highest' licensing of an argument NP with an active person feature is always φ-licensing.

Regular subjects of ECM predicates like *believe* are event-licensed by Voice$_{ACT}$, which by standard minimalist assumptions selects v_φ (Chomsky 2001:9), which in turn transmits its φ-licensing to the infinitival T. In contrast, Voice$_{PASS}$, selects φ-incomplete v (regardless of case-star deletion), with no φ-licensing properties to transmit. Similarly, plain raising verbs (without an applicative dative) are headed by φ-incomplete v, selected by Voice$_{EXPL}$. Hence the ungrammaticality of examples like the b-examples in (59)-(61) above (that is, being φ-incomplete, the matrix v cannot transmit φ-licensing to the infintival T, hence lexicalization of the infinitival Spec-T is not licensed).

Given that English *there* has active φ-features, its behavior tallies with the present analysis.[45] Consider (63) and (64):[46]

(63) 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]?

(64) 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" (as it does not trigger number agreement), further suggesting that infinitival T$_{def}$, licensing *there* in examples like (63a), has Pn but "no other φ-features". However, this is not evidently a minimal or a necessary assumption. English *there* might be analyzed as Icelandic quirky subjects (in Sigurðsson & Holmberg 2008, cf. also Richards 2004, 2007, 2008), such that it raises out of the scope of T/Nr prior to number agreement (cf. (40) above). If so, T$_{def}$ licenses an overt NP in Spec-T iff it inherits a complete φ-feature set from v_φ, that is, it is unnecessary to make the extra assumption that v_φ transmits only its Pn-feature to T$_{def}$, somehow 'trapping' or 'holding back' its other φ-features.

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transitive v/V (cf. e.g. Markman 2009).

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

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

[46] Thanks to Dianne Jonas for native speaker judgments.

Returning to (62), it should be noted that an applicative analysis also applies to numerous dative taking *-st*-verbs that do not take a TP complement. That is, while dative subjects of passive and many unaccusative verbs are derived by regular NP-movement from object to subject (Sigurðsson 1989, Jónsson 1996, among many), dative subjects of at least many *-st*-verbs are applicatives. Consider the following verb pairs:

(65) NOM-V   vs.   DAT-V*st*

    bera 'carry'   *berast* 'get something carried, receive'

    birta 'reveal, publish'   *birtast* 'get to see, get something revealed/seen'

    græða 'profit'   *græðast fé* 'get wealthy'

    heyra 'hear'   *heyrast* 'get to hear, believe oneself to hear'

    læra 'learn, study'   *lærast* 'get to learn'

    opinbera 'reveal, make public'   *opinberast* 'get something revealed'

    reikna 'calculate'   *reiknast til* 'get to understand by calculation'

    skilja 'understand'   *skiljast* 'get to understand'

    telja 'count; believe, consider'   *teljast til* 'estimate'

The examples in (66) illustrate the constrast for one of these pairs (see also Jónsson 2003:131):

(66) a. **Ólafur** lærði   að hlýða skipunum.

      Olaf.N   learnt to obey   orders

      'Olaf learnt to obey orders (by his own actions, efforts, etc.).'

    b. **Ólafi** lærð<u>ist</u>   að   hlýða skipunum.

      Olaf.D learnt.ST to   obey   orders

      'Olaf (gradually) learnt to obey orders (by experience, circumstances, etc.).'

In the *b*-example, the structure is the same as in (62) (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$_{EXPL}$. The *a*-example in contrast is a regular transitive example, where the active nominative subject is event licensed by Voice$_{ACT}$, whereas Appl is not activated. Ditransitives, as we have seen, combine the properties of these constructions, as it were, by activating both Appl and Voice$_{ACT}$, as in for instance (67):

(67) **Ólafur** kenndi **Eiríki** að hlýða skipunum.

    Olaf.N   tought   Eric.D to obey   orders

As for PRO-infinitives, C intervenes between a matrix φ-probe and the infinitival T, call it T$_{PRO}$, blocking control predicates from transmitting their φ-licensing properties onto T$_{PRO}$. In

Sigurðsson (2008) it is argued that T_{PRO} is Person defective, hence incapable of licensing an overt Spec-T. While that seems plausible, it would also seem that PRO is like spelled-out subjects in being locally C-T related. If PRO undergoes A-movement, as it arguably does (Chomsky & Lasnik 1993, Chomsky 1995:116f), then the movement trigger must be located in C, whereas the spell-out licensing property is located in T_φ. If so, movement tucks-in (as argued in Sigurðsson 2006a, 2010a), that is, C attracts PRO and overt subject NPs, but the landing site is not Spec-C but Spec-T, allowing lexicalization if T is φ-complete. Similarly, it is the matrix v_φ that triggers raising in ECM infinitives, whereas the landing site is the infinitival Spec-T.[47]

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

5. Concluding remarks

Recall that Vergnaud's Conjecture in Lasnik's (2008:18) formulation suggests that "even languages like English with very little case morphology pattern with richly inflected languages in providing characteristic positions in which NPs with particular cases occur." In the late 1970s, the leading idea behind this conjecture was revolutionary. It highlighted the question of what features or feature might be involved in the licensing of overt NPs, thereby paving the way for feature based research of a great number of syntactic phenomena. Simultaneously, however, the Icelandic quirky case facts presented and analyzed by Andrews (1976) became more and more intimidating for the conjecture, as was made clear in numerous generative studies, including Thráinsson (1979), Zaenen et al. (1985), Sigurðsson (1988, 1989, 1991) and Marantz (1991). In the early 1990s, it had become evident that the original conjecture did not hold up to scrutiny.

As a matter of fact, though, the term abstract Case or just 'Case' has undergone a meaning shift, from suggesting a link between morphology and 'Case' or NP-licensing in morphological case languages (Chomsky 1980:24, 1981), to referring exclusively to NP-licensing (Chomsky 2001:6ff). That is, whithout 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

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[47] This does not exclude further movement into the matrix clause, triggered by the matrix Voice, cf. the remark on cyclic A-movement at the end of section 3.

internal to individual case languages (see e.g. Legate 2008, Markman 2009). As succinctly put by Bobaljik & Wurmbrand (2009:44):

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

The general understanding of NP-licensing and its putative correlation with morphology has suffered from lacking attention to the abstract mechanism behind morphological case. In this paper, I have scrutinized this mechanism with respect to argument case, showing that it involves matching of categories that are structurally lower than T, most commonly and centrally v- and Voice-categories. In addition to that, however, the subject of a finite clause has to match T_φ, and it is this φ-licensing that has been called abstract 'nominative Case' in the generative literature. In a parallel fashion, T_{def} in ECM constructions (including the Experiencer ECM construction) licenses an overt subject NP in Spec-T by φ-inheritance from the matrix v_φ, whereas this is blocked by C-intervention in control infinitives. Important evidence in favor of this approach comes from the subject licensing properties of active vs. passive ECM constructions as well as the Icelandic Experiencer ECM construction (type *us.DAT would then seem she.NOM be competent*), discussed in considerable detail in section 4 of this article.

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