The No Case Generalization

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This paper argues that syntax has no case features, case instead being an interpretative feature or features operative in the PF morphology of individual languages, where it overtly distinguishes between arguments (or NPs). The paper also argues that the non-syntactic nature of case is to be expected, given Non-Isomorphism, that is, the fundamental non-isomorphic nature of the derivation. Nonetheless, the different PF case-marking strategies in different languages operate on the basis of common syntactic matching relations, including matching of Voice and marked little *v*. The dependency of structural accusative upon structural nominative (the Sibling Correlation / Burzio's Generalization) is accounted for in terms of double versus single Voice matching.

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1. Introduction*

The question of how syntax relates to morphology and word order, that is to say to PF in general, is one of the truly 'big' questions in linguistic research. GB theory (Chomsky 1981) basically suggested that the category of case was responsible for three central properties of language or at least of languages that are in some sense similar to English:

- First, by the Case Filter, it should not be possible to spell out an NP that lacks case.
- Second, NP-movement was suggested to be driven by a 'case-need' – unless an NP moved under certain conditions, it would not get case, hence it would violate the Case Filter and be ruled out.
- Third, an NP had to be governed in order to get case. It followed that PRO had to be caseless, as it had to be ungoverned by the PRO Theorem. Thus, absence of case was made responsible for the silence problem posed by PRO, that is to say, the fact that PRO cannot be spelled out as a pronoun.

If this would have been on the right track, case would have been a central feature of grammar, both of universal syntax and of the morphology of individual case languages. However, as it turns out a quarter of a century later, case cannot be assumed to have this central position in language. In fact, it has to be *eliminated* from syntax theory. Thus, I will here argue that the NO CASE CENERALIZATION in (1) holds true (as suggested in Sigurðsson 2007b):

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(1) Syntax has no case features

That is, case is an interpretative feature (or features) operated with in PF morphology, where it overtly distinguishes between arguments (or NPs) and enters into disambiguating agreement processes.[1] Case-marking is indeed based on the syntactic computation, but its assignment takes place after transfer to the expressive (externalizing) component, commonly referred to as PF. Case is in other words not an input to the syntactic derivation but its output (see also, e.g., Marantz 2000, McFadden 2004, Platzack 2006). It follows that syntactic processes (in contrast to morphological processes) cannot be driven by case or operate with case features. In the approach pursued here (and argued for in previous work), morphology is in fact divorced from syntax, interpreting it rather than being part of it.[2]

2. Case, NP-movement, PRO

It is a well-known and a widely discussed fact in the generative literature that case has no general positional effects. This is especially well-established for Icelandic, due to its quirky subjects (e.g., Zaenen et al. 1985, Sigurðsson 1989, 1991, 2000, etc., Marantz 2000, McFadden 2004, 2007, Thráinsson 2007). Thus, inherently case-marked NPs are subject to NP-movement in the same manner as structurally case-marked NPs:

(2) a. * … að þá mundi hafa verið boðið **okkur**. **DAT**
… that then would have been invited us.DAT
b. … að **okkur** mundi þá hafa verið boðið.
… that us.DAT would then have been invited
'… that we would then have been invited.'

(3) a. * … að þá mundum hafa verið kosnir **við**. **NOM**
… that then would have been elected we.NOM
b. … að **við** mundum þá hafa verið kosnir.
… that we.NOM would then have been elected
'… that we would then have been elected.'

[1] Syntactic Agree must be sharply distinguished from morphological agreement (Sigurðsson 2004b, 2006b).

[2] In this respect, the approach is very different from Distributed Morphology (DM), but it also shares with DM the basic view that syntax is radically non-lexical, operating with abstract roots and features and not with 'words', in the traditional non-technical sense of that term. I will not be discussing the non-lexicalist view here, though.

In contrast to definite subjects, indefinite, non-specific subjects often do not raise, regardless of their case:[3]

(4) a. … að þá mundi hafa verið boðið **fjórum demókrötum**. **DAT**
… that then would have been invited four Democrats.DAT
'… that there would then have been (some) four Democrats invited.'

b. … að þá mundu hafa verið kosnir **fjórir demókratar**. **NOM**
… that then would have been elected four Democrats.NOM
'… that there would then have been (some) four Democrats elected.'

As has also been widely discussed in the literature (Andrews 1976, Thráinsson 1979 *inter alia*, including many of my own works, e.g., Sigurðsson 1989, 2003), Icelandic quirky subjects behave like structurally case-marked subjects with respect to other phenomena that were taken to be driven by case in Government and Binding theory. This is illustrated (in part only) in (5)-(8):

SUBJECT RAISING:

(5) a. Þá virtist **þeim** hafa verið boðið. **DAT**
then seemed them.DAT have been invited
'Then they seemed to have been invited.'

b. Þá virtist hafa verið boðið **of mörgum repúblíkönum**/*þeim.
then seemed have been invited too many Republicans.DAT/*them.DAT
'Then there seemed to have been too many Democrats invited.'

(6) a. Þá virtust **þeir** hafa verið kosnir. **NOM**
then seemed they.NOM have been elected

b. Þá virtust hafa verið kosnir **of margir repúblikana**r/*þeir.
then seemed have been elected to many Republicans.NOM/*they.NOM

ECM:

(7) a. Ég taldi **þeim** hafa verið boðið. **DAT**
I believed them.DAT have been invited
'I believed them to have been invited.'

b. Ég taldi hafa verið boðið **of mörgum repúblíkönum**/*þeim.
I believed have been invited too many Republicans.DAT/*them.DAT
'I believed there to have been too many Republicans invited.'

[3] The indefinites in (4) can raise, but then they get a specific reading. Bare indefinites, on the other hand, do not generally raise in Icelandic (in contrast to English), an issue that I will set aside here.

(8) a. Ég taldi **þá** hafa verið kosna. **ACC**
I believed them.ACC have been elected
'I believed them to have been elected.'

b. Ég taldi hafa verið kosna **of marga republikana**/*þá.
I believed have been elected too many Republicans.ACC/*them.ACC
'I believed there to have been too many Republicans elected.'

The central conclusions that can be drawn from these and related facts are stated in (9):

(9) a. Case is irrelevant with respect to NP-movement
b. Personal pronouns obligatorily undergo NP-movement

It thus seems that Person is the most important factor triggering NP-movement. This follows in the approach to the computation developed in previous work (e.g., Sigurðsson 2004a and 2007b).

Rather than taking facts of this sort at face value, numerous researchers have assumed that Icelandic quirky case is exceptional and therefore does not really bear on the GB theory of *abstract Case*. Proponents of this idea, make the simple assumption that Icelandic quirky subjects are assigned invisible or abstract nominative Case, in addition to their inherent morphological case. This double case approach is not a priori implausible, nor is it particularly abstract or far-fetched.[4] However, it is made suspicious by Dat-Nom constructions, where the nominative object controls number agreement of the verb:

(10) Honum mund**u** ekki líka **þeir**. DAT Pn / Nr NOM
him.DAT would.3PL not like they.NOM ↑__covert__↑ ↑__overt__↑
'He would not like them.'

In contrast, Icelandic nominative objects never control (unambigouous) 1st and 2nd person agreement, as illustrated in (11):[5]

(11) a. * Honum mund**um** ekki líka **við**. DAT Pn / Nr NOM
him.DAT would.1PL not like we.NOM ↑__covert__↑ ↑__overt__↑
Intended: 'He would not like us.' *↑____overt____↑

b. * Honum mund**uð** ekki líka **þið**.
him.DAT would.2PL not like you.NOM.PL
Intended: 'He would not like you.'

[4] It was an interesting research possibility whe first suggested (by Belletti 1988).

[5] The intended readings can be expressed by several alternative means, different for different predicates (thus the verb *líka* may take a PP, type /*him.DAT would like with us.ACC*/ = 'He would like us').

As indicated in the diagrams to the right, this is understandable if Icelandic quirky subjects are as 'subjecty' as they are partly because they enter into a covert Agree relation with the clausal Person head, Person thus not being able to also overtly agree with the nominative object (see Boeckx 2000, Sigurðsson & Holmberg 2007 and the references cited there). That is, the extra abstract feature matched by raised subjects, quirky as well as nominative, is evidently *Person*, and not extra case. That, in turn, is not surprising if Person is a computational feature, matched by the subject (regardless of whether the subject subsequently triggers uninterpretable verb agreement in morphology), whereas case is not assigned until in morphology. That 'true' Person both can and must be syntactically computed is evidenced by a number of simple but commonly overlooked facts. To mention just one, it makes perfect sense for Sandra to say *"**I** am the smartest one in the class"* and for Mary to answer *"No, **I** am the smartest one"*. That is, both of them as well as anybody else who hears them and understands their language immediately computes that the first person pronoun *I* has different referents in their speech. In contrast, it would be nonsensical for Sandra to say *"**The new boy** is the smartest one in the class"* and for Mary to reply *"No, **the new boy** is the smartest one"*. – I will not go any further into this issue here, though, instead referring the reader to the theory of Person as a computational feature developed in previous work (e.g., Sigurðsson 2004a, 2007c).

As I have also argued previously (Sigurðsson 1989, 1991, 2002, 2007a), Icelandic offers pervasive evidence that PRO is case active. One piece of evidence showing this comes from case agreement of floating quantifiers, as in (12) (from Sigurðsson 2007a); the case agreeing quantifiers are set in boldface, whereas the case agreement trigger is underlined:[6]

(12) a. Bræðrunum líkaði illa [að PRO vera ekki **báðir** kosnir].
brothers.the.D.M.PL liked ill to N be not both.N.M.PL elected
'The brothers disliked not being both elected.'

b. Bræðurnir æsktu þess [að PRO vera **báðum** boðið].
brothers.the.N.M.PL wished(for) it.G to D be both.D.PL invited
'The brothers wished to be both invited.'

Notice that the matrix subjects are case different from PRO in both examples, that is, the agreeing case of the quantifiers *báðir* (NOM) and *báðum* (DAT) is not transmitted from the matrix clause, instead being triggered by the case of PRO. Parallel facts are found in finite clauses, where the overt (local) subject is the agreement trigger, as shown in (13):

[6] Other forms of the quantifiers, e.g., *báðum* in (12a) and *báðir* in (12b), are sharply ungrammatical. The abbreviations used in the examples are capital N, D, G for nominative, dative and genitive case, small capital M for masculine, and PL for plural.

(13) a. Bræðurnir voru ekki **báðir** kosnir í stjórnina.
brothers.the.N.M.PL were not both.N.M.PL elected to board.the
'The brothers were not both elected to the board.'

b. Bræðrunum var **báðum** boðið á fundinn.
brothers.the.D.M.PL was both.D.PL invited.DFT to meeting.the
'The brothers were both invited to the meeting.'

In short, case has no bearing on either NP-movement or the licensing of PRO. That is not surprising if case is not a syntactic category.[7]

3. More facts

Agreement phenomena are commonly contingent on or triggered by case. If case is not a syntactic category, it follows that case-dependent agreement phenomena are not syntactic either. Important conceptual reasons as well as extensive empirical evidence suggests that this is precisely the correct conclusion (Sigurðsson 2004b, 2006a, McFadden 2004, Bobaljik 2006). Like case, however, agreement is *based on* the syntactic computation, but it does not follow that it *takes place* in syntax. It takes place in post-syntactic PF morphology.

Formal agreement features, like number and person agreement on verbs, are contentless in the sense that they do not contribute anything to interpretation (cf. Chomsky 1995, etc.). Thus, inasmuch as speakers accept non-agreement as in *Them is there* or *They is there*, the absence of verb agreement does not lead to any poorer or different semantics than in the standard *They are here*.[8]

Individual cases in individual languages are clearly not divorced from content in this sense. However, it is also rather obvious that they could not be unitary features or primitives in syntax either. Thus, dative case is, for instance, used to mark the following kinds of NP relations in Icelandic:

[7] However, case can 'feed' processes in PF, such as agreement and possibly also Object Shift and scrambling, an issue I will set aside here. – The question of why PRO cannot be lexicalized as a pronoun in canonical PRO infinitives of the Icelandic/English type remains a very good question (cf. the discussion in Boeckx and Hornstein 2006, Sigurðsson 2007a). An idea worth pursuing, in my view, is that it might be accounted for in terms of defective Person. If PRO matches defective Person in a parallel fashion as overt subjects match full-fledged Person in finite clauses, it should follow that only those languages that have Person matching overt quirky subjects should have quirky PRO. That seems to be borne out (Icelandic having quirky PRO, in contrast to, e.g., German – but see also the critical discussion in Eythórsson & Barðdal 2005).

[8] Rich agreement languages have certain instances of semantically related agreement, facilitating processing, much as rich case languages have semantically related cases. However, this only shows that morphology is based on syntax – it does not show that morphology takes place in syntax.

(14) a. Agentive NPs in *af-* 'by' phrases in the passive
b. Experiencer subjects of certain predicates
c. Theme subjects of certain predicates
d. Free benefactives
e. Most benefactive indirect objects
f. Numerous direct objects (with certain thematic and aspectual readings)
g. Complements of many prepositions
h. Complements of certain adjectives
i. Certain adverbial NPs (instrumental, possessive, comparative)

The examples in (15) illustrate this; *henni* is the dative form of the third person singular feminine pronoun ('her'):

(15) a. Ég var studdur af **henni**.
I was supported by her
'I was supported by her.'

b. **Henni** líður vel.
her feels good
'She feels good.'

c. **Henni** fór fram
her went forth
'She made progress.'

d. Ég orti **henni** ljóð.
I made her poem
'I wrote her a poem.'

e. Ég sendi **henni** bréf.
I sent her letter
'I sent her a letter.'

f. Ég bauð **henni**.
I invited her
'I invited her.'

g. Ég var með **henni**.
I was with her
'I was with her.'

h. Ég var **henni** góður.
I was her good
'I was nice/kind to her.'

i. Ég var **henni** eldri.
I was her older
'I was older than she.'

It is also instructive to observe that prepositions with heterogeneous semantics obligatorily assign or require dative case, as illustrated for a few prepositions in (16):

(16) a. *að* ***mér*** 'towards me'
b. *af* ***mér*** 'off me' **DAT**
c. *frá* ***mér*** 'from me'
d. *gegn* ***mér*** 'against me'
e. *gengt* ***mér*** 'opposite to me'
f. *hjá* ***mér*** 'at me, with me'
g. *út af* ***mér*** 'because of me'
etc.

The arbitrariness of this becomes rather obvious when it is compared with certain other prepositions that require the genitive, as the ones in (17):

(17) a. *auk* ***mín*** 'in addition to me'
b. *án* ***mín*** 'without me' **GEN**
c. *milli* ***okkar*** 'between us'
d. *til* ***mín*** 'to me, towards me'
e. *vegna* ***mín*** 'because of me'
etc.

All the cases are used for multiple purposes (see Barðdal 2001, Jónsson 2005). Thus, nominative is used to mark the following relations:

(18) a. Agentive subjects in finite clauses
b. Numerous non-agentive subjects (of various kinds of predicates)
c. Subjects of ECM-like infinitival and small clause complements of certain matrix verbs that take a dative subject
d. Objects of certain verbs that take a dative subject
e. Predicative NPs (in finite clauses and PRO infinitives)
f. Many left and right dislocated NPs, vocatives and other addressing expressions, most listed NPs, certain exclamative NPs

The examples in (19) illustrate this in; *hún* is the nominative form of the third person singular feminine pronoun ('she'):

(19) a. **Hún** hefur skrifað margar bækur.
she has written many books
b. **Hún** hvarf. / **Hún** var kosin.
she disappeared / she was elected
c. Mér hafði virst **hún** vera þreytt.
me.DAT had seemed she be tired.
'It had seemed to me that she was tired.'
d. Mér hafði alltaf leiðst **hún**.
me.DAT had always bored she
'I had always found her boring.'
e. Mig langar ekki til að verða **hún** í næsta lífi!
me.ACC longs not for to become she in next life
'I don't want to become her in my next life!'
f. **Hún** forseti!
she president
'Her for president!'

Many of the functions or relations listed in (14) and (18) are quite complex. Thus, seeing to it that agentive subjects in finite clauses show up in the nominative requires a rule or a statement that takes, roughly, the following form:

(20) $\forall x$: ($x \in$ a finite clause & NP(x) & subject(x) & agent(x)) $\rightarrow$ nominative(x)

Similarly, the formula in (21), where the quantifier $+\exists$ stands for 'most', would see to it that most benefactive indirect objects get assigned dative case:[9]

(21) $+\exists x$: (NP(x) & indirect object(x) & benefactive(x)) $\rightarrow$ dative(x)

Notice that there is no way of linking only thematic content like BENEFACTIVE or AGENT directly with the cases, there for instance being both nominative benefactives and dative agents (in *af-* 'by' phrases in passives). That is, the case-marking is essentially based on a combination of different kinds of information, as seen in the formulas.[10] Moreover, formulas like these are just descriptive generalizations stated in terms of complex traditional notions that are not syntactic primitives, such as 'subject' (cf. Chomsky 1981:10; McCloskey 1997), 'object' and 'finite clause'. I will return to the issue of case assignment in section 4, where I consider the question of how syntax 'feeds' morphological case marking.

As mentioned above, the cases differ from formal agreement features in typically relating to semantics (in different ways in different languages). It might seem to follow, and it is commonly assumed to follow, that at least the inherent cases are legible to the semantic interface (cf. Chomsky 2002:113). If that was the case, however, we would expect cases to show up in more or less the same fashion across languages. Nothing could be further from the truth. Consider this for only a handful of Indo-European languages (see, e.g., Comrie 1990, Blake 2001):[11]

(22)	a.	Proto-Indo-European:	Nom	Acc	Gen	Dat	Voc	Abl	Inst	Loc
	b.	Lithuanian:	Nom	Acc	Gen	Dat	Voc		Inst	Loc (Ill/Ade/All)
	c.	Polish:	Nom	Acc	Gen	Dat	Voc		Inst	Loc
	d.	Latin:	Nom	Acc	Gen	Dat	Voc	Abl		(Loc)
	e.	Russian:	Nom	Acc	Gen	Dat			Inst	Loc
	f.	Albanian:	Nom	Acc	Gen	Dat		Abl		
	g.	Ancient Greek:	Nom	Acc	Gen	Dat	Voc			

[9] There are more (and probably better) ways to get the same result, but the technical details are not important here. The point I'm making is that the cases typically represent complex relations, involving a number of factors.

[10] This holds true, even if thematic information is partly encoded by Voice and little *v* heads, see below.

[11] The case abbreviations are: Nom(inative), Acc(usative), Dat(ive), Gen(itive), Voc(ative), Abl(ative), Inst(rumental), Loc(ative), Ill(ative), Ade(ssive), and All(ative).

h.	German/Icelandic:	Nom	Acc	Gen	Dat	
i.	Modern Greek:	Nom	Acc	Gen		Voc
j.	Faroese (spoken):	Nom	Acc		Dat	
k.	Rumanian:	Nom/Acc		Dat/Gen		(Voc)

If syntax operates with a +ABLATIVE feature, for instance, it is unclear why it should, at some time point, stop doing so in some languages. In contrast, if the cases are morphological markers, their variability and historical instability can be analyzed in similar terms as other morphological variation – not a trivial task, but at least a conceivable one.

Related languages, with basically the same case systems, can show quite different distribution and function of their cases. This is even true to an extent of case-poor 'sisters' like Danish and Swedish, as illustrated in (23) (facts of this sort across the Germanic languages are discussed in Sigurðsson 2006b, see also Maling & Sprouse 1995):

(23) a. Det er **os**. *Danish*
it is us.ACC
'It is us.'

b. Det är **vi**. *Swedish*
it is we.NOM
'It is us.'

Thus, structures that are arguably *exactly the same* can get different representations in morphology (PF) in even closely related languages. Icelandic vs. German is another very clear example of this (see Maling 2001, 2002, Wunderlich 2003), an issue I will return to in the next section.

In general, relations that are expressed with some particular case in one language are commonly expressed with different cases or by other means in other languages. Thus, Russian and the Germanic languages don't have any special PARTITIVE case, while Finnish does. However, partitive and pseudopartitive relations are often marked with the genitive in Russian and commonly with prepositions in the Germanic languages but also sometimes with the genitive or even with no marking, as in the German and Swedish pseudopartitive construction *zwei Flaschen Wein / två flaskor vin* 'two bottles *of* wine' (see Neidle 1988, Vainikka & Mailing 1996, Blake 2001, Delsing 1993 and Sigurðsson 2003, for some discussion of these and related issues).

It is not as if case languages don't have any similarities in their case systems. On the contrary, such similarities are numerous. However, the point is that if individual cases were *syntactic* features, we would not expect *any* differences of this sort, given the basic assumption that syntax operates with universal features only. It is of course not inconceivable that this basic assumption is on the wrong track, but it is unclear, to say the least, what alternative assumptions there could be.

It might seem to be a way out here to assume that case variation boils down to parametric variation, but, to put it bluntly (perhaps), that could hardly seem to be a plausible

alternative to anyone who has ever spent some time on studying morphological case in more than minimally complex case languages of the English or the Romance type. Thus, it is not clear, to say the least, how a parameter, given or implanted in Universal Grammar, would account for the fact that the preposition meaning 'without' selects ACC in German (*ohne*), GEN in Modern Icelandic (*án* = [au:n] or [a(u)n]) and ACC, DAT or GEN in Old Norse (also *án* = [a:n]), to mention only one of thousands of tiny as well as more general differences of this sort (some of which will be discussed below). – After all, it is hardly a coincidence that case parameters have not been successfully proposed in the generative literature.

Also, languages apply various means, other than case or in addition to case, to mark the relation between an NP and its linguistic environment, including suprasegmental marking and some marking of a non-NP member of the relevant syntactic relation (see Sigurðsson 2003, for some discussion).

Nichols (1992) studied dependency marking with respect to the typological notions of A(gent)-S(ubject)-P(atient). In her sample of 155 (relevant) languages, 148 or 95,5% had some such marking, and these in turn split into about equally large groups, with and without case-marking (see Nichols 1992:90). This is presumably not very different from the result one might expect if different marking strategies (i.e., NP-marking (=case) vs. non-NP marking = agreement, etc.) are randomly spread across languages. Moreover, if one looks at constructions, rather than only at whole languages, the little available evience there is (including Nichols' study) suggests that *no marking* (as in German/Swedish *zwei Flaschen Wein/två flaskor vin*, lit. 'two bottles wine') is a third, highly common alternative.

As far as can be seen, the only general pattern in this is that NP relations are commonly marked in some manner. One could even phrase the putative 'generalization' such that NPs enter into syntactic relations, and that these relations are often marked or highlighted in one way or another, somewhere on the NP itself, or on some of its neighbors, or suprasegmentally, althought nothing of this is necessarily the case, and commonly is not the case ...

4. On case assignment

4.1 Non-Isomorphism

Reconsider the distribution of the Icelandic dative and nominative, sketched in (14) and (18), repeated here as (24) and (25):

The Icelandic *dative* marks:

(24) a. Agentive NPs in *af-* 'by' phrases in the passive

b. Experiencer subjects of certain predicates
c. Theme subjects of certain predicates
d. Free benefactives
e. Most benefactive indirect objects
f. Numerous direct objects (with certain thematic and aspectual readings)
g. Complements of many prepositions
h. Complements of certain adjectives
i. Certain adverbial NPs (instrumental, possessive, comparative)

The Icelandic *nominative* marks:

(25) a. Agentive subjects in finite clauses
b. Numerous non-agentive subjects (of various kinds of predicates)
c. Subjects of ECM-like infinitival and small clause complements of certain matrix verbs that take a dative subject
d. Objects of certain verbs that take a dative subject
e. Predicative NPs (in finite clauses and PRO infinitives)
f. Many left and right dislocated NPs, vocatives and other addressing expressions, most listed NPs (in dictionaries, etc.), certain exclamative NPs

Clearly, it does not make much sense to assume there to be *syntactic* DAT and NOM 'features' that would be the common denominators for all the relations in (24) and (25), respectively. In other words, case instructions do *not* take the simple form in (26), hence the stars:

		Narrow Syntax	*transfer*	*Morphology (PF)*
(26) a.	*	+NOM	→	morphological nominative case
b.	*	+DAT	→	morphological dative case, etc.

As a matter of fact, it seems to be a fundamental property of language that it *never* applies mappings of this sort between *any* levels or derivational stages.[12] Thus, there are no one-to-one mappings from features in phonology onto soundwaves in phonetics, nor are there any such mappings from morphological features like +PLURAL and +FEMININE onto phonological features such as [–high] and [+labial] (not even onto bundles of phonological features, as simply evidenced by allomorphy). I refer to this fundamental fact about language (and plausibly about any biological transformation process), as NON-ISOMORPHISM, NI:

[12] Assuming that it does is a contradiction in terms, since it suggests that the derivation is in fact non-derivational, simply reproducing an input as an equivalent albeit a differently looking output.

(27) NI: Linguistic processes are *non-isomorphic*

4.2 Surface adjustments

Given Non-Isomorphism, the question of how exactly individual cases are 'produced' in individual languages must be addressed. A part of the answer to this question is trivial: Certain instances of case-marking are simple adjustment rules, taking, roughly, the form in (28):

(28) $X_{\alpha} + NP \rightarrow X_{\alpha} + NP_{CASE\text{-}\alpha}$

This is illustrated in (29) for the above mentioned, most common prepositions meaning 'without' in German and Modern Icelandic:

(29)	a.	ohne + NP	→	ohne + NP_{ACC}	e.g., *ohne mich/*meiner*	*German*
	b.	án + NP	→	án + NP_{GEN}	e.g., *án mín/*mig*	*Icelandic*

This is not to say that the syntax of prepositions is simple, but it is to say that their case-marking properties are commonly trivial.[13] Thus, any Icelandic preposition containing the string /um/, like *um* 'about', *kringum* 'around', *umfram* 'in addition to', etc., assigns accusative, and any (single-word) preposition or adverb containing /an/, *innan* 'within', *sunnan* 'south of', etc., assigns genitive!

Another type of surface case adjustments involves case agreement, as in adjectival, participial and NP predicates in Icelandic, and yet another instance of 'mechanic' case-marking strategy is genitive marking in 'possessive' NP/NP constructions (with an array of different semantic/syntactic properties). Again, the syntax of the constructions in question is everything but simple, while their case-marking properties are arguably trivial, at least internal to individual languages (notwithstanding the fact that, for instance, predicative case-marking shows curious variation across even closely related languages).

As for the case-marking of subjects and objects, two simple relational rules can be discerned for nominative-accusative languages like Icelandic and German (Yip et al. 1987 and many since):

[13] That does however not extend to prepositions that can assign either ACC or DAT, depending on the semantics of the P + NP relation.

(30) a. ***Inherent over Structural***, I>S: Semantically related case (inherent case) takes precedence over non-semantically related case ('structural' case).[14]

b. ***Nominative over Accusative,*** N>A: Among the structural cases, nominative (CASE 1) takes precedence over accusative (CASE 2), that is, accusative cannot usually be assigned to an argument unless nominative is assigned to another argument in the same clause, whereas nominative is independent of the presence of an accusative argument (Burzio's Generalization or the Sibling Correlation, see Sigurðsson 2003, 2006b).

N>A is a typical elsewhere process in morphology, only taking place after I>S or when I>S does not take place. There are certain well-known apparent exceptions to N>A, but I will not discuss them here (many of them are described and discussed in Sigurðsson 2006b).

Consider how this works for quirky vs. non-quirky case patterns, as in (31) and (32):

(31) **Mér** áskotnuðust **fjórir gullpeningar**. DAT NOM
me.DAT acquired.3PL four gold-medals.NOM
'I got four gold medals (by some luck or coincidence).'

(32) a. **Ég** fékk **fjóra gullpeninga**. NOM ACC
I.NOM got.1SG four gold-medals.ACC
'I got four gold medals.'

b. **Ég** tók **fjóra gullpeninga**. NOM ACC
I.NOM took.1SG four gold-medals.ACC

Evidently, some feature or features in (31) require that the subject of *áskotnast* 'acquire, gain, get' be dative, whereas the object is not subject to any such inherent case precedence or priority. Thus, by I>S, the subject cannot get structurally case-marked, and, by N>A, the object gets assigned nominative, rather than accusative. In (32), on the other hand, the subject is assigned nominative by N>A, the object being assigned accusative as CASE2.

4.3 Voice and subject case

A number of complex issues arise. The fact that *all agentive* subjects in finite clauses are nominative, whereas numerous non-agentive subjects are quirky, suggests that subject case variation is in part a reflection of different Voice type heads (cf. Svenonius 2006). In the

[14] As discussed in Sigurðsson (2006b), 'relational case' is a more fortunate term than 'structural case' (there being a precedence *relation* between nominative and accusative), but I will be using the term 'structural' here, for convenience. Notice also that 'semantically related' does not imply that the case itself is input to semantic interpretation.

approach developed in Alexiadou et al. (2006) and Schäfer (2007), agentive subjects of finite clauses are introduced in the specifier of Voice, where Voice is marked [+AG(entive)]. I will instead assume that the subject is generated vP-internally but enters a matching relation with an AG(entive) Voice feature, Voice/AG, as well as with the Fin(iteness) head (in the sense of Fin in Sigurðsson 2004a, 2007c, inspired, in turn, by Rizzi 1997). Evidently, the subject also has to match Pn, the clausal Person head (see Sigurðsson & Holmberg 2007 and the references cited there, see also the discussion around examples (10)-(11) above).[15] However, quirky subjects also match Fin and Pn (see shortly).[16] Thus, as indicated with the boldface connecting arrow in (33), only matching of Voice/AG seems to matter for PF case assignment to agentive subjects:

(33) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice/AG** … NP … → NP/**NOM** in PF morphology
↑____↑↑_____↑↑_____↑

A different Voice head is involved in the FATE ACCUSATIVE construction (type */us.ACC drove to land/* = 'We drifted ashore', etc.), call it Voice/FATE.[17] As discussed in Sigurðsson (2006b), this fate Voice feature and Voice/AG are mutually exclusive (as one would expect). Thus, the boldface matching relations in (34) commonly give rise to accusative marking in standard Icelandic (fate accusatives are like other quirky subjects in matching Pn and Fin, cf. Sigurðsson 2006b, 2007c):

(34) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice/FATE** … **V** NP …
↑____↑↑_____↑↑_____↑_↑

Voice features in dative subject constructions include experience, Voice/EXP, and success/failure, or, more generally, (non-agentive) gain/loss: Voice/GAIN, Voice/LOSS.[18] Thus, the boldface matching correlations in (35) often yield dative case in Icelandic morphology:

(35) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice/GAIN** … **V** NP_1 … (NP_2) …
↑____↑↑_____↑↑_____↑_↑

[15] I am abstracting away from other phi-features.

[16] Conversely, nominative PRO does not match Fin but is nonetheless assigned case.

[17] Voice/X is just a convenient notation, where X is the active feature. It should thus read something like: 'X, an active Voice feature, excluding other Voice features'. The term 'Voice' itself is a cover term, much like 'Aspect' in the approach of Cinque (1999).

[18] For a more detailed classification, see Barðdal (2001). See also the lists in Jónsson (2003, 2005; but note that Jónsson's lists do not reflect the idiomatic nature of many quirky constructions, and are thus not easy to use or interpret for non-natives).

Notice that the verb is involved in the NP matching relations in (34) and (35), as opposed to (33). This is a necessary feature of the analysis, in view of the fact that quirky case is commonly licensed in part by lexical properties of individual predicates (as has been the received understanding since at least Zaenen et al. 1985).[19] Many quirky constructions are partly or entirely idiomatic (around 94% of all subjects were nominative in the counts reported in Barðdal 2001). Thus, there does not seem to be any general reason why *áskotnast* 'acquire, gain, get' takes a dative subject, as in (31), whereas *fá*, the most central verb meaning 'get', takes a nominative subject, as in (32a).[20] Rather, *fá* is arguably embedded under Voice/GAIN, without the matching relation between the two leading to dative marking in morphology (see further below on object case marking). Similarly, Voice/FATE in (34) does not necessarily lead to or trigger accusative subject case, that is, some 'fate predicates' regularly take a nominative rather than an accusative subject.[21] In addition, many speakers actually use nominative rather than accusative in the Fate 'Accusative' construction (Eythórsson 2000a, 2000b), without any concomitant semantic effects, it seems.

Again, complex issues arise. Thus, some general approach to the inventory of Voice heads and the relation between their properties and argument theta- and case-properties across languages (including ergative languages) needs to be developed. However, the wonders of case-markings in individual languages are not central to my present purposes (but for some recent discussion, see, e.g., McFadden 2004, 2007, McIntyre 2006, Svenonius 2005, 2006). What matters here is the following:

- First, while Voice/AG in (33) certainly precludes quirky case-marking of subjects (presumably by precluding Voice features that are active in quirky constructions), there is no mention of a +NOM feature in the syntactic derivation (and there is also no mention of +ACC or +DAT in (34) and (35)).

[19] However, 'lexical items' represent a larger structure than just the lexical (or conceptual) root. It is thus not self-evident what should count as a 'lexical property' and as an 'individual predicate'. I will not pursue these (extensively discussed) issues here.

[20] The same applies to a large number of similar minimal pairs (see Barðdal 2001 and Jónsson 2003, 2005 for examples and Sigurðsson 2003 for some general discussion). In this particular case, there might be some connection with the 'middle' *-st*-suffix in *áskotnast*, cf. also pairs like the NOM–ACC verbs *læra* 'learn' and *skilja* 'understand' vs. DAT–NOM taking *lærast* 'learn' (without purposeful or conscious effort) and *skiljast* 'understand' (also without trying to, but merely by experience or circumstances), but the putative connection could not be a straightforward one, as most *-st*-verbs do in fact take nominative subjects (cf. Zaenen & Maling 1984 and many since, e.g., Svenonius 2006). One such verb is actually *öðlast*, meaning 'acquire, gain, get, obtain', much as *áskotnast*, but differing from it in taking a nominative subject and an abstract object ('strength', 'courage', etc.).

[21] Thus, *hrekja* 'drive' can take a fate accusative subject (type */us.ACC drove there because of the weather/* = 'We were driven there by the weather'), whereas *hrekjast* 'be driven' takes a nominative subject.

- Second, the other instances of nominative case-marking, listed for Icelandic in (18)/(25), are *not* interpretations or 'translations' of the Voice/AG matching relation in (33), instead interpreting several different syntactic correlations.

Consider the second point for only nominative objects, as in (31) = (36):

(36) **Mér** áskotnuðust **fjórir gullpeningar**.
me.DAT acquired.3PL four gold-medals.NOM
'I got four gold medals (by some luck or coincidence).'

As illustrated in (35), the dative subject enters into a matching 'chain' with Voice, Pn and Fin (the nominative object matching Nr, cf. (10) above). Thus, matching Voice does not 'produce' nominative case. One could argue that specifically matching Voice/AG triggers nominative marking, but different kinds of matching relations yield nominative as well. The most coherent understanding is thus that Voice/AG is not a 'nominative assigner', instead precluding Voice features that are active in quirky constructions, thereby allowing the PF strategy of *Nominative over Accusative* in (30b) to apply to the subject, in the absence of *Inherent over Structural* in (30a).

4.4 On dative direct objects

Discussing all the case facts listed in (24)-(25) requires much more space than available here. However, consider at least the fact, stated in (24f), that Icelandic has numerous direct objects that are assigned dative case. Typically, the corresponding verbs assign accusative in German. Compare the Icelandic *a*- and the German *b*-examples in (37)-(42):

(37) a. Hún kastaði **steininum**/*steininn.
she threw stone.the.DAT/*ACC
'She threw the stone.'
b. Sie hat **den Stein**/*dem Stein geworfen.
she has the stone.ACC/*DAT thrown

(38) a. Hún hellti **víninu**/*vínið niður.
she poured wine.the.DAT/*ACC down
'She spilled the wine.'
b. Sie hat **den Wein**/*dem Wein verschüttet.
she has the wine.ACC/*DAT spilled

(39) a. Hún stýrði **skipinu**/*skipið.
she steered ship.the.DAT/*ACC
'She steered the ship.'
b. Sie hat **das Schiff**/*dem Schiff gesteuert.
she has the ship.ACC/*DAT steered

(40) a. Hún gleymdi **mér**/*mig.
she forgot me.DAT/*ACC
'She forgot me.'
b. Sie hat **mich**/*mir vergessen.
she has me.ACC/*DAT forgotten

(41) a. Hún heilsaði **mér**/*mig ekki.
she greeted me.DAT/*ACC not
'She did not greet me.'
b. Sie hat **mich**/*mir nicht gegrüßt.
she has me.ACC/*DAT not greeted

(42) a. Hún bauð **mér**/*mig ekki.
she invited me.DAT/*ACC not
'She did not invite me.'
b. Sie hat **mich**/*mir nicht eingeladen.
she has me.ACC/*DAT not invited

Minimal pair differences of this sort between these two closely related languages, with the same inventory of cases, are strikingly numerous. I quote Maling (2002:31):

> Maling (1996) [an unpublished work] 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 ...

Dative direct objects in Icelandic primarily have four thematic interpretations (for further discussion, see, e.g., Barðdal 2001, Maling 2002, Svenonius 2002, Jónsson 2005, Thráinsson 2007:208ff):

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

ausa 'scoop'	*bylta* 'overturn'	*dreifa* 'spread'
fleygja 'throw away'	*fleyta* 'float'	*hella* 'pour'
henda 'throw, throw away'	*ýta* 'push'	etc.

b. THE OBJECT (AS A WHOLE) IS UNDER EXTERNAL CONTROL:

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. THE ACTION DESCRIBED BY THE VERB IS POTENTIALLY RECIPROCAL:

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

The first two classes, in (43a) and (43b), seem to have a common *aspect of wholeness* (the opposite to partitive). Thus, some verbs can either take a dative object that is moved or controlled as a whole or an accusative object that is effected or affected. This is illustrated in (44):

		DATIVE:	ACCUSATIVE:
(44)	a.	*hlaða steinum* 'pile bricks'	*hlaða hús* 'build a house (of bricks)'
	b.	*moka sandi* 'shovel sand'	*moka skurð* 'dig a ditch'
	c.	*nudda kremi* 'rub cream (onto/into)'	*nudda augun* 'rub one's eyes'
	d.	*skjóta kúlunni* 'shoot the bullet'	*skjóta dýrið* 'shoot the animal'
	e.	*snúa lyklinum* 'turn the key'	*snúa fótinn* 'twist ones foot/ankle'
	f.	*sópa ryki* 'sweep up dust'	*sópa gólfið* 'sweep the floor'

Similarly, a few verbs make a distinction between dative benefactive objects (commonly animate) and accusative affected objects (commonly inanimate). This is illustrated in (45):

		DATIVE:	ACCUSATIVE:
(45)	a.	*greiða barninu* 'comb the child'	*greiða hárið* 'comb the hair'
	b.	*strjúkja henni* 'stroke her'	*strjúkja enni hennar* 'stroke her forehead'
	c.	*þurrka sér* 'dry oneself'	*þurrka heyið* 'dry the hay'
	d.	*þvo sér* 'wash oneself'	*þvo bílinn* 'wash the car'

Assume that the dative direct object in Icelandic matches one of a limited number of a little *v*-type heads, $v^{wholeness}$, v^{gain}, and perhaps a few other, call them simply v^{x} in general (on a par

with *v** in Chomsky's work, see below).[22] This would yield the following matching relations (where higher matching relations are not indicated, but see shortly):

(46) … [$_{IP}$ … $\mathbf{v^x}$ … **V** NP
↑____↑↑__↑

Again, there is no mention of a case feature, like +DAT, in the syntactic derivation. Importantly, also, there are no discernable semantic correlates with the Icelandic-German case differences exemplified in (37)-(42). There is thus no reason to assume that German, or other languages for that matter, lack v^x-type heads or features. Rather, the relevant difference here between the languages is morphological: Icelandic morphology commonly interprets the presence of a syntactic v^x feature in terms of dative object case, whereas German morphology does so much less frequently.[23]

There are exceptions from this central pattern in both languages, that is, German has some dative direct objects and Icelandic has a number of accusative objects with thematic properties that are otherwise typical of dative direct objects in the language. This is illustrated by pairs like the following ones:

		DATIVE:	ACCUSATIVE:
(47)	a.	*bifa* '(slightly) move'	*hreyfa* 'move'
	b.	*þoka* ' (slightly) shift'	*færa (til)* 'shift/move'
	c.	*fylgja* 'follow, accompany'	*elta* 'follow, pursue'
	d.	*ljúka* 'finish'	*klára* 'finish'
	e.	*hjálpa* 'help'	*aðstoða* 'assist'
	f.	*þjóna* 'serve (e.g., at the table)'	*uppvarta* 'serve (at the table)'
	g.	*bjarga* 'rescue'	*lífga (við)* 'revive'
	h.	*hjúkra* 'nurse'	*lækna* 'cure'

[22] Similar ideas have been proposed for other kinds of arguments (with different labels of the heads involved and more elaborated structural proposals), for instance indirect objects and free datives. See McFadden (2004) and Schäfer (2007) and the references cited in these works. It is of course an important task of linguistics to study the inventory and nature of little *v*-type heads, much as the inventory and nature of the Voice heads discussed above, but this is not one of the goals of the present study. Svenonius (2006) refers to the relevant head type as V_{DAT}, but using the DAT 'index' is just a convenient way of saying that whatever semantic/syntactic properties the head and its matching relations may have, they will be represented by dative case in morphology.

[23] I am abstracting away from free (bare, non-prepositional) datives, highly common in German (see, e.g., Schäfer 2007) but relatively rare in Icelandic (for some Icelandic examples, see Thráinsson 2007:218f).

The natural interpretation of this fact is that not only v^x but also the verb itself (or some verb related feature) matches the object, as shown in (46), and therefore can 'switch off' or block the otherwise prevailing case interpretation of v^x.

In short, the presence of a v^x feature is commonly signalled on direct objects by dative case in Icelandic morphology as opposed to German morphology, but there are numerous exceptions from this generalization in both languages. Such idiosyncratic exceptions, as well as sporadic changes of the case-marking of individual items, are expected if case-marking takes place in post-syntactic morphology, but they would be truly troublesome if case-marking took place already in syntax.

Assuming that case-marking is syntactic apparently forces one of two unfortunate options. The first one is that syntax operates with arbitrary features, but that would preclude coherent semantic interpretation of syntax and is thus not compatible with the central goal of linguistics, to develop an understanding of the content-form relationship in language. The second option is to assume arbitrary case-deletion (cf. Chomsky's deletion approach to agreement features in 2000, 2001, etc.). Thus, one could say that *uppvarta* 'serve (at the table)' in (47f) takes a 'deep' dative, just like *þjóna* 'serve (e.g., at the table)', and that its deep dative is subsequently deleted prior to or under transfer to PF (leading to accusative object case in PF morphology, as CASE2, in accordance with N>A in (30b)). Presumably, one would furthermore have to say that dative deletion is also involved in the derivation of the German examples in (37b)-(42b) above. I leave it to the reader to judge the viability of such an approach.

There is a conceivable alternative here, though, namely that the semantic factors involved in inherent case-making of subjects and objects are too subtle to be detectable. As for dative vs. accusative direct objects one could for instance hypothesize that events can be seen from either the subject's or the object's point of view, and that only the object's point of view activates v^x, resulting in dative object case in PF. If so, Icelandic expresses object point of view more frequently than German. However, in the absence of semantic correlates with subject versus object point of view it is difficult to assess this idea, and since it also requires that even inanimate arguments be associated with point of view, I do not adopt it.[24]

4.5 Case 'preservation', Voice, and little v

The passive and certain other NP-movement constructions 'preserve' or respect the matching relations in (46), thereby also 'preserving' the inherent case interpretation of these relations, as has been widely discussed (Zaenen & Maling 1984, Zaenen et al 1985, Sigurðsson 1989,

[24] Notice, though, that there is a well-known contrast between *speaker* and *subject* point of view in other subareas of Icelandic grammar. That contrast, however, has clear semantic (+HUMAN or +PERSON) and grammatical correlates, including mood selection and long distance reflexivization (cf. Thráinsson 2007:488f).

Jónsson 1996, Svenonius 2006, Thráinsson 2007, among many). In addition, however, case 'preservation' is dependent on Voice. This is, for instance, suggested by the fact that anticausative ('middle') *-st*-verbs differ from passives in not 'preserving' inherent case on themes, as illustrated in (48):

(48)	a.	Við lokuðum **glugganum**.		Active NOM-**DAT$_i$**
		we closed window.the.DAT		
	b.	**Glugganum** var lokað.		Passive **DAT$_i$**
		window.the.DAT was closed (by sby)		
	c.	**Glugginn** lokaðist.		Anticausative **NOM$_i$**
		window.the.**nom** closed-ST		
		'The window closed.'		

The reason why the anticausative cannot 'preserve' dative case (on themes) is arguably that it represents or expresses a different Voice structure than the passive (Svenonius 2006, see also Zaenen & Maling 1984). Suppose that passives have Voice$_{PASS}$/AG whereas anticausatives have an expletive Voice feature, Voice/EXPL (closely following Alexiadou et al. 2006 and Schäfer 2007). If so, dative themes are not only licensed by a v^x feature but also by active Voice/AG and Voice$_{PASS}$/AG, in contrast to Voice$_{EXPL}$. The relevant matching relations for both the nominative subject and the dative object in (48a) are thus as illustrated in (49):[25]

(49) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice/AG** … NP$_1$ … **v^x** … **V** NP$_2$

↑_____↑ → NP$_1$/**NOM** in PF

↑_____↑↑___↑↑__↑ → NP$_2$/**DAT** in PF

The relevant matching relations for the quirky passive in (48b) are sketched in (50):

(50) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice$_{PASS}$/AG** … **v^x** … **V** NP

↑_____↑↑____↑↑__↑ → NP/**DAT** in PF

Plain little *v*, in contrast, does not affect case-marking, as sketched in (51) for regular, non-quirky passives:

[25] Since matching of Pn and Fin does not affect case-marking, it is not indicated here and below. In the approach in Sigurðsson (2006c), a subject is merged lower or sooner than its object, later being shifted around the object for independent reasons, having to do with object Pn and Nr matching. As object Pn and Nr are not considered here, I set this aside (but see McFadden 2007 for a critical discussion).

(51) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice$_{PASS}$/AG** … v … V NP
↑_____↑ → NP/**NOM** in PF

Notice, however, that there is no ACC-to-NOM 'conversion'. What is going on here is simply that the single argument in the clause is assigned nominative, in accordance with *Nomiative over Accusative* in (30b). In this respect, passives are no different from regular unaccusatives, as illustrated in (52):

(52) a. Þá var byggð **ný kirkja** í þorpinu.. PASS
then was built new church.NOM in village.the
'Then, a new chuch was built in the village.'

b. Það var þá horfin **mynd** úr listasafninu. UNACC
there was then disappeared painting.NOM from art-gallery.the
'Then a painting had disappeared from the art gallery.'

As for anticausatives like *lokast* 'close' in (48c), it is evident that their Voice/EXPL 'deactivates' v^x, the result being nominative case assignment in PF by *Nominative over Accusative*, N>A in (30b), as in non-quirky passives and unaccusatives.[26]

Regular NOM-ACC constructions, in contrast, can be analyzed as in (53), where I adopt *v** from Chomsky (2001, etc.):

(53) [$_{CP}$ … Fin [$_{IP}$ Pn … **Voice** … NP$_1$ … **v*** … V NP$_2$
↑_____↑ → NP$_1$/**NOM** in PF
↑_____↑↑_____↑ → NP$_2$/**ACC** in PF

Voice in transitive structures may or may not be AG(entive). It is not AG in (32a) above, for instance. The hypothesis that accusative objects do not only match *v** but also Voice captures *Nominative over Accusative* (the Sibling Correlation), namely, that assignment of 'structural' accusative is dependent on nominative being activated in the clause, whereas nominative is independent of accusative. Notice also that the approach eliminates the look-ahead problem discussed in Sigurðsson (2006c), that is, there is no delayed 'case-knowledge' under the present approach.

This analysis presupposes that a head may in certain cases probe more than one goal. Other facts, for instance multiple case agreement facts, suggest that this is needed in any event. Notice also that the approach forces one of two conclusions: Either vP is not a full phase, or objects generally shift (even when there is no visible Object Shift) to the left edge

[26] The same applies to nominalizations and adjectival 'passives' (*The door is unlocked*, etc.). I will not consider the mechanism of v^x-deactivation here (but see Svenonius 2006 for discussion and a suggestion).

of vP, where they can be probed by Voice without inducing a violation of the Phase-Impenetrability Condition (see Chomsky 2000:108, Chomsky 2001:13f). I will not pursue these issues here, though.

4.6 A note on A'-movement and case

Movement of arguments, be it A'-movement or A-movement, does not in general affect case-marking (case being "divorced from movement", Chomsky 2001:17). This was illustrated for various A-movement contexts in (2)-(8) and it is seen again in (52) above. Nominative and accusative case-marking of subjects and objects is plainly decided by *Nominative over Accusative* in PF morphology and single versus double Voice matching in syntax. In the absence of inherent case-marking, double Voice matching (plus *v** matching) is interpreted as NOM-ACC in morphology, whereas single Voice matching is interpreted as NOM. Whether the argument in question undergoes A- or A'-movement is irrelevant. The question of why A-movement is CP clause-bounded, in contrast to A'-movement, is an interesting but a different question. A-movement is largely driven by IP-internal matching relations, most importantly Person matching (Sigurðsson 2007c), whereas A'-movement is triggered by more distant, IP-external relations.

Even so, A'-movement differs from A-movement in demonstrating that morphological case-marking strategies can 'scan' the whole derivation, even across CP-boundaries, interpreting or expressing the Voice structure of the initial or lowest merge domain of arguments (as in *Whom do you believe Mary has invited ~~whom~~*?).[27] That such long distance or *wide scanning* by PF spell-out strategies is needed in any case is evidenced by other types of long distance correlations, such as long distance reflexivization and tense agreement (Sequence of Tense) across clause bondaries. It is even more pervasively evidenced by pronominal reference. Consider the following:

(54) **Bíllinn** keyrði á **rútuna**.
car.the.MASC bumped on bus.the.FEM
'The car bumpted into the bus.'

a. Það var hált svo að **hann** fór út af veginum.
it was slippery such that he went out off road.the
'It was slippery, so it (= the car) went off the road.'

b. Það var hált svo að **hún** fór út af veginum.
it was slippery such that she went out off road.the
'It was slippery, so it (= the bus) went off the road.'

[27] I am indebted to Terje Lohndal for a helpful and knowledgeable discussion of this issue (and to Noam Chomsky, p.c., for also having raised it in relation to the research questions pursued here).

Obviously, the pronouns *hann* and *hún* do not have any semantically interpretable gender in cases of this sort (even though they are also used to refer to male and female living beings). This can be highlighted by using nouns that refer to 'the car' and 'the bus' but happen to have the same gender:

(55) a. **Bifreiðin** keyrði á **rútuna**,
car.the.FEM bumped on bus.the.FEM,
svo að **hún**/*hann fór út af veginum.
such that she/*he went out of road.the
'*The car*$_1$ bumped into *the bus*$_2$, such that *it*$_{1/2}$ went off the road.'

b **Bíllinn** keyrði á **vagninn**,
car.the.MASC bumped on bus.the.MASC,
svo að **hann**/*hún fór út af veginum.
such that he/*she went out of road.the
'*The car*$_1$ bumped into *the bus*$_2$, such that *it*$_{1/2}$ went off the road.'

As seen by facts of this sort, the pronouns do not have any content themselves, other than just being referential. They are evidently zero variables in syntax, spelled out in PF as gender specified pronouns on the basis of their coreference with PF-gender specified nouns.[28] That is, the pronominal gender (and number) is copied by a long-distance agreement process in PF (the phi-features thereby being able to function as an indexical in discourse).[29]

Plausibly, pronominal zero variables match abstract participant features in their local CP domain (cf. the approach in Sigurðsson 2004a, 2007c), where the participant features remain 'active' until they get some (overt or covert) PF interpretation by agreement (presumably via intervening CP domains, at least in the usual case).[30] If so, the PF agreement processes involved are not entirely unbounded or global. Nonetheless, it seems clear that PF spell-out strategies scan much wider domains than syntactic processes do. This is perhaps not surprising if PF is divorced from syntax, interpreting it rather than being part of it, as assumed here. The question of why PF differs from syntax in this way is, however, a huge and a very important research program. Hopefully, it will be pursued in some meaningful and rewarding way in not all too distant future. The first step is to identify and ask the question.

[28] For evidence that noun gender assignment takes place in (abstract) PF, see Sigurðsson (2007b).

[29] The movement approach to pronomoninal reference pursued in Kayne (2002) is in many respects interesting, but it faces problems. One trivial but acute problem is that one can start a 500 page novel about *John* by mentioning his name in the opening line and then never mention the name again, instead referring to John by saying *he* (or *him*, *his*) 15 thousand times and *our hero* five thousand times.

[30] They are also subject to 'feature-atomic' PF-minimality effects, but it would take me too far to discuss this here.

5. Conclusion

The present approach to the syntax underlying argument PF case (albeit not 'producing' it, as it were) is close in spirit to the ideas pursued by Chomsky in his minimalist research (see, in particular, Chomsky 2001).[31] The following differences are important, though:

- First, it is Voice matching, and not Tense matching, that is commonly interpreted or reflected by morphological case.[32] It follows that PRO infinitives should get a parallel case interpretation as finite clauses, and, as briefly mentioned in section 2, that is indeed the case.
- Second, direct objects match not only marked little *v* (*v** or v^{X}) but also Voice; this captures the Sibling Correlation (Burzio's Generalization), that is, the fact that structural accusative is dependent on nominative but not vice versa.

Crucially, however, *syntax contains no case features*, such as +NOM and +DAT (or any other more general or abstract case featues like +/–OBLIQUE; all such features are morphological, inasmuch as they are 'real'). Thus, syntactic processes, such as NP-movement, could not be driven by a 'case-need', such a 'need' being nonexistent in syntax. Syntax computes relations between verious kinds of elements. Such relations include matching relations between Voice heads, little *v*-heads and arguments (= argument structure), and these relations are commonly interpreted in terms of nominative and accusative case in PF. However, as we have seen, other NP relations may also be interpreted or expressed by either nominative or accusative case. This is not in principle any different from other relations between syntax and morphology. Thus, past tense verb forms in English do not only express shifted (true) past time readings but also unshifted (simultaneous) or future subjunctive readings (in which case the past morphology is copied by PF tense agreement across clause boundaries). Similarly, to mention just one additional well-known example (see Thráinsson 2007:465ff), Icelandic reflexives do not only express locally bound anaphors but also long distance and even (overtly) unbound logophors, commonly expressed by plain pronouns in related languages, including English.

In sum: Syntax contains abstract relations (such as matching of Voice and little *v*), and the morphology of individual languages interprets or expresses these relations with the

[31] But it is different in spirit from Sigurðsson (2006b, 2006c), where I did not try to pin down the structural correlates of PF case (in view of the partly unsuccessful attempts to do so in Sigurðsson 2000, 2003). The present results could not have been achieved without the 'case in tiers' insights of Yip et al. (1987) and the introduction of Voice into the minimalist discussion of Icelandic case by Svenonius (2005, 2006). It seems to me that the development of this subfield is thus reassuringly or at least hopefully becoming convergent.

[32] This first difference is however not radically distinct from Chomsky's approach, if T in his work is understood to be a cover term for a T-feature domain, including not only T itself but also clausal Pn, Nr and Voice features.

optimal (commonly the least ambiguous) means available to them in their language-specific PFs. Thus, there are no one-to-one mappings from syntax onto morphology or PF in general, the derivation instead being fundamentally non-isomorphic.[33] Case features operate in morphology. Hence, they cannot be syntactic as well.

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[33] See also previous work (e.g., Sigurðsson 2006a, 2007b, 2007c). As mentioned in fn. 2 above, this is very different from Distributed Morphology (where morphology is basically an extension of syntax). It seems possible that morphology has some universal features, but I do not know of any Universal Morphology, or Universal PF in general. Putative Universal PF should, for instance, offer a coherent account of how oral languages relate to sign languages, and also of how both oral languages and sign languages relate to extinct written languages, such as Sumerian. Regrettably, no such account has been developed. In Otto Jespersen's words, as cited by Chomsky (2007): "no one ever dreamed of a universal morphology."

[34] I include first names in my reference lists, as Icelandic second names are epithets (*Jónsson* = 'son of Jón', *Sigurðsson* = 'son of Sigurður', etc.) and not true names, thus *never* being used (in any Icelandic contexts) except as attributes to first names. Also, publishers should respect the fact that academics nowadays use first names in communication and therefore need information on first names.

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