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The syntax of Person, Tense, and speech features*

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This paper argues that Person interprets event participants in relation to speech participants in a parallel fashion as grammatical Tense interprets event time in relation to speech time. This understanding of Person is embedded in a general theory of speech-grammar-event matching, that is to say, an approach where speech (event) features, $\mathbf{S_F}$, are matched by grammatical features, $\mathbf{G_F}$, which in turn are matched by (propositional) event features, $\mathbf{E_F}$. This is informally sketched below, where 'A ↔ B' reads as 'A matches B' or, more accurately, 'A is computed/interpreted in relation to B':

$E_F \leftrightarrow G_F \leftrightarrow S_F$

In accordance with this general scheme, event participants, $\mathbf{E_P}$, match Person and other grammatical participant features, $\mathbf{G_P}$, which in turn match speech participants, $\mathbf{S_P}$:

$E_P \leftrightarrow G_P \leftrightarrow S_P$

In the same fashion, event time, $\mathbf{E_T}$, matches grammatical tense, $\mathbf{G_T}$, which in turn matches speech time, $\mathbf{S_T}$:

$E_T \leftrightarrow G_T \leftrightarrow S_T$

A basic claim that I shall be making is that the Minimalist Program (Chomsky 1995, 2000, and subsequent) can be profitably developed such that features and feature built structures are the only syntactic elements. I refer to this approach as MINIMAL FEATURE SYNTAX. My aim is to show that it enables a (more) coherent understanding of the fundamental function of speech features as well as of Person and Tense in language.

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The ideas pursued here have, to a varying extent, been presented at several colloquia and confereneces: The Linguistics Departments in Konstanz, Frankfurt, Venice, Siena and at Yale University, "In the Mood" in Frankfurt, June 2002, "Argument Structure" in New Delhi, January 2003, the 18th Comparative Germanic Syntax Workshop in Durham, September 2003, "Semantics in Focus" in Lund, October 2003, the XXX IGG in Venice, February 2004. Many thanks to the organizers of these events, for their friendliness and hospitality, and to the audiences for their helpful comments and discussions.

1. Minimal feature syntax and clausal architecture

In minimal feature syntax, there can be no syntactic 'complex heads', such as Infl and Agr (as in Chomsky 1981, 1991), or ϕ-complete v (v*) and ϕ-complete T (as in Chomsky 2000, 2001a, 2001b). Rather, individual ϕ-features, such as Person and Number, as well as other verb inflectional features such as Mood and Asp(ect), are independent syntactic elements.[1] This is not particularly radical or controversial. As pointed out by Chomsky, his complex heads are merely convenient "cover terms for a richer array of functional categories …" (Chomsky 2001a, fn. 8, see also Chomsky 2002:123 on 'cartographic studies'). I will thus assume that Infl and v split (minimally) as follows:[2]

(1) a. 'Infl' = Pers(on)_S, Num(ber)_S, M(ood), T(ense)
b. 'v' = Pers(on)_O, Num(ber)_O, Asp(ect), v

This gives us, minimally, the partial clausal structure in (2):

(2) $[_{CP} \ldots [_{IP} \text{Pers}_S, \text{Num}_S, \text{M}, \text{T}, \text{Pers}_O, \text{Num}_O, \text{Asp} \ldots [_{vP} \ldots \text{v} \ldots$

Some, perhaps all of these elements might in fact be "cover terms for a richer array of functional categories", that is, it might turn out to be necessary to posit different categories for different tenses, aspects, etc. (cf. Cinque 1999). Optimistically, however, I assume only 'basic categories' like the ones in (2).[3]

Languages usually show only partial verb inflectional evidence for the categories in (2). Icelandic, for instance, offers striking evidence for the Infl or 'T' categories in (1a) (see, most explicitly, Sigurðsson 2001) but almost no morphological evidence for the v categories in (1b), with the exception of v itself (more or less the same is true of many other Indo-European languages). This is illustrated in (3), where the dots indicate that Icelandic happens not to have overt Pers_O/Num_O or Asp inflection:[4]

[1] This idea goes back to Sigurðsson 2000, where it was dubbed The Feature Uniqueness Principle. It is obviously closely related to the ideas pursued by Cinque (1999; see also e.g. Cardinaletti 2002).

[2] A more coherent notation for the Person and Number categories would be Pers_1, Num_1, Pers_2, Num_2, but, for readability, I am disregarding this and also the fact that there are more ϕ-categories.

[3] Throughout, I shall be disregarding many other complicating factors, e.g. gender and other classifying features.

[4] With respect to Asp, however, this is a matter of terminology. Asp and (the closely related category of) Voice are clearly active 'word formation' categories in Icelandic verbs, an issue that I shall not address here, though.

(3)	V	v	..	..	T	M	Num_S	$Pers_S$		
a.	leit	a	..	..	-	-	-	-	→	*leita*, 'search', INF
b.	leit	a	..	..	ð	-	i	r	→	*leitaðir*, PAST.IND.SG.2
c.	tók	-	..	..	-	-	u	m	→	*tókum*, 'took' PAST.IND.PL.1
d.	tók	-	..	..	-	i	u	ð	→	*tækjuð*, PAST.SUBJ.PL.2
										(*i*-mutation: *ó* → *æ*)

Before we proceed discussing Person and other central functional categories, a few remarks on syntactic structure building are in place. In the present approach (see also Sigurðsson 2004a, 2004b, 2004c), individual features are the basic syntactic building blocks, that is, syntactic objects consist of either a single feature or of syntactically derived combinations of single features. That is, any application of Merge adds a single feature **F** to a structure XY, yielding F[XY]; reapplication of Merge adds another single feature **G**, yielding G[FXY], and so on. The effects of Merge, however, are often invisible or opaque. One of the reasons why this is so is that lexical items are typically complex, each matching a set of features, {F, G, …}, hence the matching of the individual features involved may be masked by phonological processes.[5] Another, more pervasive reason is that syntactically active features need not be phonologically active at all (Kayne 2003a, 2003b, Sigurðsson 2003b, 2003c).

Given MINIMAL DESIGN or the strong minimalist thesis (SMT, see Chomsky 2001b:3), "the initial conditions on language aquisition" include only interface conditions and general properties (of biological systems and computational systems). If so, many traditional assumptions about clausal architecture are stipulative and should be dispensed with, unless they are strongly empirically justified. Thus, it is not really obvious that binary branching and structural hierarchy ('tree-structures' of some sort) follow from minimal design, although I shall here adopt the standard view that they are Narrow Syntax properties.[6] It is clear, on the

[5] For example, the Icelandic subjunctive marker *-i-* is often deleted in PF as a consequence of being adjacent to the number marker. Similar cases are innumerable, both language internally and cross-linguistically. See for instance Halle & Marantz (1993) and Halle (1997) on impoverishment.

[6] Given phase theory as developed in Chomsky (2001a, 2004b), syntax has only a very short memory of structural hierarchy. Another conceivable approach is that it has no memory of structure (i.e. that it immediately forgets about 'borderlines' between merged objects), but I shall not adopt that approach here. However we

other hand, that X'-theoretic notions such as 'head', 'complement', 'specifier', 'projection', etc. do not follow from minimal design and I shall here adopt the null-assumption that these notions are not parts of language (cf. also Collins 2002, Chomsky 2004a, 2004b). Or, to put it differentely, I do not adopt the hypothesis or the stipulation that these notions are linguistic.

Even the notion 'position' does not follow from minimal design, that is, it makes no clear sense in minimal feature syntax (whereas one could make contentful use of the notion 'space'). In particular, a feature and its left edge space have no correlation with each other, that is, there is no matching correlation between the two (so-called 'Spec-head agreement' being a PF displaced reflection of Agree, cf. Sigurðsson 2004a).

Merge itself comes for nothing (Chomsky 2001b), as it is an inevitable property of any system that combines objects. Sisterhood follows, whereas c-command is not a primitive but can be defined in terms of 'transitive sisterhood' (inasmuch as syntax memorizes structural hierarchy).

Consider the merger of V and an argument θ_1 plus another argument, θ_2. We start out with θ_1, merging (the root) V to it, giving us [V θ_1]. Next we merge θ_2 to this outcome:

(4) θ_2 + [V θ_1]

The outcome of this in turn is, simply, [θ_2 V θ_1],[7] to which we may subsequently merge v, giving us [v θ_2 V θ_1], and that structure in turn may merge with Asp, yielding [Asp v θ_2 V θ_1], and so on. It is straightforward that θ_2 in (4) enters into a structural correlation with [V θ_1], a sisterhood correlation, whereas it is not obvious that it enters into any independent or underivable ('Spec-head') correlation with V. It might. In a feature based approach a structural correlation between a 'head' and a 'specifier' would presumably be some kind of an featural agreement or feature selection correlation. I do not, for the present at least, want to claim that developing a coherent theory of such correlations is impossible. However, such a theory is inevitably stipulative, thereby deviating from minimal design. That is, it is uncelar what entities (outside the metalanguage) notions like 'head' and 'specifier' refer to, even less clear is why and how they should 'agree with' or 'select' each other's features, and still less clear is what features would be involved in 'headedness' vs. 'specifierness'. Instead of trying

conceive of this, it is evident that the interfaces read structure into the 'syntactic chunks' transferred to them from Narrow Syntax.

[7] Or, rather, [θ_2 [V θ_1]], if syntax has local memory of structural hierarchy. The difference is immaterial for the point I am making here.

to make sense of any of this, I assume, plainly, that apparent [$_{\alpha}$ Spec X …] structures take the form **F [$_{\alpha}$ Y X …],** where F is phonologically invisible and where Y (or 'Spec') typically moves to the (visible) left edge of α for the purpose of successful matching of F. Thus, there are no fixed 'positions', only features and edges or 'spaces'. I shall return to the nature of syntactic structure building.[8]

'Syntactic constituency', as it were, is easily defined as the outcome of any application of Merge. On the other hand, the widely assumed descriptive notion of constituency does not follow in any obvious manner. It is usually taken that movement and deletion correlate with this descriptive notion, but we do not have any deeper understanding of the notion itself, that is, we do not know what it is that 'glues' phonological material, such that it moves or deletes together. Indeed, we do not even know much about what it is that enables features to make up individual words. Thus, there is no consencus on how to explain the fact that a single word like Latin *Regam* 'I will rule' may correspond to three words in English or six words in Icelandic (*Ég kem til með að stjórna*, lit. I come toward with to rule = 'I will rule'). The derivation of the Latin sentence presumably starts out as a numeration with the same features for person, number, tense and θ-role as its English and Icelandic translations, and yet it comes out as a single word. We can describe this fact and the linguistic variation that arises, but there is no generally accepted understanding of why it arises and not even of the structural 'mechanism' that brings it about.[9]

It is clear that many descriptive generalizations on individual languages have been stated in terms of notions like 'word', 'position' and 'constituency' as well as in terms of X'-theoretic notions, and it is also clear that we do not want to lose track of these generalizations. Hopefully, it will be possible to show that at least some of them follow from general principles, but that is just a hope. As soon as one starts comparing more than one language variety, the explanatory value of for instance 'constituency' becomes dubious. Thus, it does not account in any obvious manner for the fact that Old Norse, as opposed to Modern Icelandic, allowed topicalization or scrambling of prepositions and attributive adjectives to the initial 'position' of main clauses, nor does it account for the fact that Modern Icelandic, as opposed to e.g. German, does not topicalize verb phrases, or for the fact that some Germanic varieties allow topicalization of particles as opposed to e.g. prepositions and auxiliaries, or the fact that many languages disallow preposition stranding, or the fact that gapping,

[8] For further discussion, see also Sigurðsson 2004a, 2004b, 2004c.

[9] For interesting suggestions, though, see for instance Halle & Marantz (1993) and Josefsson (1998).

complementizer deletion and VP-ellipsis come out quite differently in Icelandic and English, and so on and so forth. I leave the issue at that.

Returning to the data in (3), it should be noted that there is no straightforward or given interpretation of facts of this sort. First, they cannot be taken as negative evidence. That is, the fact that verbs in a language like English generally show only [V-T-(Num$_S$)] where Icelandic verbs show [V-v-T-M-Num$_S$-Pers$_S$] cannot be taken as evidence that e.g. v, Mood and Person are syntactically inactive or absent in English. Similarly, the fact that Pers$_O$ and Num$_O$ are morphologically invisible in Icelandic cannot be interpreted such that Icelandic objects do not syntactically match these categories (for at least indirect evidence that they do, see Thráinsson 1996). Given Universal Grammar, it would be greatly suprising if individual languages did not have some universal features that are commonly or even generally phonologically silent; indeed, it has been argued that 'partial silence' is a general and a fundmental property of language (e.g. Cinque 1999, Kayne 2003a, 2003b, and, most explicitly, Sigurðsson 2003b, 2003c).

More problematically, it is not given that morphological data as in (3) unequivocally can be interpreted as direct positive evidence of UG features. It is possible that overt grammatical formatives like e.g. Tense, Mood and Person markers in a particular language are complex feature bundles, that is, language-specific lexical units rather than universal primitives.[10]

However, even though one should be keenly aware of the problems involved in interpreting morphological data as evidence on syntax, the particular feature composition seen in (3) is not coincidental, I believe. That is, it is hardly a mere accident that Tense, Mood and the ϕ-features all relate to features of the SPEECH EVENT, that is, the time and location of speech and the speech participants.[11] This becomes natural on the hypothesis that grammar adheres to the COMPUTATION PRINCIPLE in (5):

[10] A central issue that I cannot discuss here is how the ´lexicon' relates to 'grammar'. Our lexica are clearly the meeting place of universal linguistic features (i.e. Narrow Syntax features in the sense argued for in Sigurðsson 2003c) and of features of other, non-linguistic subsystems of mind (inference, conscious thought, classification, etc.). Problematically, this seems also to apply to an extent to 'grammar' in the conventional sense, that is, individual languages 'grammaticalize' or 'conventionalize' features, such as social class, that would seem to be features of e.g. conscious thought rather than part of Universal Grammar (see e.g. Bickel et al. 1999, Chandrasena Premawardhena 2002, Siewierska 2004). Further research might however reveal that conventions of this sort can be analyzed in terms of abstract features of language.

[11] The term speech event vas originally suggested to me by Valentina Bianchi. It is also used by Giorgi and Pianese (1997), who, however, are only concerned with the temporal dimension of the speech event.

(5) Grammar computes or interprets (propositional) event features in relation to speech (event) features.

That is, schematically, as in (6), where $\mathbf{E_F}$, $\mathbf{G_F}$ and $\mathbf{S_F}$ stand for (propositional) 'event features', 'grammatical features' and 'speech (event) features', respectively:

(6) $E_F \leftrightarrow G_F \leftrightarrow S_F$

Any syntactic event feature, thus, is computed in relation to a grammatical feature, and the grammatical feature is in turn computed in relation to a speech feature.[12] This is in essence the displacement property of language, that is, the property that makes it possible for humans (as opposed to most or all non-human animals) to communicate about events that are displaced, not present in the speech event (cf. Hockett 1960; Hauser 1997:211; Di Domenico 2003).

The notion 'speech' that I have in mind here should not be understood literally as 'perceptible speech', but, rather, as 'potential speech', as it were. Thus, 'speech event' in the relevant sense here and in the following is not limited to actual speech or utterance situations; instead, it should be understood as ranging over events of 'language activity', irrespective of whether it is externalized or merely internal (in the Chomskian sense of internal vs. external language, cf. e.g. Chomsky 1995, 2004a). In other and simpler words: 'speech' in the notion 'speech event' refers to not only the act of speaking but also to the linguistic act of thinking (and hence attitude predicates like 'think', 'believe', 'wish', 'feel', etc., introduce a (secondary) speech event, cf. below).

Notice also that structural case features play no role in clausal computation in the present approach. As I have argued elsewhere (most recently in Sigurðsson 2004c), the structural cases come for nothing as the 'first' vs. the 'second' case, that is, they are locally and immediately interpretable, hence in no need of being computed. More generally, I disagree with the Chomskian approach (2000 and subsequent) that the computation operates with uninterpretable features (that are deleted under Agree). Instead, I argue, it operates with

[12] A difficult question that I leave open is what counts as a syntactic event feature (and not as an idiosyncratic or an encyclopaedic lexical feature).

(interpretable but) uninterpreted features that get interpreted under matching in the course of the derivation (see further section 2).[13]

Yet another point of clarification: I am not suggesting that Davidsonian event semantics (see e.g. Higginbotham et al. 2000, Herburger 2000) reduces to syntax. Instead, I am making the more modest claim that grammatical features relate syntactic event featurs to syntactic speech fetures by way of matching. Much as there are phonological operations that apply exclusively for interface internal reasons there are numerous and powerful semantic processes that cannot and should not be reduced to syntax.

The Reichenbachian approach to tense (Reichenbach 1947) is the only generally acknowledged and well studied instantiation of the Computation Principle (see Hornstein 1990, Giorgi and Pianesi 1997, Cinque 1999, Julien 2001, Eide 2002, among many). The basic Reichenbachian insight is often illustrated with the past perfect, as in (7):

(7) John had eaten breakfast (before nine).

The tense reading of examples of this sort is usually analyzed as E_R_S (or E > R > S), that is: event time (E) before reference time (R), and reference time, in turn, before speech time (S). In other words, the event of 'eating breakfast' happened before the reference time of the grammatical tense (here past), and the time of the grammatical tense was prior to the time of speech.

The event time, thus, is interpreted or valued in relation to the grammatical tense (reference time), which in turn is interpreted in relation to the speech time. We may sketch this as in (8), a subcase of the general scheme in (6) above, where $\mathbf{E_T}$ is the event time, $\mathbf{G_T}$ is the grammatical tense, and $\mathbf{S_T}$ is the speech time:[14]

(8) $E_T \leftrightarrow G_T \leftrightarrow S_T$

[13] Morphological agreement phenomena involve feature copying in PF (that in turn reflects Merge and abstract Agree in syntax, cf. Sigurðsson 2004a). It follows that uninterpreted agreeing features are not present in Narrow Syntax (to be deleted prior to transfer to the conceptual interface) – on the contrary, they are added in PF.

[14] This is only the general picture, sufficiently sophisticated for our limited purposes. As discussed by e.g. Julien (2001) and Eide (2002:257ff.), temporal relations can be much more complex than assumed here (thus, Julien argues in favor of two distinct T 'heads' and an unrestricted number of reference times, and Eide's analysis is even more fine-grained).

This is widely acknowledged, of course (see e.g. Giorgi and Pianese 1997:27ff., Cinque 1999:81ff.). Amazingly, however, another closely related fact has not been generally noticed, namely the fact that Person and other ϕ-features have a parallel status as grammatical Tense.[15] That is, these grammatical participant features, $\mathbf{G_P}$ relate event participants, $\mathbf{E_P}$, and speech participants, $\mathbf{S_P}$, as stated in (9), another subcase of (6):

(9) $E_P \leftrightarrow G_P \leftrightarrow S_P$

Importantly, the inherent speech participants are NOT simply the speaker and the addressee, as commonly assumed. Rather, they are the active vs. passive participants of speech, that is, the local LOGOPHORIC AGENT vs. LOGOPHORIC PATIENT. Consider the very simple examples in (10):

(10) a. **I** love **you**.
1SG = the speaker = LOGOPHORIC AGENT (and also the 'loving one')
2SG = the addressee = LOGOPHORIC PATIENT (and also the 'loved one')
b. John said to me: "**I** love **you**."
1SG = John = LOGOPHORIC AGENT (and also the 'loving one')
2SG = the speaker = LOGOPHORIC PATIENT (and also the 'loved one')

As this illustrates, the constant meaning of the personal pronouns is not speaker vs. addressee, but the local logophoric agent vs. logophoric patient.[16]

Let us refer to these logophoric roles or features as LAMBDA-FEATURES, Λ-features for short.[17] The grammatical 'linking function' of person and other ϕ-features may then be sketched as follows:

[15] As I have become aware of only recently, however, the understanding in Schlenker (2000, 2003) is close to the one developed here (and in Sigurðsson 2003b, 2003c, 2004b and to an extent in Sigurðsson 1990a). Person is more directly related to the speech event than are other ϕ-features, but the formulation in the main text is, again, sufficiently accurate for our limited purposes.

[16] One could also retain the notions speaker/addressee by distinguishing between 'primary' and 'secondary' or 'basic' and 'derived' speaker/addressee (cf. the discussion in e.g. Sigurðsson 1990a and Safir 2004a).

[17] The term *lambda-feature* for 'logophoric feature' is coined in line with the notions *theta-feature* and *phi-feature*. However, in order to avoid confusion with the notation of lambda calculus, I use the capital lambda, Λ, rather than small lambda, λ.

(11) θ-features ↔ ϕ-features ↔ Λ-features

That is, θ-features are interpreted in relation to ϕ-features, which in turn are interpreted in relation to Λ-features.

On this view, an argument or a θ-feature does not come with any fixed ϕ-values. Rather, it comes with active unvalued ϕ-'variables' that are valued under matching by clausal ϕ- and Λ-elements.[18] Also, 'arguments' are neither fixed 'positions' nor are they 'DPs' or phonological material of some sort. Rather, arguments are sets of interrelated event features, grammatical features and speech features, as sketched in (12):[19]

(12) 'Argument' = {θ ↔ ϕ ↔ Λ}

Typically, however, all the features of an argument are matched by one and the same phonological unit (a 'lexical item'). Insertion of this unit cannot sucessfully take place until after grammatical features have been valuated in relation to a speech event, that is to say, after the computation of the CP phase containing the features has been completed. It follows that late insertion is forced.

If the idea behind the general scheme in (6) is on the right track, then clausal structure has three basic layers, as sketched in (13), where speech featuers include the Λ-features introduced above:

(13) [… speech features [grammatical features [event features …]]]

That is, features of the speech event are not outside clausal structure as usually assumed. They are crucially syntactic, I claim, and we must revise our ideas of syntax accordingly. There has been a strong trend in linguistics since the 1970s to escape this conclusion, probably for various reasons. Perhaps the simplest and also the most important reason is that incorporating the speech event into clausal structure raises some extremely hard questions. I address some of these questions in the following sections. Before doing so, however, let me say this:

[18] For the opposite view, that arguments are underlyingly Person Phrases, see Platzack (2004).

[19] With the exception of 'non-person' arguments, which do not enter into Λ-matching in the present approach, cf. (26) below.

The linguistic and philosophical literature on speech feature related phenomena is enormously copious and I am obvioulsy familiar with only a fraction of it. Important studies include Clements (1975), Chierchia (1989), Kaplan (1989), and, more recently, Bianchi (2000, 2003), Schlenker (2003), and Safir (2004a, 2004b), to mention only very few. See olso, specifically on Icelandic data, Sigurðsson (1990a). I can do no justice here to these and numerous other relevant works on speech feature related phenomena. Semantic approaches to these phenomena have produced many important results, there is no doubt about that, and what I have to say here does not always add much to the insights already developed by the above mentioned authors and others. On the other hand, my approach (like that of Bianchi's 2000, 2003) goes against mainstream thought in 20th century linguistic theorizing in that I develop a **syntactic** analysis of speech features and phenomena that relate to such features.

2. The syntax of speech features: an initial sketch

The first of our hard questions is what features are contained in the syntactic speech event. I make the minimal assumption that it contains the time and location of speech, $\mathbf{S_T}$, $\mathbf{S_L}$ respectively, and the inherent speech participants, that is, the logophoric agent and patient, $\mathbf{\Lambda_A}$ and $\mathbf{\Lambda_P}$. By distinguishing between Speech Time, S_T, and Speech Location, S_L, I am taking an anti-localist view of temporal deixis. In addition, I assume that S_L is the Fin feature of Rizzi (1997) and Platzack and Rosengren (1998), i.e. the 'high' EPP feature that is matched by +/-SPEECH LOCAL (+/-SL) elements, canonically +SL subjects or –SL expletives, whereas S_T is matched by T(ense), attracting it in V1/V2 environments (see further on matching below).

If this is on the right track, it is not a mere coincidence that expletive elements typically derive from items that denote a speech distal location (English *there*, Danish *der*, etc.) or a speech distal argument (French *il*, Icelandic *það*, Mainland Scandinavian *det*, German *es*, etc), but not from items that denote speech distal time ('*then*-type' expletives, as it were).

As evidenced by examples like (14), the tensed verb cannot normally match the EPP feature, i.e., we must distinguish between S_T, matched by T, and EPP = Fin = S_L, not matched by T:

(14) *Had John thus left in anger. / *Left John in anger.

Similar cases can be found in other Germanic languages, though, (see e.g. Mörnsjö 2002, Magnusson 2003), but they are exceptional and always special and should obviously not be accounted for by introducing a generally available option of EPP/Fin-matching by Tense in

for instance Germanic and Romance languages, whereas that option might perhaps be invoked to account for word order in VSO languages.[20]

As discussed in Sigurðsson 2004c, there are reasons to believe that positive matching takes precedence over negative matching. If so, the distribution of expletives vs. definite subjects partly follows: being –SL, expletives come into question as S_L matchers only in the absence of +SL subjects. There is obviously much more to be said here, for instance about the correlation between speech locality or proximity, definiteness and topicality (cf. Safir 1985, see also e.g. Sigurðsson 1989:292ff.), but I have to leave these extensively discussed issues aside.

The inherent speech event, then, may be described as in (15):

(15) Speech event $\supset$ $\{S_T, S_L{=}Fin, \{\Lambda_A, \Lambda_P\}\}$

This is the minimal and also the minimalistic assumption: these features are present in the speech event by necessity (whereas assuming any further elements there deviates from minimal design, and would hence require justification).[21] It is also uncontroversial that these features are parts of language, active in tense systems, pronominal and agreement systems and in the syntax of existential and other expletive containing clause types. The general evidence that they do belong to syntax and not merely to the conceptual interface is very simple and of the same basic kind as the evidence in favor of all other syntactic features: these features are not only intrepreted at the conceptual interface, they also have exponents and/or effects in PF. That is to say, these features are plausibly present in Narrow Syntax and therefore visible/interpretable to both the interfaces. Some of the evidence illustrating this will be presented below.

[20] So-called Narrative Inversion in Germanic languages is often described as having the effect of a special 'temporal extension' or 'discourse cohesion', which would seem to make sense if it does involve exceptional S_L-matching by Tense. It is largely or exclusively confined to certain written genres in Icelandic (see Sigurðsson 1990b:46). On the other hand, most of the Modern Swedish verb-initial orders discussed by Mörnsjö (2002) arguably or obviously involve PF deletion (in contrast to the more 'Icelandic-like' older Swedish examples in Magnusson 2003).

[21] In section 3, I propose a 'point of view' speech feature that is, I believe, empirically justified.

Another basic question is how the inherently silent speech event relates to the audible/visible clause. The plain approach is to assume that any utterance is a CP, containing elements of the speech event in its left sphere:[22]

(16) $[_{CP}$ ... speech event features $[_{IP} \ldots [_{vP} \ldots]]]$

If so, we can unify the ideas developed above with the system proposed by Rizzi (1997), as illustrated in (17):

(17) $[_{CP}$ Force … Λ_A, Λ_P … Top … S_T … S_L $[_{IP} \ldots \text{Pers}_s \ldots \text{Num}_s \ldots M \ldots T \ldots [_{vP} \ldots]]]$

For simplicity, I disregard Foc(us) and assume only one Top, notwithstanding the fact that a clause may have more than one topical element.[23]

Bare roots like 'table' or 'visit' are presumably interpretable without any syntactic feature matching (like signs in non-human 'languages').[24] All other syntactic elements, I assume, are subject to Agree and matching. Thus, the feature F and the (feature built) structure [XYW] are licit objects of Merge iff they abstractly Agree, that is, some substructure of [XYW], e.g. Y, must contain an *active feature*, call it $\mathbf{F^+}$, that potentially matches F. For successful, local matching of F by F^+, $\mathbf{F \leftrightarrow F^+}$, Move may have to apply to Y containing F^+ (Y/F^+), moving it such that it 'tucks in', commonly in the edge of XYW:

(18) $F\,[X - Y/\mathbf{F^+} - W] \quad \rightarrow \quad F\,[Y/\mathbf{F^+} - X - \langle Y/F^+ \rangle - W]$

[22] In earlier works (e.g. Sigurðsson 2003a, b) I have referred to this 'extended' CP as the Speech Phrase, SP. However, given the feature based theory pursued here, labels must be dispensed with, and hence the labels of 'syntactic chunks' are immaterial. I use 'CP', 'IP', and 'vP' here for plain expository ease, as convenient shorts for the speech feature domain (CP), the grammatical feature domain (IP) and the event feature domain (vP), respectively.

[23] In most, perhaps all such cases, though, the topical element matches the Λ-features, i.e. it is not clear that we need more than one Top, in addition to Λ_A, Λ_P. Plausibly, the facts of clitic placement in for instance Romance languages (cf. e.g. Poletto 2000) are largely due to Λ-matching under movement, but I am in no position to pursue the issue.

[24] In contrast, 'words' are arguably formed in syntax (see e.g. Halle & Marantz 1993, Josefsson 1998). Thus, the noun *visit* may be analyzed as being derived by syntactic merger of the root and *n*, whereas the verb *visit* is derived by merger of the root and *v*. Both *n* and *v* are phonologically silent, a common trait of English.

Move is thus driven by the needs of successful matching.[25]

Given this approach, an event feature in the vP-domain matches a grammatical feature in the IP-domain, which in turn matches a speech feature in the CP-domain. Thus, IP features take a mediating position between vP- and CP-features, entering into matching relationships in both 'directions'.[26]

As mentioned in section 1, I take it that syntax operates with interpretable features only. That is, no features delete under Agree or matching. Rather, features that are active or uninterpreted at some derivational stage get valued or interpreted under matching. Thus, an argument or a θ-feature comes with a ϕ-variable that is valued under matching with clausal ϕ/Λ-features, and a predicate comes with a T-variable that is valued under matching with clausal T/S_T-features.

If this is on the right track, matching is not confined to identity. Rather, it involves either identity or anti-identity, as it were, and as traditionally assumed for feature evaluation in both phonological and morphological theory. That is, a feature may either be positively matched as being identical with a particluar value or negatively matched as being 'actively distinct' from the value (given the present premises, this is compatible with the identity notion in Chomsky 2001a:5). For instance, a ϕ-variable that is positively matched against Λ_A will get the value [+1Person], whereas a ϕ-variable that is negatively matched agianst Λ_A will get the value [-1Person] (see section 3 for a more accurate formulation).

In addition, we need to assume that being negatively valued for a feature 'counts', as opposed to not being valued for the feature at all. Thus, there is a difference between third person ([-1Person, -2Person] and 'no person' (contra Benveniste 1966 and many since, including Sigurðsson 1996). A third person pronoun matches clausal Λ-features, albeit only negatively, whereas for instance a verb or an adverb does not enter into any kind of a matching relation with Λ-features. As mentioned above, however, positive matching takes precedence over negative matching (and, accordingly, negative matching need not take place in the presence of a stronger, positive matcher). This precedence of positive matching yields the effects that have lead many researchers to believe that third person is generally 'no person' (cf. the discussion of quirky agreement in Sigurðsson 2004c). – I shall return to the nature of third person in section 3.

[25] See Sigurðsson 2004c, where it is argued that Move applies under the condition of Inactive Intervention (which would otherwise block matching). Further Move, across F, may result in (apparent) 'Spec-head agreement', a displaced PF reflection of abstract Agree (cf. Sigurðsson 2004a).

[26] This is closely related to the ideas pursued in Platzack 2001.

In general, 'lexical items' are bundles of features and may accordingly match many syntactic features, partly independently or separately, but partly also because there is an implicational hierarchy between certain feature values. Thus, a first person singular subject matches not only Num_S and $Pers_S$ but also S_L (being inherently speech local), Top (being inherently topical), and Λ_A and Λ_P.[27] In many cases, however, matching is not of this compact kind but of a more split one. For instance, the associate of *there* evidently matches Num_S positively, whereas *there* itself can be analyzed as negatively matching $Pers_S$ and S_L, and potentially also Top (in the absence of a positive Top matcher):[28]

(19) There have probably been **some strangers** in the apartment.

A different split of matching is seen in Icelandic expletive constructions. The Icelandic expletive *það* 'there, it' differs from English *there* and Mainland Scandinavian *det* 'there, it' in being subject to a remarkable restriction, that I shall here refer to as the CLAUSE INITIAL CONSTRAINT, CLIC (see the discussion in Thráinsson 1979, Platzack 1987, Ottósson 1989, Sigurðsson 1989, Magnússon 1990, Rögnvaldsson and Thráinsson 1990, Holmberg 2000, Vangsnes 2002, to mention only a few of very numerous works that discuss the phenomenon). That is, it is strictly confined to the absolute first 'position' or 'space' in both main and subordinate clauses, thereby differing from referential subjects – in fact from all other lexical items in the language:[29]

(20) a. **Það** hefur verið talað um þetta.
it has been talked about this
'This has been talked about/discussed.'

[27] Also, some feature combinations are inherently incompatible. For instance, an element cannot be [-Plural] and simultaneously match both Λ_A and Λ_P positively. Developing a formal theory of interfeatural relations of this sort is beyond my goals here.

[28] An alternative is to assume that Top is not merged unless it has a positive value. See Cinque (1999:127ff.) for a general discussion of the question "whether we should take the entire array of functional projections to be present in every sentence."

[29] See also Sigurðsson (2004b). *Það* is excluded from subordinate clauses with a 'subject gap' (*wh*-questions, relatives). This is accounted for if *wh*-moved subjects are inherently +SL, hence taking precedence over *það* as matchers of S_L (thereby precluding its insertion). – As discussed in great detail by Thráinsson (1979), certain occurrences of clause anticipating *það* can 'invert' with the finite verb, but this second *það* is evidently another lexical item, sharing properties with demonstrative *það* 'it, that, what'.

b. Hefur (***það**) verið talað um þetta?
has (it) been talked about this

(21) a. Ég veit að **það** hefur verið talað um þetta.
I know that it has been talked about this
'I know that this has been talked about/discussed.'

b. Ég veit að um þetta hefur (*__það__) verið talað.
I know that about this has (it) been talked

(22) a. Ég veit ekki hvort (að) **það** hefur verið talað um þetta.
I know not whether (that) it has been talked about this
'I don't know if this has been talked about.'

b. Ég fer ef (að) **það** hefur verið talað um þetta.
I go if (that) it has been talked about this
'I'm leaving if this has been talked about.'

This relates to another fact, namely that *það* NEVER triggers agreement, thereby also differing from expletives in related languages, e.g. the Mainland Scandinavian *det*. Compare the Swedish clause in (23a) with the Icelandic one in (23b), where the agreement controlling DP is set boldface:

(23) a. **Det** blev skjutet älgar.
it:NEUT.SG was shot:NEUT.SG moose
'There were some moose shot.'

b. Það voru skotnir **hvalir**.
it were:3PL shot:NOM.MASC.PL whales:NOM.MASC.PL
'There where some whales shot.'

Evidently, Icelandic *það* does not match Num_S and $Pers_S$. It follows that it raises directly into the vicinity of a higher feature it does match, namely S_L=Fin=EPP. Thus, we have an account of the remarkable Clause Initial Constraint if the CP-domain is silent in *það* main clauses as opposed to subordinate clauses, as sketched in (24) for only a few clause types:

		Force	...	S_L	
(24) a.	Main clauses:	$[_{CP}$ Ø	...	Ø	$[_{IP}$ *það* …

b.	Declarative subordination:	[$_{CP}$ Ø	...	*að*	[$_{IP}$ *það* …	'that'
c.	Interrogative subordination	[$_{CP}$ *hvort*	...	(*að*)	[$_{IP}$ *það* …	'whether (that)'
d.	Conditional subordination:	[$_{CP}$ *ef*	...	(*að*)	[$_{IP}$ *það* …	'if (that)'
e.	...					

In all instances, then, *það* merges in or moves to the edge of IP 'in order' to match S_L.

If this is on the right track, *það* main clauses differ from regular Germanic V2 clauses in not raising the finite verb into the CP-domain (cf. Ottósson 1989, Rögnvaldsson & Thráinsson 1990), in wich case T stays put, matching S_T under Long Distance Agree. Connectives like *whether* and *if* presumably match Force, whereas simple 'complementizers' of the *that*-type lexicalize S_L (and possibly S_T as well).

Implicit in this approach, as mentioned in section 1, is that structural case features play no role in clausal computation. Accordingly, the syntactic distribution of DPs, including expletives, is in no way controlled by nominative case.[30] Rather, the most common type of NP-movement is driven by EPP (S_L-matching) and active ϕ-features (this is close to the approach in Chomsky's more recent works, e.g. 2000, 2001a; see Sigurðsson 2004b, 2004c for a more detailed discussion). Thus, the reason why Icelandic quirky subjects raise in exactly the same way as nominative subjects in the language (Thráinsson 1979, Zaenen, Maling & Thráinsson 1985, Sigurðsson 1989 and subsequent) is that quirky arguments in this language match $Pers_S$, subsequently raising into its vicinity (and then raising further to also match S_L, like ordinary subjects). It follows that the nominative argument in Icelandic Dat-Nom constructions cannot match $Pers_S$, hence the (in)famous person restriction in Dat-Nom constructions in Icelandic in contrast to e.g. German, Russian and most Romance varieties (see e.g. Boeckx 2000, Chomsky 2000, Sigurðsson 1996, 2004a, 2004b, 2004c, Schütze 2003). Conversely, quirky arguments in e.g. German (as in *Mir ist kalt* lit. 'me.DAT is freezing', etc.) are like Icelandic expletive *það* in matching only S_L (EPP), not getting into any matching relation with ϕ-features, whereas e.g. Mainland Scandinavian expletive *det* is like an ordinary subject in matching ϕ-features as well as S_L. Standard English *there* evidently does not match number, but it behaves like *det* and unlike *það* in being able to take a position that is lower than the visible edge of CP. This follows if it enters into a 'quirky agreement' correlation with $Pers_S$ (Sigurðsson in press).

[30] Nominative case comes for nothing, as the 'first case' in the approach developed in Sigurðsson 2004c; for numerous arguments against syntactic activity of case, see also Sigurðsson 1989, 1991, 2003a.

3. Logophoric matching and speech event binding: some initial observations

The present approach raises many intriguing questions that cannot be properly dealt with here. I shall here only briefly address logophoric matching and speech event binding, two phenomena that are of central importance in clausal computation but have not received any standard treatment within generative theory.[31]

Logophoric matching of third person participants is not simple identity matching. In a clause like *He hit me*, the subject obviously does not match the logophoric agent, Λ_A (or the logophoric patient Λ_P) under identity, that is, *He* $\neq \Lambda_A$ (and *He* $\neq \Lambda_P$). The question arises whether there is any necessary relation at all between Λ_A (or Λ_P) and *He*, that is to say, a relation that is not 'merely' pragmatic. In my view, there can be no doubt that there is such a 'non-pragmatic' relation. Referring to propositional event participants simply as 'θ' and abstracting away from the complications raised by 'non-personal' identificational categories like number, gender and class (honorific or not), we get the following matching relations:

(25) a. $\theta = +\Lambda_A, -\Lambda_P \rightarrow$ 1P

b. $\theta = -\Lambda_A, +\Lambda_P \rightarrow$ 2P

c. $\theta = -\Lambda_A, -\Lambda_P \rightarrow$ 3P

That is, in a clause like *He hit me*, there is nothing loosely 'pragmatic' about the correlation between the third person of the subject pronoun and the inherent logophoric roles. On the contrary, the correlation is a strictly inferential relationship: if the referent of the event role (θ-role) is identical to the referent of Λ_A we get 1st person, if it is identical to the referent of Λ_P we get 2nd person, otherwise, we get 3rd person. There is of course no question that we are abstracting away from many important phenomena (see further below), but there is also no doubt in my mind that this is the 'instinct' we should rely on and pursue.

The analysis in (25) does not state what is involved in Theta-Person matching as such. I suggest the following understanding:

(26) a. An event participant (argument) is valued under Theta-Person matching as being either [+Person] or [-Person].

[31] Some of the issues dealt with here have also been discussed in several other works of mine (e.g. Sigurðsson 2003c, 2004b), inevitably with some overlapping.

b. Only [+Person] arguments are potential speech participants, that is, they are the only arguments that undergo Λ-matching.[32]

Thus, we can replace the implicational relations in (25) with the matching relations in (27):[33]

(27) a. θ = +Person = $+\Lambda_A$, $-\Lambda_P$: 1P by computation
b. θ = +Person = $-\Lambda_A$, $+\Lambda_P$: 2P by computation
c. θ = +Person = $-\Lambda_A$, $-\Lambda_P$: 3P by computation
d. θ = -Person (= $0\Lambda_A$, $0\Lambda_P$): 3P by default

However, 3rd person morphology does not generally distinguish between 'personal' and 'non-personal' 3rd person.

The interaction of person with number and inclusiveness raises widely discussed problems (see Panagiotidis 2002, Cysouw 2002, Siewierska 2004 for recent discussions). Some of these problems are at least partly resolved under the present understanding (while others remain to be properly accounted for). *We*, for instance, is obviously not a plural of *I* in the sense that it denotes 'more than one speaker' (except perhaps under extremely rare and special circumstances). However, it is the plural of *I* in the sense that it denotes more than one potential linguistically active selves, where a linguistically active self is a speaking or a thinking (experiencing, feeling, …) actor: 'I and others that could be in my footsteps as speakers/thinkers/experiencers'. Thus *we* can mean 'I, John, Mary and you', but it cannot mean 'I and this book'. That is, *we* is not simply augmentative, as often assumed; rather the 'augmented entity' must be one or more potential logophoric agents. – Actually, this extends to the other persons.[34] *They*, for instance, cannot mean 'she and the book'. This follows under the understanding of Person in (26) above.

[32] If so, the Λ-features may be left unspecified, $0\Lambda_A$, $0\Lambda_P$, that is, speech event features escape matching in the absence of an active (positive or negative) matcher.

[33] I assume that T-matching by a T-variable of a predicate (E_T) also involves valuing as either [+Tense] or [-Tense], [+Tense] in turn getting further specified under S_T matching. I shall not discuss this here, though.

[34] I am grateful to Ken Safir for ponting this out to me. In my view, it is a distinct phenomenon that personal pronouns are among the elements that are used to "preserve[…] constancy of reference across a discourse span" (Safir 2004a). Thus, for instance, Icelandic *hann* 'he, it' may refer to e.g. 'the car' and *hún* 'she, it' may refer to e.g. 'the book', a fact that is arguably not a function of person as such but of the indexical nature of personal pronouns in combination with ϕ-features (gender, number and person in Icelandic). I shall not dicuss this any further here.

In combination with [+Plural] the constellations $+\Lambda_A$ & $-\Lambda_P$ and $+\Lambda_A$ & $+\Lambda_P$ yield exclusive vs. inclusive 1st person plural, respectively, but, in order to fully implement this analysis, we would need to develop a more refined theory of argumenthood and feature combinations than aimed at here. Also, it is not obvious how to analyze for instance 'exclusive' 2nd person plural, as it were ('you and and someone who is not present'): it involves a combination of the values $+\Lambda_P$ and $-S_L$, which would seem to lead to a contradiction. In general, both the 1st and the 2nd person plural can combinatorily refer to propositional event participants that are speech local AND distal, e.g. *we* = 'I and my passed away father' and *you* = 'you and President Putin'. Also, the 'simple' 1st and 2nd person singular pronouns can have 'double readings' of a related sort (e.g. 'the present logophoric agent at a different time and place').[35] I believe many of these and related problems can be solved if personal pronouns are analyzed as lexicalizing underlyingly complex syntactic structures. For instance: we_1 = [+Pers/$+\Lambda_A$ & +Pers/$+\Lambda_P$], we_2 = [+Pers/$+\Lambda_A$ & +Pers/$-\Lambda_A$,$-\Lambda_P$], and so on. I shall not pursue this any further here, though.

Multiple argument feature matching is another even more difficult problem (that has nonetheless raised amazingly little interest).[36] It must be the case that not just subjects but all arguments enter into ϕ/Λ-matching. Accordingly, I have been assuming not only $Pers_S$ and Num_S but also at least one potential $Pers_O$ and Num_O per clause.[37] This would seem to get support from overt object agreement in many languages (although interpreting agreement evidence is never a simple matter, cf. Bybee 1985, Siewierska 2004). In addition, it seems to gain indirect support from e.g. Scandinavian Object Shift (cf. Thráinsson 1996, 2001) and the Person Case Constraint, PCC, saying, basically, that if a clause contains both dative and accusative agreement or both a dative and an accusative clitic, then the accusative cannot be in the 1st or 2nd person (see e.g. Bonet 1991, 1994, Boeckx 2000), a fact that indicates that $Pers_O$ matching is constrained by factors that are independent of $Pers_S$ matching. Even so, it is evident that there are heavy restrictions on the number of ϕ/Λ-matchings or computations per clause. If the possibilities were unlimited we would expect the number of possible arguments per clause to be unlimited as well, but this is obviously not the case:

[35] As discussed in Sigurðsson (1990a), this "schizophrenia" sometimes has interesting consequences for mood selection in Icelandic. Certain (other) instances of this phenomenon lead Schlenker (2003) to introduce the feature –author*.

[36] Thanks to Valentina Bianchi for bringing this issue to my attention – as, in fact, so many other issues.

[37] Thus, Λ-features may be matched by more than one argument. This may seem to be a problem, but it is, plainly, a reality that linguistic theory has to accept and account for.

(28) a. Hann gaf mér þetta **handa þér**.
he:NOM gave me:DAT this for you:DAT

b. *Hann gaf mér þetta **þér**.
he:NOM gave me:DAT this you:DAT

c. *Hann gaf mér þetta **þín**.
he:NOM gave me:DAT this you:GEN

The extra beneficiary must be introduced by a preposition, *handa* 'for' (this is just as in English, i.e. rich case marking alone licenses nothing here). There are more than one conceivable ways of accounting for restrictions of this sort, e.g. in terms of predicational event structure. No matter what account one opts for, these restrictions are not surprising in view of the computational complexities that arise with a rising number of participants.[38]

Next, consider pronoun 'agreement' vs. 'non-agreement', as in (29):

(29) a. **He** said to **me** that **he** loved **me**.

b. **He** said to **me**: "**I** love **you**".

Importantly, this is not an extra-syntactic phenomenon.[39] In some languages, regular subordinate clauses show the same shift of pronoun reference as does direct speech in languages like English. The following examples illustrate this for Punjabi (from Siewierska 2004:203, fn. 14), Persian and Kurdish (Gh. Karimi Doostan, p.c.), and Hindi-Urdu (from Subbarao 2002):[40]

[38] Subordination and prepositions radically reduce computational complexity, an intriguing issue that I cannot detail about here. Let me just point out that this effect should arguably be accounted for in terms of embedded speech events (corresponding, roughly, to the phase notion in Chomsky 2001a and subsequent). Even so, this must be worked out in more detail, as there are severe restrictions on subordination and the number of PPs per clause.

[39] For semantic approaches, however, see, for instance, Banfield (1982), Chierchia (1989), Sigurðsson (1990a), Huang & Liu (2001), Schlenker (2000, 2003), among very many.

[40] Other languages that apply this strategy are e.g. Amharic, Donno SO (Dogon/Niger-Congo), Navajo, Kannada and Tamil (Schlenker 2000, 2003, Bianchi 2003 and references). K.V. Subbarao informs me that this is a common or even a general trait of Indo-Aryan and Dravidian languages. As seen by the translations within parentheses, subordinate clauses of this sort are typically or regularly ambiguous between, roughly, an 'indirect speech reading' and a 'direct speech reading' (see Schlenker 2003).

(30) a. Punjabi:

Gurnekne aakhiaa ki **mãi** jããvaagaa.

Gurnek:ERG said that I go:FUT:1M.SG

'Gurneki said that he would go.' (also: '… I would go.')

b. Persian:

Ali be Sara goft ke **man tora** doost daram.

Ali to Sara said that I you friend have.1SG

'Ali told Sara that he likes her.' (also: ... that I like you.')

c. Kurdish (Sorani):

Ali ba Sara goti ke **men tovem** xosh garaka.

Ali to Sara said that I you pleasant need-is

'Ali told Sara that he likes her.' (also: ' ... that I like you.')

d. Hindi-Urdu:

Saritane kahaa thaa ki **mainN aap**se kal miluungii.

Sarita:ERG said had that I you-with tomorrow will-meet

'Sarita had told me that she'd meet me tomorrow.'

(also: ' … that I will meet you tomorrow.')

It is clear that the difference between (29a) and (29b) cannot be accounted for in terms of 'direct' binding relations between the overt arguments. Rather, it must be accounted for in terms of LOGOPHORIC MATCHING. That is, it is accounted for, first, if any clause has a local speech event, and, second, if the local speech event of subordinate clauses is ANAPHORIC, that is to say, if its features are bound (hence 'redefined') by preceding elements:

(31) Subordinate clauses have a secondary, anaphoric speech event, with speech features (S_T, S_L, Λ_A, Λ_P, ...) that inherit their values from preceding elements, that is, either from the silent elements of the overall matrix speech event or from overt elements in a preceding clause.

In (29a), the Λ-features of the subordinate CP are identical with the Λ-features of the matrix CP, hence the constant reference of the pronouns (i.e., the same ϕ-elements match the same Λ-values in both the main and the subordinate clause):[41]

(32) He said to me that he loved me:

$[_{CP} \ldots \mathbf{\{\Lambda_A\}_i} \ldots \mathbf{\{\Lambda_P\}_k} \ldots [_{IP} \ldots he_j \ldots me_l \ldots [_{CP} \ldots \mathbf{\{\Lambda_A\}_i} \ldots \mathbf{\{\Lambda_P\}_k} \ldots [_{IP} \ldots he_j \ldots me_l \ldots$

In (29b), on the other hand, the embedded Λ-features have shifted values, not being identical with the silent matrix Λ-features but with the overt matrix arguments; hence the subordinate clause pronouns also have shifted values/reference:

(33) He said to me: I love you:

$[_{CP} \ldots \{\Lambda_A\}_i \ldots \{\Lambda_P\}_k \ldots [_{IP} \ldots \mathbf{he_j} \ldots \mathbf{me_l} \ldots [_{CP} \ldots \mathbf{\{\Lambda_A\}_j} \ldots \mathbf{\{\Lambda_P\}_l} \ldots [_{IP} \ldots I_j \ldots you_l \ldots$

Plainly, silent Λ-features ARE syntactically active: That is, the person of a pronoun is computed in syntax under Λ-matching (cf. (27) above), and hence the person information is visible/interpretable to not only the conceptual interface but also to PF, as seen in (29) and (30).

A parallel 'redefinition' of speech time, S_T is widely observed in tense interpretation of indicatives vs subjunctives. Consider the Icelandic (34):[42]

(34) a. Ég sá að hún **fór**.
I saw that she left.IND.PAST
'I saw that she was leaving.'

b. Ég vonaði að hún **færi**.
I hoped that she left.SUBJ.PAST
'I hoped that she was leaving/would leave.'

[41] The brackets are used for typographic reasons only. By using indices, I'm not committing myself to a representational approach instead of the standard derivational approach. The indices are descriptive tools, used here to highlight plain facts of language that any general linguistic theory has to take into account.

[42] There are some interesting differences between German, Icelandic and Romance subjunctives that I cannot discuss here. The Icelandic subjunctive is close to the Romance one, the major difference being that verbs of saying take subjunctive complements in Modern Icelandic, as opposed to many or most Romance varieties (and Old Norse, as a matter of fact). See for instance Giorgi & Pianese (1997:193ff.), Sigurðsson (1990a).

Before analyzing the tense interpretation difference between (34a) and (34b), let me state the 'obvious', namely that mood selection is evidently syntactic by the same standards as pronoun selction, or, for that matter, any other 'lexical decision': The underlying feature that controls mood selection is not only intrepreted at the conceptual interface, it also has PF-exponents, as seen in (34). As I shall demonstrate below, the feature in question is S_T. Accordingly, we must conclude that this speech event feature is **syntactic**.

The past tense indicative *fór* in (34a) is truly past in the sense that 'her leaving' happened before the speech time of the whole sentence, just like 'my seeing'.

(35) a. event of my seeing > Speech NOW
b. event of her leaving > Speech NOW

Reversing the time line (such that it runs from right past to left future), we may also sketch this as in (36):

(36) NOW
< PAST event of seeing
< PAST event of leaving

That is, both events are temporarily specified in relation to the Speech NOW (the overall S_T). – I shall return to the interclausal temporal relation shortly.

The past tense subjunctive *færi* in (34b), on the other hand, does not express any temporal relation to the Speech NOW. Instead, it expresses a temporal relation to the past matrix clause event, that is, the event of my seeing. Strikingly, the relation in question is not the usual relation of the past tense, but a non-past relation, yielding either a simultaneous or a future reading, '≥':

(37) Speech NOW < the event of my hoping
& the event of my hoping ≥ the event of her leaving

That is, the relation between the subordinate past subjunctive and the matrix past indicative is the same as that between the simple present tense and the Speech NOW:

(38) a. Hún fer.

she leaves

b. Speech NOW ≥ the event of her leaving

Thus, the past subjunctive does NOT remove the event itself (of her leaving, here) back in time; instead its 'past' value scopes over the reference time of the event.

We can account for this phenomenon if subordinate clause tense interpretation is relative to a 'speech time', S_T, like main clause tense interpretation, the difference being that the subordinate S_T is 'secondary', redefined in terms of EITHER the covert matrix, primary S_T OR in terms of the overt matrix grammatical tense, G_T:

(39) I saw that she left.IND.PAST (i.e. 'was leaving')

$[_{CP} \ldots \mathbf{\{S_{T1} = Speech\ NOW\}_i} \ldots [_{IP} \ldots \{G_T = PAST\}_k \ldots [_{CP} \ldots \mathbf{\{S_{T2}\}_i} \ldots [_{IP} \ldots$

(40) I hoped that she left.SUBJ.PAST (i.e. 'was leaving/would leave')

$[_{CP} \ldots \{S_{T1} = Speech\ NOW\}_i \ldots [_{IP} \ldots \mathbf{\{G_T = PAST\}_k} \ldots [_{CP} \ldots \mathbf{\{S_{T2}\}_k} \ldots [_{IP} \ldots$

In addition, the subjunctive conflates the secondary speech time, S_{T2}, and the reference time. It follows that the reference time of 'her leaving', S_{T2}=R, is (equal to) the Speech NOW in the indicative past in (34a)/(39), whereas it is (equal to) the Grammatical PAST in the subjunctive past in (34b)/(410. The temporal (event) reading of the subjunctive verb (or Tense) itself, in turn, is present/future or [– PAST] in relation to the reference time. Subjunctive Tense is thus closely related to infinitival 'Tense', not surprisingly in view of the widely attested overlapping of subjunctive and infinitival complementation (see e.g. Krapova 2001 on Bulgarian and Modern Greek).

The analysis in (39) of the simple indicative past in (34a) does not explicitly state the fact that subordinate event of 'her leaving' must be simultaneous to the matrix event of 'my seeing' (cf. the discussion in Giorgi and Pianesi 1997:283-284). That is, 'her leaving' is neither past nor future relative to 'my seeing', as indicated by a star in (41):

(41) a. Speech NOW < the event of my seeing * < the event of her leaving

b. Speech NOW < the event of my seeing * > the event of her leaving

Both relations can be expressed by other means, though. The PAST-PAST reading in (41a) must be expressed by the past perfect (Icelandic differing in that respect from English and many

other languages), and the PAST-FUTURE reading in (41b) must be expressed with the past tense future modal *mundi* 'would':

(42) a. Ég sá að hún hafði farið.
I saw that she had left
b. Ég sá að hún mundi fara.
I saw that she would leave

The PAST-PAST reading can be sketched in either of the two following conceptually different ways, depending on what time point is taken to be the reference time of the 'second' past, R (reversed time line and multiple arrows are used here for typographical convenience only):

(43) a. NOW
<<<<<<< PAST1/see (= R)
<<<<<<<<<<<<<<<< PAST2/leave
b. NOW (= R)
<<<<<<< PAST1/see
<<<<<<<<<<<<<<<<<<<<<<<<<<< PAST2/leave

The PAST-FUTURE reading may also be sketched in two conceptually different ways, again depending on what time point is taken to be the reference time of the 'second' past:

(44) a. NOW
<<<<<<<<<<<<<<<<<<<<<<<<<<< PAST1/see (= R)
PAST2/leave <<<<<<<
b. NOW (= R)
<<<<<<<<<<<<<<<<<<<<<<<<<<< PAST1/see
<<<<<<< PAST2/leave

Given the fact that the relations in (43a) and (44a) are expressed by the temporal auxiliaries 'had' and 'would', as in (42), it is not surprising that the simple past is not used to express differently 'deep' past tenses, as in (43b) and (44b).

Subordinate speech time binding involves binding by either the Speech NOW or the matrix grammatical tense, as sketched in (39) and (40), not by both (contra Giorgi and Pianesi

1997:283-284). Complex subordinate tenses are relative to the secondary (i.e. the 'bound') speech time of the subordinate clause. Such tenses are expressed by temporal auxiliaries in many languages, including Icelandic, as exemplified in (42).

SPEECH EVENT BINDING is evidently a highly complex phenomenon, operating separately for different features, a fact that gives support to the present approach to the speech event as being complex, with many subcomponents. LONG DISTANCE REFLEXIVIZATION in languages like Icelandic illustrates still further complexities that can arise in speech event binding. Thus, in a clause like (45), the reflexive *sig*, which is usually strictly clause bounded, may be bound by the matrix subject (notice that *María* may also be the binder, in which case the clause gets the reading 'John demands that Mary shaves herself'):

(45) **Jón** heimtar að María raki **sig**/hann.
John demands that Mary shaves SELF/him
'John demands that Mary shaves him.'

The fact that the reflexive can be bound across a potential binder seems to blatantly violate standard conceptions of locality and the Minimal Link Condition. However, as shown by Thráinsson (e.g. 1976, 1990, see also Sigurðsson 1990a), the use of the long distance anaphor reflects on the mind of the matrix subject *Jón*, such that the subordinate event is seen from his point of view, not the plain speaker (or the overall logophoric agent) point of view. This is accounted for if the speech event contains a point of view feature, POW, that is usually bound by the overall logophoric agent, but may be bound by a superordinate subject in exactly those environments where long distance reflexivization is possible. If so, the anaphor in (45) is locally bound by an invisible POW in the secondary speech event, that feature in turn being bound by the matrix subject:

(46) $[_{CP} \ldots \{\Lambda_A\}_i \ldots [_{IP}$ Jón$_k \ldots [_{CP} \ldots \{\Lambda_A\}_i \ldots$ **POW$_k$** $\ldots [_{IP}$ María$_l \ldots$ **SELF$_k$** $]]]]$

While both *María* and *Jón* are interpreted in relation to their respective local logophoric agent Λ_A (as being distinct from it), the anaphor is interpreted in relation to POW.[43,44] The structure

[43] In an approach like that of Kayne (2002; see also e.g. Platzack 2004), the matrix subject and the anaphor would be merged as a constituent, [Jón, sig], *Jón* subsequently raising (stranding the anaphor) to match POW, then raising further into the matrix clause to match the matrix 'subject features'.

of the clause-bounded reading of the anaphor (' … that Mary shaves herself'), on the other hand, is as shown in (47):

(47) $[_{CP} \ldots \{\Lambda_A\}_i \ldots [_{IP}$ Jón$_k \ldots [_{CP} \{\Lambda_A\}_i \ldots$ POW$_i \ldots [_{IP}$ **María$_l$** … **SELF$_l$**]]]]

Finally, the pronominal (coreferential) version of (45) has the structure in (48):

(48) $[_{CP} \ldots \{\Lambda_A\}_i \ldots [_{IP}$ **Jón$_k$** … $[_{CP} \{\Lambda_A\}_i \ldots$ POW$_i \ldots [_{IP}$ María$_l$ … **HIM$_k$**]]]]

As seen (and as described by Thráinsson 1976, 1990), neither the pronoun in (48) nor the locally bound reflexive in (47) are bound by / reflect on the matrix subject's POW.

Once again, we see that a feature that at first sight might seem not to be present in syntax, 'is there', after all, having consequences not only for the semantic interpretation of a clause but also for its PF. Let me however stress that many important issues remain to be sucessfully treated under the present approach. Thus, there is a discrepancy between S_T maching by T and the anchoring of indexicals like *tomorrow* (noted in e.g. Banfield 1982). Consider (49a) vs. (49b):

(49) a. Yesterday, 4th of July, John said to me: "I'll meet you here tomorrow".
b. Yesterday, 4th of July, John said to me that he would meet me here tomorrow.

In (49a), *tomorrow* refers to **5th** of July, while it refers to **6th** of July in (49b). That is, the reference of *tomorrow* is anchored with John in (49a), but with the speaker (overall logophoric agent) in (49b). Problematically, however, the temporal reference of *would meet* in (49b) is anchored with John (future relative to his saying), not with the speaker (cf. Sigurðsson 1990a:319-321). Similarly, expletives, understood as being -SL in the present approach, are fully compatible with +SL adverbials like *here*:

(50) There is a man waiting here.

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[44] The logophoricity that results from this point of view split is also available in languages like English (cf. e.g. Banfield 1982), the only difference being that Icelandic has 'grammaticalized' it by long distance reflexivization. – Notice that minimality (the Minimal Link Condition) needs to be relativized with repspect to individual features, a complex issue that I cannot go into here (see Sigurðsson 2004c for some discussion).

These facts might perhaps be taken as evidence that adverbial syntax is orthogonal or 'third dimensional' with respect to verb projectional syntax (cf. Åfarli 1997, Bobaljik 1999, Chomsky 2004b). I leave the issue at that.

4. Concluding remarks

The empirical issues discussed here, regarding both pronominal and temporal reference, are highly complex and fascinating, and call for much further research, both in depth and cross-linguistic. Interesting as these issues are, however, I cannot detail further about them here. The preceding initial observations do not, of course, amount to a full-fledged formal theory of logophoric matching and speech event binding. Importantly, however, they illustrate that the program of developing such a theory – syntactic, not merely semantic – is not only feasible but also an inevitable step in our quest of further understanding of language.

Evidently, clausal structure has three (familiar) basic feature layers or domains:

(51) $[_{\mathbf{CP}}$ … Speech features $[_{\mathbf{IP}}$ Grammatical features $[_{\mathbf{vP}}$ Event features …]]]

Extending the approach of Rizzi (1997), as well as that of Chomsky's (2001a and subsequent), I conclude that Universal Grammar minimally has the following types of features:

(52) $[_{\mathbf{CP}}$ Force … Λ_A … Λ_P … S_T … S_L $[_{\mathbf{IP}}$ … Pers … T … $[_{\mathbf{vP}}$ … θ … E_T …]]]

Person, thus, is parallel to Tense in that both match or interpret event features (θ-features and E_T, respectively), in relation to speech features (Λ-features and S_T).

It is true, as pointed out by Chomsky (1992:102; see also Jenkins 2000:15ff.) that "the study of everything" is pointless; in fact, it is obviously impossible. However, disregarding syntactic speech features, hence also logophoric matching and speech event binding, is like disregarding the movements of Jupiter's moons.

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