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Meaningful Silence, Meaningless Sounds*

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This paper discusses the very general question of how syntactic features of individual languages relate to the universal set of syntactic features. It is pointed out that Chomsky's approach (2001) to this fundamental issue is paradoxical. On one hand he argues that language is uniform in the relevant sense (L-UNIFORMITY), but, on the other hand, he also assumes that languages make different selections of features from a universal feature set (L-SELECTION). The paper argues strongly that L-uniformity is the only conceivable possibility. However, if that is correct, a great deal of what languages have in common is 'silence', that is, categories that are present in Narrow Syntax but silent in PF. In other words, language has innate elements and structures irrespective of whether or how they are overtly expressed. It follows that language variation is to a substantial extent 'silence variation', that is, much of it boils down to languages being explicit vs. silent about different (syntactically active) categories. This claim is coined as the SILENCE PRINCIPLE, saying that any meaningful feature of language may be silent.

Key words: Silence Principle, Compactness Principle, Uniformity Principle, language uniformity, universal features, feature selection, feature interpretation, matching, logophoric features, perceptible form, PF, speech event, speech event features, pronominal reference

1. Uniformity vs. selection

The hypothesis that all languages are variations on one and the same theme, UNIVERSAL GRAMMAR – UG, is one of the most fruitful and exciting hypotheses of intellectual inquiry. Given UG, two of the central questions of linguistic research are:

- A. What are the features of UG – $F(UG)$?
- B. How do UG features, $F(UG)$, relate to the features (or 'properties') of any particular language – $F(L_x)$?

In *Derivation by Phase*, Chomsky expresses his approach to Question B in two very different ways. On one hand, he suggests the UNIFORMITY PRINCIPLE (Chomsky 2001:2):

In the absence of compelling evidence to the contrary, assume language to be uniform, with variety restricted to easily detectable properties of utterances.

Chomsky does not explain what he means by “variety restricted to easily detectable properties of utterances”; presumably he is referring to EPP effects and morphological parameters. In any case, it is clear that he is not referring to any underlying syntactic-semantic differences. Thus, whatever the answer to Question A may be, we are led to believe that all languages have the same set of Narrow Syntax features.

However, Chomsky (2001:10) also suggests that languages differ with respect to their basic feature inventories:

FL [i.e. Faculty of Language] specifies the features **F** that are available to fix each particular language *L* ... We adopt the conventional assumption that *L* makes a one-time selection [F_L] from **F**. These are the features that enter into *L*; others can be disregarded in the use of *L*.

In other words, UG is or contains a universal pool of features **F**, from which languages each make their own specific selection. Thus, if UG contains { $F_1, F_2, F_3, F_4, F_5, F_6$ }, language A might pick { F_1, F_2, F_6 }, while language B might opt for { F_4, F_5, F_6 }. This, however, contradicts the Uniformity Principle, that is, Chomsky’s answers to Question B are paradoxical. Let us refer to these views as L-SELECTION vs. L-UNIFORMITY.

2. Against selection

Thráinsson (1996) presents an interesting and a radical version of L-selection, suggesting that the selection of functional categories is a matter of acquisition, the child assuming only those categories that he or she has evidence for, where ‘evidence’ can be directly read off from the surface structure of a language, either its morphology or its word order patterns (the Real Minimalist Hypothesis in Thráinsson’s terminology, see 1996:261).¹ Thus, Thráinsson suggests that even closely related and typologically rather similar languages, such as Icelandic and the mainland Scandinavian languages, have different inventories of basic functional categories, Icelandic having a split IP, with AgrS, T and AgrO, whereas the mainland Scandinavian languages only have one, unsplit Infl (or T).

I shall here argue against L-selection. As we shall see, there is accumulating evidence that any language has ‘direct access’ to any feature of UG.

Audible language grew out of silence, as it were, that is, internal language presumably preceded external language (Chomsky 2005). We know very little about when, how and why language first was externalized (cf. Christiansen and Kirby 2003), but it seems uncontroversial that the first audible functional category of the first human language was not acquired on the basis of audible ‘evidence’. This extends to all functional categories: they once had no audible exponent, hence, if they must be acquired, they should never have been able to get selected in the first place.

One of the leading ideas of the Minimalist Program (e.g. Chomsky 2000, 2001, 2004) is that there should be no Narrow Syntax (NS) internal levels, such as S-structure and D-structure. The optimal solution would thus be that there is a direct relationship between Universal Narrow Syntax, UNS, and the various expressions this system gets in different PFs of the world’s languages, as sketched in (1):²

$$(1) \text{ UNS} \rightarrow \text{PF}(\text{L}_x)$$

On L-selection, however, the correlation between UNS and different PFs is only indirect, as sketched in (2):

$$(2) \text{ UNS} \rightarrow \text{NS}(\text{L}_x) \rightarrow \text{PF}(\text{L}_x)$$

If so, the question arises why all human languages are compatible, can be translated or ‘converted’ despite all their apparent differences (the Code Talker Paradox, see Baker 2001). What is it that blocks any two distinct syntaxes, $\text{NS}(\text{L}_x)$ and $\text{NS}(\text{L}_y)$, say in Australia and North-America, from having developed in such different directions that they become radically incompatible or ‘non-convertible’? Mathematical and other artificial languages are incompatible with natural languages and generally also with each other.³ Thus, a simple sentence like *She and he were a married couple* has no mathematical translation (say, ‘ $1 + 1 = 2$ ’ or ‘ x^2 ’) – while it has for instance the Icelandic translation ‘Hún og hann voru hjón’ – nor does a formula like $2 \times 3 = 6$ have any ‘chess-language’ translation like ‘White Queen f5-f7 mates black King’. Why does this situation of incompatibility arise among artificial languages as well as between such systems and natural languages, whereas it seems *never* to arise between *any* two human languages, including *all* known sign languages?⁴ Given L-selection, this is nothing less than a miracle.

Children obviously acquire lexical and phonological peculiarities of their surrounding language(s). But there can hardly be any doubt that central categories like Tense, Neg(ation) and the Interrogative feature are universal, innate properties, hence not learned. If Tense, for instance, is a category that either may or may not be acquired, the average chance of finding it in a particular language should be 50%, other things being equal. Similarly, the average chance of finding e.g. both Tense and Neg should be 25%, the average chance of finding both of these plus, say, the Interrogative (Q) and Imperative (Imp) features should be 6.25%, and so on. The increasing improbability for randomly selected features to be co-selected is illustrated in (3):

(3)a. T	50,0%	
b. T, Neg	25,0%	
c. T, Neg, Q	12,5%	
d. T, Neg, Q, Imp	6,25%	
e. T, Neg, Q, Imp, Pers	3,12%	
f. T, Neg, Q, Imp, Pers, Num	1,56%	
g. T, Neg, Q, Imp, Pers, Num, Mood	0,78%	
h. T, Neg, Q, Imp, Pers, Num, Mood, Asp	0,39%	= 1/256

That is, only 27 out of a sample of 7000 languages should have the eight highly frequent features in (3h) in common. The chances of any two languages having 20 common features should be less than 1 out of 10.000, etc.

This gains no support from facts. Languages of the world show a much higher degree of uniformity, even overtly, than predicted by *general L-selection*. Tense, for instance, is found as a ‘grammatical’ category in most languages, it seems. Even the few languages that have been claimed not to ‘grammaticize’ Tense, such as Burmese and Dyirbal, express it systematically (see Comrie 1985:50 ff.). And, as so succinctly stated by Horn and Kato in the opening line of their volume on negation and polarity (2000:1): “Negative utterances are a core feature of every system of human communication and of no system of animal communication.”

Notice that the question of whether e.g. Neg or Tense are narrowly linguistic or more general cognitive features is not obviously crucial in this context; what matters here is that these categories are innate, hence need not – could not – be acquired. Given, in turn, that there are at least *some* innate, non-selected functional categories or features, *partial L-selection* calls for a theory that details which ones have to be selected and which ones need not be, and it also calls for a theory or at least some informal ideas of how selection could have emerged in the first place. In addition, we would have to assume that

Narrow Syntax in fact splits in two: a universal part and a language specific part, which in turn calls for a theory of how the two come to function as a single coherent system.

A 'mixed approach' along these lines, where some functional categories would need to be acquired while others would be inherently active, is not logically precluded, as far as I can see, but it is not clear to me how such an approach could be carried out in a constrained, non ad hoc fashion (nor is it clear to me how a mixed system could have evolved, but I'll not stretch that point). A basic question, for instance, is *how* to measure that a particular category is universally active, as opposed to some other categories, and another very simple question is *why* that should be so.⁵ The same questions arise for every single category that comes into consideration as a functional category. In view of the circumstances, mentioned above, that Tense is not grammaticized in all languages, do we conclude that it has to be universally acquired (which would lead us back to general L-selection)? Or do we conclude that some categories are universally active in spite of not being universally grammaticized, and, if so, how can we possibly know that?

In my view, acquisition theory cannot solve or account for these issues, not even remotely, and the reason, I claim, is simple: Children acquire PFs and lexica, not Narrow Syntax.⁶

3. Meaningless sounds

Humans have a deeply rooted need or even coercion to interpret any variation as meaningful, and this is a strong trend in linguistics. Case is a case in point. There are almost innumerable studies of different case systems, aiming to reveal the 'true meaning' of specific cases or of case in general.⁷ However, the morphological cases do not themselves have *any* meanings but are instead varyingly ambiguous markers of underlying 'case meanings' that either may or may not have overt exponents in particular languages (as demonstrated and discussed in Sigurðsson 2003a). Thus, it does not make any (non-morphological) sense to say that English, for instance, lacks 'the dative case' or 'the partitive case'. It evidently has all the same underlying case semantics as its 'case-dressed' cousins, German and Icelandic, and as, say, Hungarian.

The more one studies case, the more one is inclined to believe that there are *no* underlying case differences between languages. The same seems to be true of other categories, for instance the subjunctive. English does not have an

inflectional subjunctive, but it certainly has syntactic subjunctive, not only in examples like (4), but also in less formal examples as in (5):⁸

(4) The police insisted that he **tell** the truth.

(5) The police insisted that he **should tell** the truth.

Icelandic differs from English in having an inflectional subjunctive, used in contexts as in (4)-(5) as well as for various other purposes. In addition, it has a logophoric long distance reflexive in certain subjunctives, as in (6); as shown, it is also possible to use an ordinary pronoun instead of the reflexive:⁹

(6) *Pétur vonaðist til að hún byði sér / honum.*
 Peter hoped for that she invited.SJ SELF / him
 ‘Peter hoped that she would invite him.’

The referent of the pronominal is viewed from the speaker’s point of view, while the same referent is seen from his/her own point of view in the reflexive version, that is, from the viewpoint of a logophoric secondary ego (Sigurðsson 1990, based on the insights of Thráinsson 1990).

Long distance reflexivization into finite subordinate clauses is cross-linguistically rather rare. As most languages, English has not developed systematic means to express logophoricity. Again, however, it would be incorrect to say that English ‘lacks’ or has ‘not selected’ the relevant property; rather, it does not express it by ‘grammatical means’ in its Perceptible Form (PF).¹⁰ It certainly *has* logophoric semantics, no less than Icelandic (for a more general discussion, see Banfield 1982).

Agreement is even more obviously meaningless than morphological case, mood and long distance reflexivization. Consider the striking fact that the very robust agreement variation illustrated in (7) for English, German, Swedish and Icelandic, in that order, has no meaningful correlates, ‘makes no sense’ at all (agreeing forms are boldface):

- | | | |
|-------|--|------------|
| (7)a. | They would be rich. | -AGR, -AGR |
| b. | <i>Sie würden reich sein.</i>
they would.3PL rich be | +AGR, -AGR |
| c. | <i>De skulle vara rika.</i>
they would be rich.PL | -AGR, +AGR |
| d. | <i>Þeir mundu vera ríkir.</i>
they(N.PL.M) would.3PL be rich.N.PL.M | +AGR, +AGR |

Consider also DP internal concord in Icelandic, as compared to English:¹¹

(8) a.	<i>allir</i>	<i>þessir</i>	<i>ffórir</i>	<i>frægu</i>	<i>kaflar</i>
	all	these	four	famous	chapters
	N.M.PL	N.M.PL	N.M.PL	PL.DEF	N.M.PL
b.	<i>alla</i>	<i>þessa</i>	<i>ffóra</i>	<i>frægu</i>	<i>kafla</i>
	all	these	four	famous	chapters
	A.M.PL	A.M.PL	A.M.PL	PL.DEF	A.M.PL
c.	<i>allar</i>	<i>þessar</i>	<i>ffórar</i>	<i>frægu</i>	<i>bækur</i>
	all	these	four	famous	books
	N/A.F.PL	N/A.F.PL	N/A.F.PL	PL.DEF	N/A.F.PL

Clearly, the rich agreement and concord found in languages like Icelandic does not express *any* meaningful distinctions that are absent in morphologically poorer languages like English.¹² Straightforward and simple as this fact is, it evidently needs to be highlighted to the linguistic community.

Abstract Agree is however meaningful or functional in the sense that it is a universal precondition on Merge (Sigurðsson 2004a). In this respect, English is of course no poorer than e.g. Icelandic. Reflecting abstract Agree in morphology, on the other hand, is extravagance, at least linguistically.¹³

We could go on like this forever. The fact that a language does not express a certain feature in its Perceptible Form does not mean that the feature is absent from its Narrow Syntax.¹⁴

- The fact that Russian and Arabic do not have a copula in the present tense, does not mean that clauses like *Boris glup* ‘Boris [is] stupid’ or *Omar muʕallim* ‘Omar [is] a teacher’ (from Benmamoun 2000:3) lack tense and finiteness.
- The fact that e.g. Japanese, Russian, Serbo-Croatian (and most other Slavic languages), Estonian and Finnish have no articles does not mean that they lack definiteness (cf. Lyons 1999; see also e.g. Chesterman 1991, Hiietam 2003, and the discussion of cross-linguistic variation with respect to the D(et) category in Bošković 2003).
- The fact that e.g. the Germanic languages have no future tense inflection of verbs does not mean that these languages lack future tense in clauses like *John leaves on Saturday*.
- The fact that the mainland Scandinavian languages do not overtly object shift full DPs, as opposed to Icelandic, does not mean that they lack the category that attracts object DPs in Icelandic (contra Thráinsson 1996).
- The fact that PRO-infinitives in e.g. English have no overt marking of tense or person does not mean that these features are absent from English PRO-infinitives.

And so on, and so forth. In spite of the Chomskian ‘cognitive revolution’, linguistics is still heavily burdened by the positivist heritage of 20th century pre-Chomskian structuralism. In science, however, it is *not* a virtue to only believe what one ‘sees’. We do not ‘see’ atoms, electrons or quarks, black holes or anti-matter, at least not in any simplistic sense of the notion ‘see’.

Linguists are accustomed to the ‘Saussurean arbitrariness’ of the sound-meaning pairing at the lexical level.¹⁵ We do not generally assume that Italian *tavola* relates more naturally or directly to the meaning ‘table’ than Russian *stol*.¹⁶ In contrast, many linguists seem to strongly believe in ‘sensible morphology’. However, there is no such thing. Morphology is radically meaningless in the sense that it *never* expresses *any* underlying syntactic-semantic differences between languages. The reason is simple in my view: there are no such differences.

Morphological variation, seen in e.g. case systems, complex honorific systems and multiple ‘gender’ systems, has of course often been taken to constitute a serious challenge to language uniformity.¹⁷ Thus, I’m sometimes asked whether I would want to claim that e.g. the indirect object of the verb *give* in English is ‘dative’, just as in e.g. Icelandic. The question is misleadingly formulated. Instead, we should ask: “Is the indirect object in Icelandic ‘dative’ in some non-morphological or deep sense that does not apply to English?” The answer to that question is unequivocally NO, as far as I can see (see the discussion in Sigurðsson 2003a). Rather, the PF case system of Icelandic overtly marks universal syntactic relations (or even relational complexes, that is, a series of combined relations) that are not marked in the English PF.

Consider also the fact that Fula (Niger-Congo) has “about twenty genders, depending on the dialect” (Corbett 1991:191), Icelandic has three genders, whereas Finnish has no pronominal or inflectional category of gender. Understandably, an antagonist of uniformity is tempted to ask whether this means that Finnish should be analyzed as having three or twenty underlying but silent ‘genders’. Again, however, the question is misleadingly formulated. Like most other, perhaps all, morphological categories, gender is a hybrid category, reflecting various factors or features in differing ‘mixtures’ or ‘proportions’. Thus, the Icelandic gender system is to a considerable extent a phonologically based, language-specific classificational system, applying to lexical items in PF and triggering phonological agreement processes (as in (7d) and (8) above, cf. Sigurðsson 2004a). However, to the extent that the Fula and the Icelandic ‘gender’ systems are syntactically based, the relevant features are arguably accessible (albeit not necessarily expressed) in all languages, including Finnish.

Morphology does *not* ‘make sense’. It expresses language-specific PF reflections of Universal Grammar (and, to an extent, of different lexica). That is, it relates features of Narrow Syntax and PF and it does so in a much more arbitrary fashion than usually assumed.

4. Meaningful silence

The central task, even mission, of linguistics is to further our understanding of the sound-meaning relationship in language, hence also our understanding of the fact that languages differ – the Babel wonder and mystery of language. However, we are never going to gain any significant understanding of this mystery unless we appreciate the seemingly paradoxical fact that the perhaps most common way of ‘expressing’ meaning is – by not expressing it. That is: language has innate structures that have meanings irrespective of whether or how they are expressed in Perceptible Form.¹⁸

I coin this claim as the THE SILENCE PRINCIPLE. It is the basic insight I gained from learning some of the signs – and some of the silence – of Icelandic sign language.¹⁹

- (9) Languages have meaningful silent features; any meaningful feature may (in principle) be silent.²⁰

In order to prevent misunderstanding: First, this is about normal sentences in normal language use, not ‘theatrical’ silence or any other special ‘use’ of silence in communication. Second, this is of course not to say that sign languages are ‘less expressive’ than oral languages. To my knowledge, they are not. Indeed, they offer striking evidence that language is internal to humans, independently of the various external forms it takes. Thus, it is evident that numerous sign languages have emerged spontaneously, ‘from nowhere’. Deaf people form isolated and small communities, often so small that their languages come into being and vanish within a short period of time.²¹ In fact, the creation of a sign language has been studied and partly documented (by Judy Kegl and others, see Pinker 1994:36-37).

Also, new languages come into being as oral pidgins develop into creole, often with grammatical structures that have no predecessors in the linguistic input (as demonstrated by Bickerton 1999). A parallel fact that is not commonly acknowledged is that even ‘established’ languages constantly develop new traits (although such processes are very much slowed down in generally literate

societies). Icelandic is usually taken to be an extremely conservative language. However, even this ‘fossil’ among languages has developed new constructions, such as the PROGRESSIVE *vera að* ‘be to’ construction, the INCHOATIVE *fara að* lit. ‘leave to’, i.e. ‘begin, go to’, and the recent or PROXIMATE ANTERIOR *vera búinn að* ‘be (recently) done/finished to’ construction, often corresponding to the perfect in related languages (see, most recently, Wide 2002):

- | | |
|--|--------------------|
| (10)a. <i>Ég er að læra.</i>
I am to study
'I am studying.' | PROGRESSIVE |
| b. <i>Ég fór að læra.</i>
I left to study
'I began studying.' | INCHOATIVE |
| c. <i>Ég er búinn að læra.</i>
I am done to study
'I have (just) finished my homework.
/ I'm done studying (for good).' | PROXIMATE ANTERIOR |

Moreover, these constructions combine with each other or with other aspectual constructions to form still other, ‘complex aspects’, such as the IMMEDIATE INCHOATIVE in (11a) and the IMMEDIATE ANTERIOR in (11b); the emphasis on the finite verb expresses ‘immediate’ (as opposed to merely ‘proximate’):²²

- | | |
|--|----------------------|
| (11) a. <i>Ég ER að fara að læra.</i>
I am to leave to study
'I'm on the brink of starting studying.' | IMMEDIATE INCHOATIVE |
| b. <i>Ég ER að verða búinn að læra.</i>
I am to be(come) done to study
'I'm on the brink of having finished studying.' | IMMEDIATE ANTERIOR |

These and other complex aspects of Modern Icelandic did not have any grammaticized exponents in earlier Icelandic, nor were they borrowed from neighboring languages (where they have no systematic exponents).²³ Rather, these categories are present in Narrow Syntax, irrespective of whether or how they are expressed in individual PFs.

‘Examples of silence’ are of course both numerous and varying, across languages and also within languages.²⁴ Two further very simple examples follow:

Optative mood is generally a ‘discreet’ category in Icelandic, formally indistinguishable from the subjunctive. However, the copula has specifically optative forms (*hann veri* ‘he be’ = ‘may he be’, etc.), distinct from subjunctive

forms (...*hann sé* ‘he be’, etc.), thereby highlighting that the optative is syntactically active in the language, although it isn’t normally ‘PF active’.

English has middle forms without a middle marker, *opens*, *opened*, etc. (Keyser and Roper 1984, among many), and the same applies to Dutch and Afrikaans (e.g. Ackema and Schoorlemmer 1995, Booij 2002:139-140). In general, the Germanic languages have not developed specialized middle markers, Swedish, for instance, most commonly using the ‘passive’ *-s*-marker, *öppnades* ‘opened-*s*’, etc., German applying the reflexive pronoun, *öffnete sich* ‘opened (itself)’, and Icelandic using the multiply ambiguous *-st*-marker, *opnaðist* ‘opened-*st*’ (Anderson 1990). Evidently, though, all the Germanic languages have the ‘middle category’, irrespective of whether or how they overtly express it.

It is trivially obvious that ‘keeping quiet’ about a category is more economical than expressing it.²⁵ The Silence Principle is plausibly the most powerful economy strategy applied in PF, but another very powerful one is THE COMPACTNESS PRINCIPLE.²⁶

- (12) Any meaningful feature may combine with its neighboring feature(s), so as to make up a compact unit of information.

Thus, language may combine distinct features, such as aspect, tense, mood, gender, number and person in e.g. the verb inflection, thereby producing a compact unit of information, easy to express but underlyingly highly complex. Substantial cross-linguistic variation arises because different features combine in different languages. Two simple examples: 1) gender combines with tense in only some languages, for instance Arabic; 2) person and number combine with the negation in Finnish, in contrast with, e.g., Germanic and Romance languages.

Given the Silence Principle, it is lexicalization that is last resort, requiring some licensing or justification (see my approach to lexical arguments vs. PRO in Sigurðsson 1991), whereas non-lexicalization is the unmarked or the minimal strategy, applied whenever possible.²⁷

5. Even more meaningful silence

Language, our object of inquiry, is much less tangible than most of us would presumably wish. Not only may features be silent in individual languages, there are also meaningful features that are generally silent across languages. In recent work, I have argued that any finite clause is computed in relation to elements or

features of the *speech event*.²⁸ More specifically, silent speech event features, S_F , are matched by grammatical features, G_F , which in turn are matched by propositional event features, E_F . This is informally sketched in (13), where ‘ $A \leftrightarrow B$ ’ reads as ‘ A matches B ’ or, more accurately, ‘ A is computed/interpreted in relation to B ’:

$$(13) \quad E_F \leftrightarrow G_F \leftrightarrow S_F$$

I make the minimal assumption that the speech event contains at least the inherent speech participants and the time and location of speech, S_T , S_L respectively. 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. Conceiving of speech participant features as logophoric features (see below), lambda features or *A-features* for short,²⁹ the composition of the inherent speech event can be sketched as follows:

$$(14) \quad \text{Speech event} \supset \{S_T, S_L=\text{Fin}, \{\Lambda_n, \Lambda_{n+1}, \dots\}, \dots\}$$

That is, the speech event minimally contains the time and location of speech and a set of participants.

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). It is also uncontroversial that these features are parts of language, crucially active in tense systems, locative expressions and pronominal and agreement systems. 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 interpreted at the conceptual interface, they also have audible or visible effects in PF (in spite of generally being silent themselves). 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.³⁰

Since Reichenbach (1947), it is widely acknowledged that language computes grammatical tense in relation to the speech time (Hornstein 1990, Giorgi and Pianesi 1997, Cinque 1999, and many others). The central Reichenbachian insight is often illustrated with the past perfect, as in (15):

$$(15) \quad \text{He had read the book (before seven).}$$

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 reading 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. What this means is that the event time, E_T , is interpreted or valued in relation to the grammatical tense (reference time), G_T , which in turn is interpreted in relation to the speech time, S_T (see the discussion in Giorgi and Pianese 1997:27ff. and in Cinque 1999:81ff.). We may sketch this as in (16):

$$(16) \quad E_T \leftrightarrow G_T \leftrightarrow S_T$$

This is just a restatement of the Reichenbachian insight. Amazingly, on the other hand, linguists and philosophers have, to my knowledge, not generally acknowledged another closely related fact, namely that Person and other ϕ -features have a parallel status as grammatical Tense in that these grammatical participant features, G_P , relate θ -features or event participants, E_P , and speech participants, S_P :³¹

$$(17) \quad E_P \leftrightarrow G_P \leftrightarrow S_P$$

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 (or thought), that is the LOGOPHORIC AGENT vs. LOGOPHORIC PATIENT. Consider the very simple examples in (18):

(18) a. **I believe you.**

1SG = the speaker = the logophoric agent (and also the ‘believer’)

2SG = the addressee = the logophoric patient (and also the ‘believer’)

b. John said to me: “**I believe you.**”

1SG = John = the logophoric agent (and also the ‘believer’)

2SG = the speaker = the logophoric patient (and also the ‘believer’)

As this illustrates, the constant meaning of the 1st and 2nd person pronouns is not speaker vs. addressee, but the local logophoric agent vs. logophoric patient, Λ_A and Λ_P .³²

Person and other ϕ -features, then, are like Tense in that they are *grammatical features* that mediate between or relate *event features* and *speech features*. As already sketched in (13):

$$(13) \quad E_F \leftrightarrow G_F \leftrightarrow S_F$$

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).³³ Narrow Syntax is basically a device that computes propositional events in relation to speech events.³⁴

The linking or interpretative function of ϕ -features may be sketched as follows:

$$(19) \quad \theta\text{-features} \leftrightarrow \phi\text{-features} \leftrightarrow \Lambda\text{-features}$$

In feature based syntax, where labelling and X'-theoretic conventions are dispensed with (Collins 2002; cf. Chomsky 2002:151), an argument is not a 'position' or a 'DP', but a set of relationally interpreted features (typically matched or lexicalized by a single PF element):

$$(20) \quad \text{'Argument'} = \{\theta \leftrightarrow \phi \leftrightarrow \Lambda\}$$

Consider pronoun 'agreement' vs. 'non-agreement', as in (21):

- (21) a. **He** said to **me** that **he** loved **me**.
 b. **He** said to **me**: "I love **you**".

It is obvious that the difference between (21a) and (21b) cannot be accounted for in terms of 'direct' binding relations between the overt arguments.³⁵ 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 inherited from preceding elements:

- (22) Subordinate clauses have a secondary, anaphoric speech event,³⁶ 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 over-all matrix speech event or from overt elements in a preceding clause.

In (21a), 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):³⁷

- (23) He said to me that he loved me:
 $[_{CP} \{\Lambda_A\}_i \dots \{\Lambda_P\}_k \dots [_{IP} \dots he_j \dots me_i \dots [_{CP} \{\Lambda_A\}_i \dots \{\Lambda_P\}_k \dots [_{IP} \dots he_j \dots me_i \dots$

In (21b), 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:

- (24) He said to me: I love you:
 $[_{CP} \{\Lambda_A\}_i \dots \{\Lambda_P\}_k \dots [_{IP} \dots \mathbf{he}_j \dots \mathbf{me}_i \dots [_{CP} \{\Lambda_A\}_j \dots \{\Lambda_P\}_i \dots [_{IP} \dots I_j \dots \mathbf{you}_i \dots$

On this approach, 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.

Notice that logophoric matching of third person arguments is not simple identity matching. In a clause like *He loved 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-person’ identificational categories like number, gender and class (honorific or not), we get the following matching relations (where 3p elements negatively match both Λ_A and Λ_P):

- (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 loved me*, there is nothing loosely pragmatic about the correlation between the third person of the subject pronoun and the Λ -features of the speech event. On the contrary, the correlation is a strictly inferential relationship: if the referent of a θ -feature 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 here (i.e. more features are involved), but there is also no doubt in my mind that this is the basic insight we should rely on and pursue.

As seen in (23) and (24) above, pronominal reference (that is, the pronoun ‘agreement’ vs. ‘non-agreement’ in examples like (21)) is accounted for in terms of shifted vs. non-shifted values of the silent Λ -features of the secondary speech event of an embedded clause. In case the secondary Λ -features have the same values as the overall matrix Λ -features, the pronouns also have non-shifted val-

ues ('pronoun agreement'), but in case the secondary Λ -features have shifted values, the overt pronouns also have a shifted reference.

As I have argued elsewhere (in Sigurðsson 2004b), the secondary speech time, S_T , of embedded clauses may undergo a parallel shift, the effects of the shift being visible through mood selection in languages like Icelandic and the Romance languages. In case the embedded S_T is non-shifted, having the same value as the overall S_T (the basic speech NOW), the finite verb of the embedded clause shows up in the *indicative*. In case the secondary S_T , on the other hand, has a shifted value (in which case it has the same value as the overt grammatical tense in a matrix clause), then the subordinate clause shows up in the *subjunctive*, with a severely restricted temporal reference ('tense-agreement' and related phenomena, see also Sigurðsson 1990).

Plainly, silent speech event features *are* syntactically active. That is the inevitable conclusion, unless we want to say that mood selection, pronominal reference and temporal reference are not decided in syntax.³⁸

The inherent features of the speech event, then, are *not* pragmatic. They are *syntactic*, indispensable elements, independent of specific 'circumstances' and crucially entering the computation of every single argument and every single clause in all languages. Clauses or propositions have *no truth value*, are entirely non-functional, unless they are computed in relation to the speech event and its components.³⁹ We must conclude that any finite clause contains S_T , S_L , Λ_A and Λ_P . Unifying these ideas with the approach of Rizzi (1997), we may conclude that clauses crucially have minimally the following architecture:⁴⁰

$$(26) \quad [_{CP} \Lambda_A \dots \text{Force} \dots \Lambda_P \dots S_T \dots S_L [_{IP} \dots \text{Pers} \dots T \dots [_{VP} \dots E_T \dots \theta \dots$$

Speech event features are those features of language that are most obviously and uncontroversially universal: there can be no language without the fundamental components of the speech event. Nonetheless, these syntactic features are quite generally silent.⁴¹

To repeat: language has innate elements and structures that are independent of their perceptible exponents. Thus, language variation is strictly confined to PF (and the lexicon), and the setting of parameters does not merely involve choices between different audible strategies (in oral languages, visible strategies in sign languages). It also, or even primarily, consists of numerous choices whether or not to assign perceptible forms to logically present categories (cf. Cinque 1999, Kayne 2003a, 2003b). We need to extend the notion of feature strength or prominence (in PF) such that 'prominence' entails 'audibly/visibly expressed'. In addition, we need to acknowledge that, in spite of being

an extremely sophisticated motor system, the Phonological or Perceptible Form of oral languages is *not* part of Universal Grammar, not any more than the Perceptible Form of sign languages or the ability to learn, say, acrobatics.⁴²

Perhaps, bare roots like ‘table’ or ‘visit’ are interpretable without any syntactic feature matching (like signs in non-human ‘languages’). In contrast, ‘overt realization’ of items expressing features like Tense and Person, which must be computed in relation to the speech event, must take place post-computationally. Realization of an item like e.g. the first person pronoun *I* cannot successfully take place until after its computation has been completed, that is, after it has been matched against the Λ -features of its local speech event (as in e.g. (24) above).⁴³

6. Conclusion

Children of course acquire knowledge of many lexical and perceptible aspects of their native languages by experiencing positive data. In contrast, they *do not learn* the underlying syntax of language, even though it arguably is not full-fledged at birth, but keeps developing until puberty. Childhood growth of syntax (and the conceptual-intentional interface) is largely biological, it seems, much like e.g. the growth of our hands: While presumably affected to some limited extent by environmental factors, it is, crucially, genetically pre-programmed.⁴⁴

In conclusion: There is extensive evidence that *all* languages have access to *all* features of UG – humans are endowed with innate syntactic elements and structures that are independent of whether or how they are expressed. We need to realize that SILENCE VARIATION underlies a substantial part or even the lion’s share of language variation. If we do not acknowledge this, the wonder of Babel will remain a mystery, kept with Jehovah for all eternity.

Notes

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The present paper extends and revises the ideas first discussed in Sigurðsson 2003c. These ideas were also presented at the 18th Comparative Germanic Syntax Workshop in Durham, September 2003. Many thanks to Anders Holmberg and the other organizers of the workshop, for their friendliness and hospitality, and to the audience for their questions and comments. Finally, I wish to express my gratitude to Pierre Pica and Johan Rooryck for their editorial support.

1. This is in a somewhat similar vein as the Sapir-Worf hypothesis.
2. UG may be defined as being identical with UNS, but since this step is not necessary for the logic of my argument, I do not take a stand on the issue. The issue is not essential for our purposes, but one might for instance define UNS as not including Transfer (in the sense of Chomsky 2004), while UG must be taken to include Transfer.
3. This is a simple statement of common and generally known facts, not, of course, a claim that it is in principle impossible to develop distinct artificial languages that are mutually convertible. Also, I am not claiming that creating an artificial language that translates into natural language and vice versa is precluded. In the present context, it is nonetheless interesting to note that we have still not been able to develop any (full-fledged) such language, in spite of huge efforts.
4. Abstracting away from encyclopaedic differences.
5. Cf. the discussion in Thráinsson (1996:262, fn. 7) on Tense vs. Mood and Aspect.
6. Cf. also recent work of Kayne (2003a, 2003b), who presents many kinds of evidence that languages do have silent functional categories.
7. Hjelmslev (1935-1937) and Jakobson (1936) are classical studies of this sort.
8. It is partly a terminological question but also an empirical one whether the underlying property or feature should be referred to as ‘subjunctive’. In the approach developed in Sigurðsson 2004b the typical subjunctive in Icelandic and e.g. the Romance languages operates on Tense by displacing the derived or secondary speech time of the subjunctive clause (see also Section 5 below). While this certainly applies to the English subjunctives in (4) and (5), it is not clear to me that everything that has been called ‘subjunctive’ in the literature has this property.
A parallel remark can be made with respect to other categories discussed here (see shortly on gender). Arguably, traditional grammatical categories are in general complex structures rather than primitives. Modern linguistics is rapidly developing ‘microscopic tools’ that enable us to study these structures.
9. SJ = subjunctive.
10. I am replacing the term Phonological Form with the more general Perceptible Form, comprising (at least) the ‘sign form’ of sign languages and the ‘sound form’ of oral languages.

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11. See the discussion in Sigurðsson 2004a. N, A, PL, M, F, DEF = Nominative, accusative, plural, masculine, feminine, definite, respectively. There is no N/A distinction in the feminine plural (as opposed to e.g. feminine singular and masculine plural).
12. In contrast, of course, meaningful distinctions often relate to morphological distinctions language-internally (this is for instance the case for certain agreement phenomena in Scandinavian languages). That is, meaningful distinctions ‘grab’ available opportunities to get overtly expressed, as it were. Crucially, however, meaningful distinctions can ‘get by’ and also ‘get through’ without being overtly expressed.
13. Evidently, linguistic extravagance is socially important, depending on factors we have very little knowledge of.
14. Contra Thráinsson (1996:260-261) and others who take it that Narrow Syntax is partly acquired.
15. We often or even generally believe we ‘understand’ ideas and phenomena that we are merely accustomed to. Consider Chomsky’s discussion (2002:59-60) of the ‘hard problems’.
16. Given the assumption that something like ‘table’ is a ‘piece of conceptual reality’, probably an all too simplistic view (cf. Chomsky 2005).
17. See for instance the fascinating study of Bickel et al. (1999) of the Maihtili verb inflection system.
18. As Chomsky puts it (discussing only one aspect of this fact): “... the internal conditions on meaning are rich, complex and unexpected” (2000:36). Consider, for instance, the resultative construction: *He shouted himself hoarse* (= roughly ‘He shouted such that he became hoarse’), with a substantial part of the logical structure unexpressed. Consider also e.g. English *wh*-infinitives as in *How to protect yourself* (= roughly ‘This is how one can/should protect oneself’). As Chomsky discusses in many of his works, e.g. the above cited one, similar examples are innumerable (and many of them are much more sophisticated than these).
19. From my very bright and funny stepdaughter, Camilla Mirja Björnsdóttir. Takk Camilla!
20. Evidently, however, any silent feature must have at least some ‘sounding neighbors’ to lean on (cf. Kayne 2003a, 2003b). Developing a formal theory of sound/silence patterning is however far beyond realistic goals of present-day linguistic theorizing.
21. For a general discussion of these issues, see, for instance, Corballis 1999.
22. The inchoative is close to the inceptive aspect in Cinque’s aspect typology (see 1999:105), and immediateness is close to his prospective (see 1999:99).
23. A parallel point can be made for the so-called supine in Modern Swedish, that is to say a special active form of the past participle, distinct from the passive and adjectival participle forms (e.g. active supine (*har*) *skrivit* ‘(has) written’ as opposed to passive/adjectival (*blev/var*) *skrivet* ‘(was) written’). This active (i.e. non-passive, non-adjectival) past participle form

established itself in 18th century Swedish. A special active past participle form is not found in any other variety of Germanic, including Old-Swedish (see Platzack 1989).

24. For a recent, very relevant study of silence in language, see Merchant (2001). See also e.g. Kayne (2003a, 2003b) and van Riemsdijk (to appear). Notice, however, that we need to distinguish between silence that is due to non-lexicalization (as we are discussing here and as discussed by Kayne) and silence that is due to PF-deletion (such as sluicing in Merchant's analysis).

25. At least from the point of view of the speaker, cf. Merchant (2001:1). However, avoidable information is uneconomical noise, also from the point of view of the hearer.

26. Compactness must evidently respect the Minimal Link Condition (MLC), that is, non-adjacent features cannot combine across an intervening one. If MLC is a condition on syntax and not merely a PF constraint, then this means that compactness is at least partly due to syntactic processes.

27. Lexicalization is arguably the last resort whenever a meaningful feature cannot be conveyed in a message by any other means than the costly means of overtly expressing some item that carries the feature. Thus, instead of looking for a 'license' to stay empty, a category is 'happy' with whatever 'excuse' it has not to get lexicalized. This is the general program we should pursue, I believe. A huge amount of work remains to be done, where audible language is seen from the perspective of silence rather than from the perspective of sound. If that, in turn, is on the right tack, it is not surprising that attempts to account for the distribution of various types of empty categories have remained remarkably unsuccessful, in spite of the central role of the study of empty categories in the development of generative theory.

28. Partly inspired by my discussions with Valentina Bianchi and Elisa Di Domenico and by their works (Bianchi 2003, Di Domenico 2003), cf. Sigurðsson 2003a, 2003b and 2004b. In particular, the ideas so briefly sketched here are further developed in Sigurðsson 2004b (inevitably with some overlapping).

29. The notion 'lambda-feature' is coined in line with 'theta-feature' and 'phi-feature'. It is not to be confused with lambda calculus, hence the capital λ .

30. For more evidence, see Sigurðsson 2003b, 2004b. Importantly, the argumentation below strictly adheres to minimalistic methodological standards. The fact that some of the issues discussed here were also discussed within the generative semantics tradition does not make the issues themselves uninteresting or unimportant within serious syntactic approaches.

31. "Empirical evidence for covert operations and the structures they yield is harder to obtain than for their overt counterparts, but it exists, and conceptual arguments also carry us some distance, at least" (Chomsky 1995:359).

32. The interaction of person with number and inclusiveness raises widely discussed problems (see Panagiotidis 2002 and Cysouw 2002 for recent discussion). I believe the present understanding enables us to solve at least some of these (see Sigurðsson 2003b, 2004b), but I cannot pursue the issue here.

33. Displacement/dislocation in the sense of movement can be seen as an overt manifestation of this underlying event-speech matching.

34. That is, the computation interprets or values features rather than deleting them. Redundant agreeing features are not Narrow Syntax features but introduced by language-specific PF copying processes (that, in turn, reflect underlying Agree and feature matching, see Sigurðsson 2004a). – Notice that the linking or mediating function of grammatical features enables computation that escapes global look-ahead, as required.

35. It is important to notice that this is not an extra-syntactic phenomenon. Many languages show the same shift of pronoun reference in regular subordinate clauses as does direct speech in languages like English, for instance Punjabi, Persian, Kurdish, Kannada and Tamil (Bianchi 2003, Sigurðsson 2004b).

36. ‘Logophoric event’ or even ‘consciousness event’ would perhaps be more appropriate here than ‘speech event’, but this is not critical for the logic of the argumentation (a CP-phase is the corresponding notion in Chomsky 2001, 2004).

37. 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.

38. Which would in turn raise the question of how it should be possible to decide the corresponding overt PF effects and exponents – without any syntactic anchoring.

39. Tautological truths might be an exception, but it is not obvious to me that they really are.

40. I am disregarding many factors here, of course (there must for instance be as many clausal Person elements as there are arguments in any particular clause). For a more thorough discussion, see Sigurðsson 2003b, 2004b. In earlier works (e.g. Sigurðsson 2003a), I have referred to the ‘extended’ CP as the Speech Phrase, SP. However, given the feature based theory pursued here, labels must be dispensed with, and hence the descriptive labels of ‘syntactic chunks’ are immaterial.

41. However, they are like other syntactic features in being matched by perceptible ‘material’, either locally or at distance (depending on factors that I cannot go into here). Thus, it seems plausible to assume that the anaphoric S_L of subordinate clauses (and possibly also S_T), is matched by ‘speech anaphoric’ complementizers, like *that* (for a related conception, see Pesetsky and Torrego 2001). Complex subordinating elements, like Icelandic *eftir að* ‘after that’ = ‘after’, presumably match Force as well.

42. PF interpretation of syntax is controlled by physiological mechanisms that are universal to humans. Being universal, however, does not entail being part of UG.

43. Or else we have to allow limitlessly (and extremely costly) ‘crashing syntax’, cf. the discussion against ‘crashing design’ in Frampton and Gutman (2002). If PF is not part of UG, it follows that there is no reason to assume any parallelism between phonological feature selection and ‘activation’ of syntactic features (contra Thráinsson 1996). – Perhaps, there is a dichotomy with respect to lexical realization, between early insertion of lexical roots and

late realization of items containing computed functional elements, that reflects historical development of language.

44. Cf. Chomsky (2002:49), comparing the development of language and other biological subsystems, e.g. binocular vision. See also Chomsky (2005) on ‘canalization’. Notice that this is not to say that individuals who have no access to audible or visible linguistic forms will develop normal linguistic skills. Evidently, they do not develop the normal motor skills and perhaps they will not develop normal skills at the conceptual-intentional interface either. However, the latter issue is complex and largely beyond attainable knowledge, as far as I can judge.

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