The Silence Principle.

Sigurdsson, Halldor Armann

Published in:

2003

Citation for published version (APA):

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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 modern 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(Lx)?

In Derivation by Phase, Chomsky expresses his approach to these fundamental issues 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 semantic or LF differences. Thus, whatever the answer to Question A may be, we are lead to believe that all languages have the same set of LF 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 [F₁] 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 {F₁, F₂, F₃, F₄, F₅, F₆}, language A might pick {F₁, F₂, F₆}, while language B might opt for {F₄, F₅, F₆}. 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

In spite of apparent plausibility (see e.g. Thráinsson 1996), L-selection meets serious challenges, both conceptual and empirical. On the conceptual side it is unclear, to say the least, how L-selection would proceed: why and how would a language ‘decide’ to make a specific selection of LF features? On the empirical side, as we shall see, there is accumulating evidence that any language has ‘direct access’ to any feature of UG.

The central hypothesis of the Minimalist Program is that there should be no S-structure mediating between LF and PF. The ‘optimal’ solution would thus be that there is a direct relationship between a universal LF and the various expressions this system gets in different PFs of the world’s languages, as sketched in (1):

(1) \[ \text{UG} = \text{LF} \rightarrow \text{PF(L}_x\text{)} \]

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

(2) \[ \text{UG} \rightarrow \text{LF(L}_x\text{)} \rightarrow \text{PF(L}_x\text{)} \]

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 logical forms, LF(L_x) and LF(L_y), from having ‘mutated’ in such different ways that they become radically ‘incompatible’ or ‘non-convertible’? Mathematical and other artificial languages are incompatible with natural languages and generally also with each other. Thus, a simple sentence like John and Mary are a couple has no mathematical translation (say, ‘1 + 1 = 2’ or ‘x^2’), nor does a formula like 2 x 3 = 6 have any natural language translation like, say, ‘A married couple and their three kids make a family’ or a ‘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? 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.

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1 Notice the resemblance to the Sapir-Whorf hypothesis.
2 Abstracting away from coincidental encyclopedic differences, of course.
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 chance of finding e.g. both Tense and Neg should be around 25%, the chance of finding both of these plus, say, the Interrogative and Imperative features should be around 6.25% (= 1/16), and so on.

It is obvious that this gains no support from facts. Tense, for instance, is found as a ‘grammatical category’ in most languages, it seems. Even the few languages that have been claimed not to ‘grammaticalize’ 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 functional categories or features (as in e.g. Chomsky 2001), L-selection calls for a theory that details which ones have to be selected and which ones need not be. The conceptual and empirical problems that arise are non-trivial, to say the least.

3. Meaningless sounds
Human beings have a deeply rooted need 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. However, the morphological cases do not themselves have any absolute meanings but are instead varyingly ambiguous markers of underlying ‘case meanings’ that either may or may not have overt exponents in particular languages (see Sigurðsson in press a). 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 LF subjunctive, not only in examples like (3), but also in less formal examples as in (4):

327
(3) The police insisted that he tell the truth.

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

Icelandic differs from English in having an inflectional subjunctive, used in contexts as in (3)-(4) as well as for various other purposes. In addition, it has a logophoric long distance reflexive in certain subjunctives, as in (5); as shown, it is also possible to use an ordinary pronoun instead of the reflexive:

(5) Pétur vonaðist til að María myndi bjóða sér / honum.
   Peter hoped for that Mary would invite SELF / him
   ‘Peter hoped that Mary 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; cf. Thráinsson 1990).

Long distance reflexivization into finite subordinate clauses is cross-linguistically very rare. As most languages, English has not developed systematic means to express third person 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 Physical Form (PF). It certainly has logophoric semantics, no less than Icelandic (for a more general discussion, see Banfield 1982).

Agreement is even more obviously ‘non-sensical’ than morphological case, mood and long distance reflexivization. Consider the striking fact that the very robust agreement variation illustrated in (6) for English, German, Swedish and Icelandic has no meaningful correlates, ‘makes no sense’ at all (agreeing forms are boldface):

(6) a. They would be rich.
   b. Sie würden reich sein.
   c. De skulle vara rika.
   d. Þeir mundu vera ríkir.

English: -AGR, -AGR
German: +AGR, -AGR
Swedish: -AGR, +AGR
Icelandic: +AGR, +AGR

3 I am replacing the term Phonological Form with the more general Physical Form, comprising (at least) the ‘sign form’ of sign languages and the ‘sound form’ of oral languages.

4 See the discussion in Sigurðsson in press b.
Clearly, the rich agreement found in languages like Icelandic does not express any meaningful distinctions that are absent in morphologically poorer languages like English.\(^5\)

Abstract Agree is however meaningful or functional in the sense that it is a universal precondition on Merge (Sigurðsson in press b; cf. Zwart in progr.). 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.\(^6\)

We could go on like this forever. The fact that a language does not express a certain feature in its Physical Form does not mean that it is absent from its Logical Form:

- The fact that Russian does not have a copula in the present tense, does not mean that a clause like *Boris glup* ‘Boris [is] stupid’ lacks tense and finiteness.
- The fact that e.g. Japanese, Russian, Estonian and Finnish have no articles does not mean that they lack definiteness (cf. Lyons 1999; see also e.g. Chesterman 1991 on definiteness in Finnish and Hietam 2003 on Estonian definiteness).
- 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 PRO-infinitives in e.g. English have no overt marking of tense or person does not mean that these features are semantically 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 20\(^\text{th}\) 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 antimatter.

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

\(^5\) In contrast, of course, meaningful distinctions often relate to morphological distinctions language- Internally. Such language-internal relations are similar to those between diseases and symptoms: even though diseases often have diagnostic symptoms some diseases have no clear symptoms, and, also, many symptoms are common to two or more diseases. See the discussion of case from this perspective in Sigurðsson (in press a).

\(^6\) Evidently, linguistic extravagance is socially important, depending on factors we have very little knowledge of.
Instead, morphology expresses language-specific PF reflections of Universal Grammar (and, to an extent, of different lexica).

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 semantic structures that have meanings irrespective of whether or how they are expressed in Physical Form.\(^7\)

I refer to this generalization as the **The Silence Principle**. It is the basic insight I gained from learning some of the signs – and some of the silences – of Icelandic sign language:\(^8\)

\[7\] Languages have meaningful silent features; any meaningful feature may be silent.

In order to prevent misunderstanding: 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 human beings, independently of the various external forms it takes. Thus, it is evident that numerous sign languages have emerged spontaneously, ‘from nowhere’. Deaf people form small communities, often so small that their languages come into being and vanish within a short period of time.\(^9\) In fact, the creation of a sign language, that came into being in Nicaragua, 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 (Bickerton 1999). A parallel fact 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 and the recent or **PROXIMATE ANTERIOR** _vera búið í að_ ‘be (already) finished to’ construction, often corresponding to the perfect in related languages (see, most recently, Wide 2002). Moreover, these constructions

\[7\] To mention only one example, consider e.g. the resultative construction: _He shouted himself hoarse_ (= ‘He shouted such that he became hoarse’), with a substantial part of the logical structure unexpressed. Similar examples are innumerable.

\[8\] From my very bright and funny stepdaughter, Camilla Mirja. Many thanks, Camilla!

\[9\] For a general discussion of these issues, see, for instance, Corballis (1999).
combine with each other or with other aspectual constructions to form still other, ‘complex aspects’, such as the IMMEDIATE INCHOATIVE in (8a) and the IMMEDIATE ANTERIOR in (8b); the emphasis on the finite verb expresses ‘immediate’ (as opposed to merely ‘proximate’):

(8) a. Ég ER að farna að læra.
   I am to go to study
   ‘I’m on the brink of starting studying.’

b. Ég ER að verða búinn að læra.
   I am to be(com e) done to study
   ‘I’m on the brink of having finished studying.’

These and other complex aspects of Modern Icelandic did not have any ‘grammaticalized’ exponents in earlier Icelandic, nor were they borrowed from neighboring languages (where they have no systematic exponents). Rather, these categories are present in LF, irrespective of whether or how they are expressed in individual PFs. In general, the absence of grammatical means to express a category in a language cannot be taken as evidence that the category itself is absent.

‘Examples of silence’ are both numerous and varying, across languages and also within languages. 10 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 (veri hann ‘be he’ = ‘may he be’, etc.), distinct from subjunctive forms (…hann sé ‘he be’, etc.), thereby highlighting that the optative is ‘LF active’ in the language, although it isn’t normally ‘PF active’.

English has middle forms without a middle marker, opens, opened, etc. 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 ambiguous -st-marker, opnaðist ‘opened-st’. Evidently, though, all the Germanic languages have the ‘middle category’, irrespective of whether or how they overtly express it.

Not only may features be silent in individual languages, there are also meaningful features that are silent in all languages. In recent work, I have argued that any finite clause is computed in relation to a Speech Event, containing the speech participants and the time and place of speech, largely tantamount to the Reichenbachian S (Sigurðsson 2003a,b,c). The speech participants are not simply the ‘speaker’ and the ‘addressee’ (and other ‘proximates’), but rather the agent and the patient of speech. I refer to these roles as logophoric features, λ-features for short, and I argue that the speech

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10 For a recent, very relevant study of ‘silence in language’, see Merchant (2001).
time/place, $S_{TP}$, is the Finiteness feature of Holmberg and Platzack (1995), Rizzi (1997), Platzack and Rosengren (1998) and others. $S_{TP}=\text{Fin}$ and $\lambda$-features are perhaps those features of language that are most obviously and uncontroversially universal: there can be no language without the fundamental components of the situation of speech. Importantly, also, these features are not ‘pragmatic’ but syntactic, crucially entering the computation of every single clause of every single language. Nonetheless, these features are by necessity silent in all main clauses in all languages.\footnote{That is, V2 should not be analyzed as involving verb raising to $S_{TP}=\text{Fin}$ (Sigurðsson 2003a). In subordinate clauses both $S_{TP}=\text{Fin}$ and $\lambda$-features are typically lexicalized by ‘speech anaphoric’ complementizers.}

To repeat: language has innate semantic structures that are independent of their physical exponents. Thus, language variation is strictly confined to PF (and the lexicon), and the setting of parameters does not merely involve choices between different physical strategies. It also, or even primarily, consists of numerous choices whether or not to assign physical expressions to logically present categories (cf. Cinque 1999). Thus, we need to extend the notion of feature strength or prominence (in PF) such that ‘prominence’ entails ‘physically expressed’. In addition, we need to acknowledge that, in spite of being an extremely sophisticated motor system, the Phonological or Physical Form of oral language is not part of Universal Grammar, not any more than the Physical Form of sign languages or the ability to learn, say, acrobatics.\footnote{Thus, Spell-Out is at least partly post-syntactic (an issue that I cannot discuss here).}

It is trivially obvious that ‘keeping quiet’ about a category is more economical than expressing it.\footnote{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.} The Silence Principle is plausibly the most powerful economy strategy applied in PF, but another very powerful one, also a source of language variation, is \textsc{the compactness principle}:

\begin{equation}
\text{(9) Any meaningful feature may combine with its neighboring feature(s), so as to make up a compact unit of information.}\footnote{Compactness must evidently respect the Minimal Link Condition (MLC), that is, non-adjacent features cannot combine across an intervening one.}
\end{equation}

Thus, language may combine distinct features, such as aspect, tense, mood, gender, person and number in e.g. the verb inflection, thereby producing a compact unit of information, easy to express but underlyingly highly complex.

\section*{5. Conclusion}

Children of course acquire knowledge of many lexical and physical aspects of their native languages by experiencing positive data. In contrast, they \textit{do not learn} the underlying Logical Form of language, even though it arguably is not
full-fledged at birth, but keeps developing until puberty. Childhood growth of Logical Form is largely biological, it seems, much like e.g. the growth of our hands: It is of course affected by environmental factors, but it is, crucially, genetically preprogrammed. However, on this view, it also follows that adult languages cannot be ‘pure products’ of the language faculty. Rather, adult language is a hybrid of linguistic and non-linguistic systems of mind, serving, for instance, as a tool for classification and storing of concepts used by conscious thought (e.g., zero and prime number). Evidently, the Logical Form of individual adult languages is not deeply affected or transformed by extra-linguistic factors, but estimating the extent of the infiltration of non-linguistic systems into the linguistic system and vice versa is a non-trivial task.

In conclusion: There is extensive evidence that all languages have access to all features of UG – humans are endowed with innate semantic 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 simple truth, the wonder of Babel will remain a mystery, kept with Jehovah for all eternity.

Acknowledgements
For comments and discussions, thanks to Anders Holmberg, Britta Jensen, Cecilia Falk, Dianne Jonas, Elisa Di Domenico, Gunlög Josefsson, Höskuldur Thráinsson, Joan Maling, Marc de Rosnay, Valentina Bianchi, Željko Bošković. Needless to say, not all of them agree with all the viewpoints expressed here.

It is an honor to present this paper to Christer, a dear friend and a great teacher. He, more than anyone else, has taught me to not just do grammar but to think about language.

References

15 Notice that this is not to say that individuals who have no access to 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.

Halldór Ármann Sigurðsson
Department of Scandinavian Linguistics
Lund University
Helgonabacken 14
SE-223 62 Lund
halldor.sigurdsson@nordlund.lu.se