

Against Input Generalisation

Roberts (2007/2021, 2019) proposes a third-factor mechanism of Input Generalisation (IG). Taking acquisition of syntax to centrally involve discovering the parameter values of the target system and taking parameters to be constituted of formal features of functional heads, IG allows acquirers to make the abductive leap from the presence of a formal feature in one context to the presence of that feature in all possible/relevant contexts. For example, if head-final word order is derived by rollup, triggered by a diacritic feature of a head, then the preference for harmonic head-final orders follows from the generalization of the diacritic to all relevant heads. IG combines with Feature Economy (FE, a simple feature-counting metric, see Chomsky & Halle 1968) to form parameter hierarchies, chains of implicationally related parameter settings which proceed from less to more marked. In the case of word order, FE prefers the absence of rollup-triggering features, which gives rise to harmonic head-initiality. If head-final order is detected in the Primary Linguistic Data (PLD) and an instance of the rollup feature is thereby posited, IG leads acquirers to generalize that feature to all heads, giving rise to harmonic head-finality. Disharmonic word orders arise from restricted application of IG, forced by the PLD (the second factor), but dispreferred by the third-factor IG (IG and FE are defeasible by PLD).

Here I argue that IG is not required as a third factor, FE is sufficient. The arguments are based on word order, null subjects and verb movement. Consider first a fully harmonic head-final system in which all complements precede their heads in surface order. This is the situation in which roll-up movement applies everywhere. In such a system, roll-up can be formulated as in (1):

$$(1) \quad X \ YP \rightarrow YP \ [X \ (YP)]$$

No further specification of either head or complement is required, since the operation is fully general. Now consider the case where clauses, but not nominals, are fully head-final. If all functional categories in the clause have a V-feature (while those in the nominal have an N-feature), we could then formulate roll-up in these languages as in (2):

$$(2) \quad X_{[+V]} \ YP \rightarrow YP \ [X \ (YP)]$$

The structural description of the rule in (2) is clearly more complex than that in (1) since it involves a feature specification, [+V], which is not present in (1). (2) is therefore more marked than (1).

In German and Dutch, roll-up applies in the clause as far as TP but not at CP since C precedes TP. If we divide the clause into the discourse domain (“CP”), the inflectional domain (“TP”) and the argument-structure domain (vP/VP-shells), then the German/Dutch situation can be captured by (3):

$$(3) \quad X_{[+V, -discourse]} \ YP \rightarrow YP \ [X \ (YP)]$$

(3) specifies that roll-up applies in all domains of the clause except the discourse domain, i.e. vP/VP and TP but not CP. This correctly captures the facts about roll-up movement in these languages. Moreover, we can see that (3) is more marked than both (1) and (2), since now we have two features in the structural description. In languages like Nupe, where roll-up is confined to vP or VP, we have (4):

$$(4) \quad X_{[+V, -discourse, -infl]} \ YP \rightarrow YP \ [X \ (YP)]$$

(4) states that roll-up applies in all domains of the clause except the inflectional and discourse domains, i.e. it only applies within the thematic domain. The more disharmonic the system, the more complex the structural description for roll-up in featural terms. The more harmonic systems have simpler structural descriptions for roll-up; they are therefore relatively less marked and we expect them to be cross-linguistically more frequent and diachronically more stable (outside Indo-European, rigidly head-final orders are highly stable, as the long histories of Japanese, Korean and Tamil attest). Fully head-initial systems lack all roll-up operations, and in this sense are simpler than head-final systems of any kind. So we see that FE does all the work in determining markedness; there is simply no need for IG.

Turning now to null subjects, we follow the typology in Barbosa (2019). Radical NSLs of the East Asian type allow all arguments to drop, generally through argument ellipsis (Oku 1998, Saito 2007) in the absence of agreement morphology. Consistent NSLs of the Italian type have incorporation of D from the subject to T. Partial NSLs of the Finnish type (Holmberg 2005) also have D-incorporation, but the D is featurally less specified (see below).

Following Saito (2007), we take RNSLs to lack a formal Person feature. On the other hand, pronominal-argument languages such as Basque, which have rich agreement for all core arguments and hence allow all such arguments to “drop”, are characterised by the presence of fully-specified Person features on all Probes. We can therefore formulate D-incorporation as follows for languages of this type:

$$(5) \quad X_{[u\phi]} \dots D_{[i\phi]} \rightarrow D^+X_{[i\phi]} \dots (D)$$

In (5), $X_{[\phi]}$ designates any Probe, so the rule states that D-incorporation takes place with any ϕ -bearing Probe whose Goal is a ϕ -bearing D. We take a ϕ -bearing D to instantiate “fully-specified ϕ -features” whose exponence is “rich” agreement.

For CNSLs like Italian we can state the rule as follows:

$$(6) \quad T_{[u\phi]} \dots D_{[i\phi]} \rightarrow D+T_{[i\phi]} \dots (D)$$

This rule makes reference to the specific feature T (which is more accurately represented as [+V, +infl]), rather than the variable X. Hence (6) makes reference to one more feature than (5) and is more marked. To distinguish PNSLs and non-NSLs from CNSLs, impoverishment rules are needed.

In CNSLs, the fact that all person-number combinations are fully specified implies that no impoverishment rules apply. In PNSLs, impoverishment rules apply to features of D. If D undergoes feature impoverishment but T does not, then D will remain a defective goal for T (in the sense of Roberts 2010) and D-incorporation will take place. The evidence from Finnish in Holmberg (2005) suggests that 3rd person is deleted in Finnish (since definite 3rd-person null subjects cannot appear in main-clause contexts and must have a local antecedent in embedded clauses). The D-incorporation rule will be the same as that in (6), but the grammar of PNSLs is more complex because impoverishment takes place in addition to incorporation, unlike in CNSLs.

English has the ϕ -feature impoverishment rules in (7):

$$(7) \quad \begin{array}{ll} \text{a.} & [1], [2] \rightarrow \emptyset \\ \text{b.} & [3] \rightarrow \emptyset / _ \text{ [Past]} \\ \text{c.} & [3] \rightarrow \emptyset / _ \text{ [Pres, Pl]} \end{array}$$

(7) states that English verbs show no Person marking for 1st or 2nd person at all, and none for 3rd person in the past tense, while there is Person marking in the 3rd-person singular present but not in the 3rd-person plural. In other words, the only context where Person-marking appears is in the 3rd-person singular, where it is realised as orthographic *-s* (phonologically /z/). English is, of course, a non-NSL.

We see then that the markedness hierarchy for null arguments (RNSLs > pronominal-argument languages > CNSLs > PNSLs > non-NSLs) can be accounted for by FE alone; IG is not required.

Finally, verb movement. Schifano (2018) observes that across the Romance languages, the lexical verb targets different positions in the inflectional domain: French V moves to a high Mood head, Italian to T, Portuguese to high Asp and Spanish to low Asp. She also observes that the height of movement is inversely correlated to the “richness” of Mood-Tense-Aspect inflection. Further she proposes that “rich” MTA marking reflects interpretable features on the functional head, therefore no Agree with V, therefore no V-movement to that head. “Poor” marking implies uninterpretable features, therefore Agree, therefore incorporation (V being systematically a defective goal for the inflectional heads in these languages). As with PNSLs and non-NSLs, we can connect uninterpretable features to impoverishment rules: French has the most complex impoverishment rules, therefore the highest verb-movement, the “poorest” instantiation of MTA inflection, and the most marked system. Spanish is the opposite on all counts, with Italian and Portuguese representing intermediate cases. English lacks V-movement out of vP entirely because English Verbs lack interpretable MTA features (there is almost no MTA marking on V at all in English), although auxiliaries have such features and therefore move (Emonds 1978). Again the parameter hierarchy and associated markedness relations are captured by the featural complexity of the rule system: FE alone suffices.

If IG is not needed, it need not exist. It follows that any attempt to generalize over FE and IG (as in Biberauer 2019) is otiose. The determination of markedness in syntax is the same as in phonology, see again Chomsky & Halle (1968, Chapter 9).

References

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