

The nature of the input:
Tracing the INFL affix through the Dual Mechanism Model
of Language Development



Some Points on Borer and Rohrbacher¹
(Abstract and Basis for talk UMass, May 2006 Galasso)

It is too often forgotten that the derivation represented in a given ‘syntactic tree diagram’ is actually a computational representation of the inner-workings of the mind/brain—the *derivation* itself actually constitutes the *first interface* between the computations driven by the input/lexical source and spell-out. It is in this sense that we should remind ourselves that prior to PF/LF spell-out, a number of procedures must first be established and satisfied. Where these procedures come from and how they work is a central question for the Minimalist Program (MP)—with any approximation to the answer being contingent upon our consulting an understanding of the mind/brain-language relation. This is particularly the case in view of the maturational growth in development of child language.

The general insights into the proposal as set out by Borer and Rohrbacher provide one account for the obviously incremental nature of child language development (viz., the universally attested accounts of the absence of Functional categories/Inflectional features observed in early stages of child speech). They do so by *delimiting* (in some way) the child’s ability to fully extract paradigmatic formations found in the input (a product of the Computational System (CS) of the Language Faculty)². By extension, and congruent with these insights, I propose a parallel account suggesting that the Dual Mechanism Model (DMM), though originally slated as an adult morphological process, can be reinterpreted as a more precise and biologically determined first interface mechanism which can guide the CS in such delimiting ways, resulting accordingly in appropriate PF/LF spell-outs of the derivation. The approach of the proposed model is consistent with (*inter alia*) the attested Non-Inflectional stage-1 found in the study. Based on these insights, it is natural that the focus of inquiry here should be held on INFL-affix formations, since they constitute the core elements open to a DMM analysis whereby the decomposition of stem+affix is the real processing distinction. As a result of the analysis, there should be an observable disparity in the early data amongst the onsets of (i) (*bound*) INFL-morphemes relating to features on the one hand, and (ii) (*free*) Functional words related to categories on the other. A second disparity would also be expected respectively between –Interp(etable) features (such as Agreement and certain operations of ‘Move’) on the one hand and +Interp features (such as Tense and Definiteness) on the other. In this context, we hypothesize that early onsets of Determiners as attested in the otherwise non-INFL stage of acquisition rather take on the role of satisfying twin spell-out conditions placed on (i) stem-related phonology and (ii) +Interp feature projection (both consistent with the model). This spell-out results in vacuous projections of the lower DP_{>VP} (DP-shell), empty of its otherwise internal INFL-related and -Interp features.

¹ Borer and Rohrbacher (2002) Ms. ‘Minding the Absent: Arguments for the Full Competence Hypothesis’.

² We term CS in a general way as defining a heuristic searching procedure.

The Proposal

The proposal is a simple one, but not altogether obvious. First, I attempt to correlate the ‘output’ of early child utterances directly to the ‘operative level’ of the Computational System (CS)—i.e., for a state of a child’s Grammar (G), and where maturational development provides for different states ($G_1...G_2...G_3...$), $G_1...G_2...$ would be interpreted as being a direct reflex of $CS_1...CS_2$. By doing so, I suggest the CS ultimately serves as a kind of ‘cogno-linguistic’ way-station upon which the child first gains access to the input (prior to spell-out). Thus, *poverty of stimulus* is built into the model. By tethering the product of G to CS, we can maintain by definition the most economical hypothesis and assume a child-to-adult continuity irrespective of whatever state the child’s grammar is in—though, we do so not by the typical analyses which attempt to correlate the child’s underlying knowledge of G to that of the adult target grammar G_t (*pace* Borer and Rohrbacher), but rather by correlating the computational processes themselves involved which perform the specific and modular tasks of G . (Note that by pinning continuity to computational processes and not to overt/covert language production, we may still accept the biological null-hypothesis and claim maturation of language). Second, I attempt to offer a developmental response to the Dual Mechanism Model as it interacts with CS. Overall, the proposal speaks to the following general question as has been set out in the literature:

Under what circumstances and amongst which developmental stages of acquisition do children pay less attention and more attention to the details of their language?

What we mean by ‘attention-to’ can be linguistically defined as either:

- (i) (item-based) *statistical* ‘attention-to’: this would be more in line with cognitive, bottom-up processing that relies heavily on memory limitation, focus to attention, pattern building induction—viz., the early onset of phonemic awareness leading phonetic boundaries, word mapping toward categorical status, and possible syntactic outcomes based on the processing known as chunking, etc. The model shows that this is a pure CS reflex (unconnected to DMM) and is a part of other cognitive non-linguistic behaviors. (See Modal for Fodorian Modules).
- (ii) (general) *rule-based* ‘attention-to’: this would be consistent with the paradigmatic building of the inflectional properties of a language, syntactic formations and other formal properties of language that are non-statistical in nature (constitutes the full DMM).

The Model

What we now know of the DMM, its inner mapping of the brain-language relation, as well as its developmental nature, amongst those working within MP it has become theoretically appealing to devise some working brain-language model that captures the wide spectrum of child speech showing phenomenal treatments of affix/[-Interp]-related material. In refashioning the DMM as a kind of CS interface, we can determine the set of criteria to be satisfied (consistent with the emerging states of the DMM) and better understand the maturational nature of INFL. The proposed model best accounts for a number of phenomena attested in the child language literature, including agrammatic speech, Non-INFL, OI-INFL, and an extension of the OI-stage (as related to SLI).