Two ways to acquire language without parameters –

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It is not controversial (mostly) these days to postulate some innate structures specific to language to account for its acquisition in the context of the Poverty of the Stimulus. The dominant model in Generative theories is still “Principles and Parameters”: infants are equipped with a set of binary parameters that can be “set” to one value or the other by minimal exposure to samples of its language-to-be.

First, we review numerous problems that arise in using parameters as the innate basis for language acquisition. Then, we present two (very different) models of how language acquisition could work without parameters.

1. Language acquisition as implicit problem solving (TgB)

I start with three nativist assumptions different from parameters: humans uniquely interpret most experiences as problems to solve, either explicitly or implicitly; children can parse surface<->meaning pairs via (sometimes incorrect) multi-word constituents; they can access an innate I-Language “tool kit” to build derivations as needed to solve representational problems.

A dominant problem solving model was proposed by gestalt psychologists – resolve conflicting obvious representations of a situation, by accessing a different dimension (thereby releasing the “aha” reaction). In language acquisition this occurs when a particular external scheme, eg N…V…X -> .. Agent….Predicate….X’ is violated (e.g. by a short passive): the I-Language kit constructs an inner form mediating between the surface forms and meaning, e.g., inner form + distinct derivations.  aha!

This model explains many universal properties of attested languages

2. One grammar, many orders (D.P.M.)

Contemporary parameter-learning models take a highly structured input, often amounting to an analysis of grammatical functions, and map such to parameter settings, specifying order-hierarchy relations.

I present a model of a universal parser-grammar system, which obviates the need for parameters. Supplied with the structure usually assumed as the input to parameter-learning (a string of formatives with identified syntactic categories), no further problem remains to be solved. An unusual feature of the model is that many orders can be handled by one grammar. A single, invariant parsing algorithm “unscrambles” a wide variety of surface orders into a universal interpretation order. The model provides a basis for many well-established properties of grammar in a novel way, including labeled surface structure bracketing, the duality of semantics, and an important class of word order universals.