Minimalism, Economy, Simplicity, and Children Language Acquisition

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Abstract

In syntax, a model of a grammar is economical if it is doing the least work possible in order to generate grammatical forms, and rule out ungrammatical forms. In the minimalist program, economy has been applied to every level of representation, every principle, every structure, leading to a type of plainness never seen before in generativist. The study of child language acquisition highlights the continuity from the Principles & Parameters framework (Chomsky 1981) to the Minimalist Program (Chomsky 1995). In this study, minimalism particularly the trends of economy and simplicity have been investigated. In addition, minimalism and its relation to and effect on first language acquisition have been shown through children during first years of language acquisition as investigated in the literature.

1. Introduction

The reductions and minimizations of the minimal Program result in a system that is immensely different in many respects to the earlier generative GB system of language. Economy considerations are clearly observable in numerous other simplifications. Simpler operations apply in preference to more complex ones. Less economic derivations are then advanced to be congested by more economical ones, whether that means Agree rather than Move, or moving a shorter rather than a longer distance, or some other opposition. A further simplification of this

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type comes in the form of the Inclusiveness Condition. This states that nothing can be added in the course of a derivation; that is, only those features and properties which obtain in the lexical array determined at the beginning of the derivation may be used all over the phases of the derivation.

Overall, eliminations and reductions have been applied to every aspect of the architecture; levels of representation, operations, syntactic constraints, search space, phrasal categories and categorial features, derivational paths. Although not every simplification considered fully or simply mentioned in the works of the past decade or more has been detailed here, the central concept should be more than clear - the architecture should reduce to the bare minimum required to fit between the semantic and phonological systems, and the derivation should follow a course which is computationally limited in both its use of operations, and the domains in which it can apply them.

2. Economy

In The Minimalist Program (1995), Chomsky hypothesizes that language must be under restrictions of "virtual conceptual necessity" (1995, p. 171), meaning that a speaker should only need to appeal to the basic need of operations in the syntax to form structures. This assumption leads to a principled account of economy in syntactic structures. Radford explains economy as follows *"a principle which requires that (all other things being equal) syntactic representations should contain as few constituents and syntactic derivations involve as few grammatical operations as possible" (2009, p. 335).*

An important theme in recent generative grammar is that linguistic operations, derivations, and representations are subject to economy conditions which guarantee that they are ideal in some sense (see Chomsky 1998b).Consider an operation OP applying in a derivation D leading to the representations(PF, LF) (phonetic form and logical form). Economy considerations suggest that OP be as small as possible, and be applied in a way that minimizes search. Given a series of operations that form a derivation D, economy conditions suggest that the length or cost of the derivation must be minimized in some way. Finally, economy considerations suggest that the representations formed in the course of a derivation should be as simple as possible, consisting of a minimal number of syntactic objects, each of which is interpretable (at either LF or PF). As a minimalist principle, Chomsky (1993) assumes that the interface representations should be pure and simple, stripped of all features that are not relevant to the cognitive systems they provide input for. This he calls economy of representation, summarized in (1):

(1) Economy of representation:*Use as few symbols as possible in the output of a derivation* The principle Procrastinate reduces to *Inertness*, if the latter is considered to apply at each point in the derivation. In addition to (1), Chomsky proposes a second minimalist principle, stating that interface representations should be arrived at in the most economical way. This paper discusses the proper formulation of this second principle, called economy of derivation. I will argue for the following formulation:

(2) Economy of derivation: *Use as few steps as possible in deriving an output representation*

 is a standard feature of the minimalist program of Chomsky (1993). Chomsky argues that derivations are governed by principles summarized here under the label inertness:

(3) Procrastinate: *Move as late as possible*

(4) Greed: *Move "only if movement contributes to licensing of ".*(3) and (4) can be grouped together as in (5):2

(5) Inertness *Move as little as possible* (5) and (2) are equivalent.

The formulation of economy of derivation in (2) is more interesting for what it leaves out than for what it contains. In particular, (2) makes no reference to the length of the steps involved in a derivation. According to conventional wisdom, short steps are more economical than long steps. Thus, it has been proposed that economy of derivation contains (6) in addition to (2):

(6) Economy of derivation part 2:

In deriving a representation, make the shortest possible movements

(6) Underlies the concept of minimality (Chomsky 1986b; Rizzi 1990), paraphrased in (7):

(7) Minimality: *Don't move " across a place where " could have landed*

(6) also plays a major part in Chomsky (1993).

2.1. Different Types of Economy

Several major types of economy have been identified: global derivational economy, local derivational economy, and global representational economy.