Derivation and Explanation in the Minimalist Program

Edited by
Samuel David Epstein and
T. Daniel Seely
Derivation and Explanation in the Minimalist Program
Recent work in generative syntax has viewed the language faculty as a system of principles and parameters, which permit children to acquire productive grammars triggered by normal childhood experiences. The books in this series serve as an introduction to particular aspects or modules of this theory. They presuppose some minimal background in generative syntax, but meet the tutorial needs of intermediate and advanced students. Written by leading figures in the field, the books also contain sufficient fresh material to appeal to the highest level.

1. Government and Binding Theory and the Minimalist Program
   Edited by Gert Webelhuth

2. Logical Form
   Norbert Hornstein

3. Minimalist Analysis
   Howard Lasnik

4. Phrase Structure: From GB to Minimalism
   Robert A. Chametzky

5. Move! A Minimalist Theory of Construal
   Norbert Hornstein

6. Derivation and Explanation in the Minimalist Program
   Edited by Samuel David Epstein and T. Daniel Seely
# Contents

ACNOWLEDGMENTS

LIST OF CONTRIBUTORS

Introduction: On the Quest for Explanation

*Samuel David Epstein and T. Daniel Seely*

1  Explanation through minimization  
2  Derivation and explanation in the Minimalist Program  
   2.1  The computational process  
   2.2  Was GB nonderivational?  
   2.3  Which type of derivational theory is preferable?  
   2.4  Explanation through representational minimization  
   2.5  Summary  
3  The articles

1  ON THE STATUS OF REPRESENTATIONS AND DERIVATIONS

*Michael Brody*

1  Representations and derivations – the status of the mixed theory  
   1.1  Restrictiveness and duplication  
   1.2  Principles of I-language  
2  Representations or derivations  
   2.1  Derivational theories and weak representationality  
   2.2  Restrictiveness again  
3  C-command  
   3.1  Derivational definition  
   3.2  Derivational explanation?  
   3.3  Domination  
4  Summary

2  ELIMINATING LABELS

*Chris Collins*

1  Basic properties of X'-Theory  
2  Selection
### Contents

2.1 Subcategorization and Merge 54  
2.2 Accessibility 55  
3 The Minimal Link Condition 57  
4 Labels at the PF interface 59  
5 Conclusion 61  

3 RULE APPLICATIONS AS CYCLES IN A LEVEL-FREE SYNTAX 65  
*Samuel David Epstein and T. Daniel Seely*  
1 Introduction: the role of Minimalist method 65  
2 DBP’s general argument for cyclic Spell Out 67  
   2.1 Background: the DBP feature system 67  
   2.2 The general DBP argument that Spell Out must be strongly cyclic 69  
3 The problem with the general argument that Spell Out must be strongly cyclic 71  
4 A derivational approach to the problem of cyclic Spell Out 74  
   4.1 A single representation? 76  
5 Phasal Spell Out 77  
   5.1 Why vP and CP? 78  
   5.2 Global lookback? 79  
   5.3 Simultaneity? 82  
6 Summary 84  

4 CRASH-PROOF SYNTAX 90  
*John Frampton and Sam Gutmann*  
1 Filters versus constrained operations 90  
2 Crash-proof syntax and computational efficiency 94  
3 Redundancy 94  
4 Optimal design 95  
5 Crash-proof selection 96  
6 The Case Filter 97  
7 The Chain Condition 101  
8 Conclusion 103  

5 REPROJECTIONS 106  
*Norbert Hornstein and Juan Uriagereka*  
1 Introduction 106  
2 Basic mechanics 107  
3 An important prediction 109  
4 QI island inducers 111  
5 LF islands without binary quantification? 113  
6 Binary quantifiers with no associated LF islands? 116  
7 A “definiteness effect” in nonexistential contexts 118  
8 Neg-Raising 120  
9 The interpretation of weak determiners 124  
10 A binary treatment for negation 125  
11 Conclusions and further questions 128
6 PRONOUNS AND THEIR ANTECEDENTS 133
Richard S. Kayne
1 Introduction 133
2 Clitic doubling 134
3 Antecedent and pronoun 135
4 Control 135
5 Merge and Move 136
6 Condition C 137
7 More on Condition C and on apparently antecedent-less pronouns 138
8 Strong crossover 141
9 Condition B 143
10 Why are there reflexives? 147
11 English-type reflexives 147
12 \textit{zich}-type reflexives 148
13 Backwards pronominalization 150
14 Epithets again 152
15 Condition C reconstruction effects 153
16 Further Condition C reconstruction effects 155
17 Sideward movement 156
18 Circularity 156
19 “Transitivity of coreference” 157
20 Split antecedents and overlapping reference 158
21 Conclusion 158

7 SCRAMBLING, CASE, AND INTERPRETABILITY 167
Hisatsugu Kitahara
1 Scrambling and binding relations 167
2 Specifying the mechanisms of scrambling 171
3 A strongly derivational model of syntax 173
4 A derivational analysis of binding relations 175
5 Long-distance scrambling 178
6 Summary 179

8 RESUMPTION, SUCCESSIVE CYCLICITY, AND THE LOCALITY OF OPERATIONS 184
James McCloskey
1 Background 184
2 The core pattern and some initial issues 185
3 The form of complementizers 188
4 An earlier analysis 191
5 Mixed chains – movement and binding 193
5.1 Pattern 1 194
5.2 Pattern 2 197
5.3 Pattern 3 199
5.4 Implications 201
6 Analysis 202
Contents

6.1 Two features 203
6.2 Successive cyclic effects 204
6.3 Implications 205
7 Adjunct extraction 206
8 A final challenge 213
9 Summary and conclusion 218

9 VERY LOCAL A’ MOVEMENT IN A ROOT-FIRST DERIVATION 227
Norvin Richards
1 Expletive–associate relations 229
2 Sinking and non-Sinking 231
3 Very local A’ movement 236
  3.1 Inner tough-movement 236
  3.2 Vacuous movement 237
  3.3 Contained relative clauses in Japanese 238
  3.4 Tense islands 240
  3.5 Persian scrambling 241
  3.6 Tagalog extraction 243
4 Conclusion 245

10 ARGUMENTS FOR A DERIVATIONAL APPROACH TO SYNTACTIC RELATIONS BASED ON CLITICS 249
Esther Torrego
1 Introduction 249
  1.1 Background 250
  1.2 Background assumptions 251
  1.3 English 252
2 Strict derivationality: the first two arguments from Romance 252
  2.1 The first argument: French and Italian 253
  2.2 The second argument: Spanish versus French/Italian 254
3 The third argument 260
  3.1 Raising-to-object or control? 260
4 Conclusion 264

11 ISSUES RELATING TO A DERIVATIONAL THEORY OF BINDING 269
Jan-Wouter Zwart
1 Introduction 269
2 Anaphoricity as acquired information 272
3 Consequences 275
  3.1 Asymmetry 275
  3.2 Obviation (Principle C) 276
  3.3 Obligatoriness 277
  3.4 Uniqueness 278
  3.5 C-command 278
  3.6 Locality 279
  3.7 Binding restricted to A-positions 280
Acknowledgments

We thank David Lightfoot, Series Editor, and Steve Smith, Editorial Director, for their interest in and support of this project. In addition, we are indebted to Tami Kaplan, Associate Acquisitions Editor in Linguistics at Blackwell for her extraordinarily professional and personable assistance throughout all stages of the preparation of the manuscript. Thanks also to Sarah Coleman, assistant editor, for her help. We are, of course, very grateful to our contributors for their willingness to participate in this project, for their hard work, and for their patience. We also thank each of us for tolerating the other (some more than others, and conversely). Finally, we thank Noam Chomsky for the generative revolution and for his support of this project.

This book is dedicated, in reverse chronological order to: Charlie, Piper, Sylvie, Molly, Hannah and Elaine. Also to Josh. And to our parents Peggy and Thomas Seely; and Lucy Epstein (1920–99) and Joseph Epstein (1917–93).

Samuel David Epstein
T. Daniel Seely
List of Contributors

Michael Brody, Department of Phonetics and Linguistics, University College London, UK.

Chris Collins, Department of Modern Languages and Linguistics, Cornell University, USA.

Samuel David Epstein, Department of Linguistics, University of Michigan, USA.

John Frampton, Department of Mathematics, Northeastern University, USA.

Sam Gutmann, Department of Mathematics, Northeastern University, USA.

Norbert Hornstein, Department of Linguistics, University of Maryland, USA.

Richard S. Kayne, Department of Linguistics, New York University, USA.

Hisatsugu Kitahara, Institute of Cultural and Linguistic Studies, Keio University, Japan.

James McCloskey, Department of Linguistics, University of California at Santa Cruz, USA.

Norvin Richards, Department of Linguistics and Philosophy, MIT, USA.

Esther Torrego, Linguistics Program, Department of Hispanic Studies, University of Massachusetts at Boston, USA.

Juan Uriagereka, Department of Linguistics, University of Maryland, USA.

T. Daniel Seely, Program in Linguistics, Eastern Michigan University, USA.

Jan-Wouter Zwart, Department of Linguistics, University of Groningen, The Netherlands.
Introduction: On the Quest for Explanation

Samuel David Epstein and T. Daniel Seely

1 Explanation through minimization

Anyone seeking to understand how humans acquire the knowledge they have, and interested in explicitly characterizing what the knowledge is, must engage in the development of a theory. Whenever asking “What exactly is X?” and “How does it develop?” and seeking an explanatory answer, the only way to proceed is to construct a theory, however preliminary or undetailed. In linguistics, once one postulates, e.g., “noun,” one has engaged in theory construction. Since the goal of any theory is to explain things, the further question we all must address is “To what extent is this goal achieved?” If engaged in serious rational inquiry, the question can’t be avoided. Addressing it requires that we be analytical and reflective about our proposals. In this regard, Chomsky, acknowledging the possibility that the Minimalist Program might well be “wrong,” writes of its merits as follows:

the Minimalist Program, right or wrong, has a certain therapeutic value. It is all too easy to succumb to the temptation to offer a purported explanation for some phenomenon on the basis of assumptions that are of roughly the order of complexity of what is to be explained. . . . Minimalist demands at least have the merit of . . . sharpening the question of whether we have a genuine explanation or a restatement of a problem in other terms. (Chomsky 1995: 233–4)

Expressing this same commitment to critical reflection, Whitehead wrote:

the progress of biology and psychology has probably been checked by the uncritical assumption of half truths. If science is not to degenerate into a medley of ad hoc hypotheses, it must become philosophical and must enter upon a thorough criticism of its own foundations.¹

Unfortunately, it seems to us that these so-called “philosophical” sentiments are foreign or uninteresting to some researchers. Such questions are sometimes regarded, we fear, as “not real linguistics” or “too conceptual.” If this is
true, the situation is not new. C. S. Pierce, calling for reflective evaluation of the explanatory adequacy of our theories, writes:

There remains still another kind of power of observation which ought to be trained; and that is the power of observing the objects of our own creative fancy. . . . The highest kind of observation is the observation of systems, forms, and ideas.² (editors’ emphasis)

We believe that the desire to determine the properties of our theories, and the explanatory depth achieved by them, i.e. the extent to which all the relevant phenomena have been explained, should be regarded not as an issue that is “just conceptual,” but instead as the central issue confronting theory construction.

Of course, with Newton (1690),

We are certainly not to relinquish evidence of experiments for the sake of dreams and vain fictions of our own devising; nor are we to recede from the analogy of Nature, which is wont to be simple and always consonant itself. . . .³

The question that then arises is: How do we proceed? More specifically, what shall we regard as “a genuine explanation” as opposed to “a restatement of a problem in other terms”? That is not an easy question to answer; there are no hard and fast criteria; there is no explanatory gauge that can measure the “degree” to which genuine explanation has been attained. But, the question we should ask is: To what extent have we explained anything? How do we ever know if we are on the right track?

In grappling with this very question, Einstein writes:

Can we ever hope to find the right way? Nay, more, has this right way any existence outside our illusions? Can we hope to be guided safely by experience at all when there exist theories (such as classical mechanics) which to a large extent do justice to experience, without getting to the root of the matter? I answer without hesitation that there is, in my opinion, a right way, and that we are capable of finding it. Our experience hitherto justifies us in believing that nature is the realization of the simplest conceivable mathematical ideas.⁴ (editors’ emphasis)

Not only should each idea be “mathematical” (we assume meaning formally explicit) and the simplest conceivable, but in addition, understanding is maximized through the minimization of the number of “simplest conceivable mathematical ideas” postulated:

Resolved to maximize our understanding, we find ourselves committed to a highly characteristic effort to minimize the number of theoretical premises required for explanation.⁵ (editors’ emphasis)

Thus, we seek to minimize each premise, and the number of them, thereby seeking to maximize explanation through deduction (not empirical “coverage” through stipulation). Importantly then, the data is not satisfactorily “covered” if it is covered by stipulation. Einstein thus speaks of: