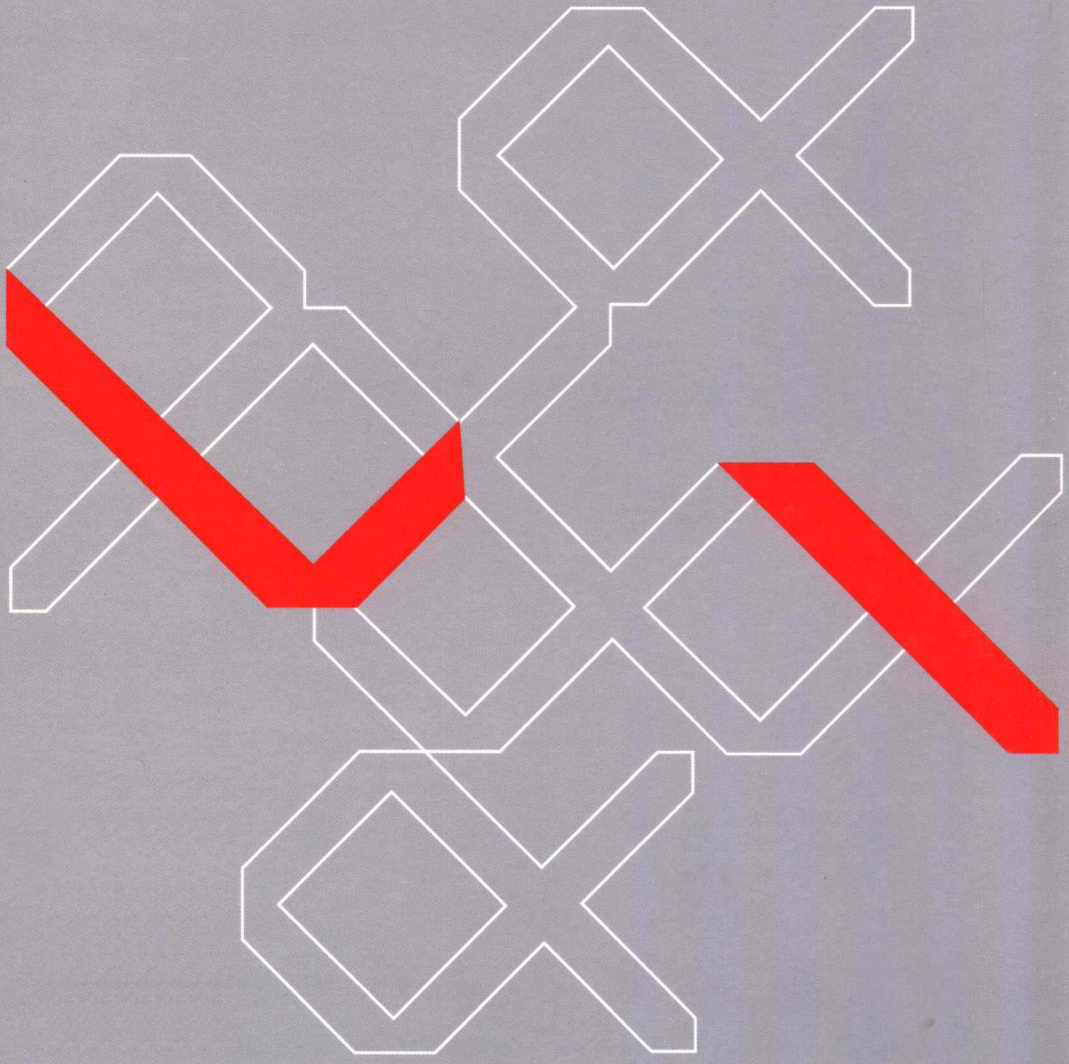
Linguistic Inquiry
Monograph Sixty-Two

Anaphora and Language Design

Eric Reuland



Anaphora and Language Design

Eric Reuland

常州大学图书馆
藏书章

The MIT Press
Cambridge, Massachusetts
London, England

© 2011 Massachusetts Institute of Technology

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

For information about special quantity discounts, please e-mail special_sales @mitpress.mit.edu

This book was set in Times New Roman and Syntax on 3B2 by Asco Typesetters, Hong Kong. Printed and bound in the United States of America.

Library of Congress Cataloging-in-Publication Data

Reuland, Eric
Anaphora and language design / Eric Reuland.
p. cm. — (Linguistic inquiry monographs)
Includes bibliographical references and index.
ISBN 978-0-262-01505-9 (hardcover : alk. paper) — ISBN 978-0-262-51564-1 (pbk. : alk. paper) 1. Anaphora (Linguistics) 2. Grammar, Comparative and general—Syntax. I. Title.
P299.A5R48 2011
401'.456—dc22 2010020909

10 9 8 7 6 5 4 3 2 1

Series Foreword

We are pleased to present the sixty-third in the series *Linguistic Inquiry Monographs.* These monographs present new and original research beyond the scope of the article. We hope they will benefit our field by bringing to it perspectives that will stimulate further research and insight.

Originally published in limited edition, the *Linguistic Inquiry Monographs* are now more widely available. This change is due to the great interest engendered by the series and by the needs of a growing readership. The editors thank the readers for their support and welcome suggestions about future directions for the series.

Samuel Jay Keyser
for the Editorial Board

Preface

Finishing this book marks the end of the first stage of a project that essentially started with a workshop on long-distance anaphora in Groningen on June 18–20, 1987. Before that workshop I always told myself that I was never going to work on binding theory, since the canonical binding conditions were just too boring. It did not help that the crosslinguistic facts obviously did not fit, since I did not see how they could be made to fit without all kinds of ad hoc solutions. Most crucial, however, was the fact that it kept eluding me why something like the binding conditions would hold. The workshop, and especially the decision to edit a volume together with Jan Koster on the basis of that workshop and to include Tanya Reinhart in the process, changed that. (See Koster and Reuland 1991.)

In my work with Jan Koster on the introduction to the book I learned that the apparent variation in the binding domains of long-distance anaphors reflected very simple binding principles interacting with independently varying properties of the syntactic structure, a discovery that for the most part had been made earlier by Martin Everaert (Everaert 1986) but that somehow had not received sufficient attention. Given a distinction between structural binding and logophoricity, much of the variation fell into place.

My work with Tanya Reinhart on the material that ended up as chapter 14 of that volume (Reinhart and Reuland 1991) really got me hooked on the subject. The modular approach to binding that came out of that work helped me understand a range of initially puzzling facts, from anaphors in English that do not obey the canonical condition A, to the contrast between *zich* and *zichzelf* in Dutch (and similar contrasts in other languages) and the existence of locally bound pronominals in Frisian, discussed earlier by Martin Everaert. After finishing this article we decided

此为试读,需要完整PDF请访问: www.ertongbook.com

to work on a journal article, which after the most intense series of working sessions I have ever experienced, was published as Reinhart and Reuland 1993. The results convinced us that we had discovered fundamental principles of the organization of the anaphoric system in natural language, but on the other hand, we were faced with the challenges posed by crosslinguistic variation, and, of course, the even more fundamental question of why there would be special conditions on binding at all.

Some decisions are not made consciously, but in retrospect I can say that subsequently Tanya Reinhart and I started working on different pieces of the puzzle that in the end all came together. Tanya first resumed her work on the division of labor between the semantics and discourse components of the language system, resulting in her 2006 book, and I started thinking about issues of crosslinguistic variation and about why there would be conditions on binding. My decision to take up the latter question was heavily influenced by what I thought was one of the most challenging and attractive features of the Minimalist Program, namely the inclusiveness condition, eliminating the use of indices from the syntax. For me, the result, reported in my 1995 GLOW talk (Reuland 1995)—that syntactic conditions on binding (the chain condition of Reflexivity) could be derived without recourse to indices—was a breakthrough. That this particular way of encoding dependencies accounted for their variability in a natural way provided an incentive to continue this line of inquiry. So, I became more and more intrigued by anaphora and convinced that our approach led to an understanding of the basic mechanisms. This feeling was strengthened by my chance to work with Sigga Sigurjónsdóttir on long-distance anaphora in Icelandic, where again important pieces of a puzzle all of a sudden turned out to fit. In a nutshell, that is the reason I pursued that area of linguistics.

Between 1995 and 2004 most of my time was taken up by administrative duties, hence it was not for several years that my ideas from 1995 were published (as Reuland 2001b). So, although I kept doing some work on anaphora, it was not nearly enough to satisfy my own curiosity. Luckily, Tanya had meanwhile taken up another issue from reflexivity that we had had to leave open at the time, namely lexical reflexivity, and embedded it in θ-theory, a more general theory of operations on argument structure. An initial version of her work on this subject was accepted as a *Linguistic Inquiry* monograph. Because of her sad and untimely death this monograph has not come out yet, but Martin Everaert, Marijana Marelj, Tal Siloni, and I are working on that. In the meantime, her insights are available, for instance, in Reinhart 2002, Reinhart and

Siloni 2005, and Marelj 2004, a dissertation Tanya and I jointly supervised. In that period Tanya, Tal, Marijana, and I had extensive discussions about reflexivity, operations on argument structure, and Case, which played an essential role in further shaping my ideas.

Around the same time I became involved in discussions about the relation between grammatical architecture and language processing. Sergey Avrutin, Frank Wijnen, and I had converging ideas on the role of economy in the processing of anaphoric relations, which Sergey elaborated with Esther Ruigendijk and Nada Vasić, whereas Frank and I worked on these ideas with Arnout Koornneef. In the present book I show how a synthesis can be found between these results and Tanya's view on economy.

Combining these various angles, we found that the conditions on anaphoric dependencies are the result of the interaction of many factors, some independent of language (as I showed in Reuland 2005a), others irreducibly linguistic. Small differences in structure, entirely independent of binding, may give rise to what appear to be major differences in the way anaphoric dependencies manifest themselves. The following conclusion is unavoidable: there is no dedicated "binding theory," and the superficial constraints on anaphoric dependencies tell us very little in isolation of other properties of a language. This means that in order to understand patterns of anaphora in one language—or language in general—one has to take into account a great many factors from different parts of the grammar. This has far-reaching methodological implications. On the one hand, one can no longer "falsify" an analysis on the basis of a simple isolated observation about anaphors in language x, y, or z, as is often attempted; but on the other hand, the exposure to falsification is increased, since data from many components of the grammar can be brought to bear on a particular analysis. Another implication is that it is important to seriously study languages that show patterns that are prima facie different.

My experience with discussions in the field convinced me that all the factors that played a role in my understanding of anaphoric relations should be brought together in one book. In 2004 I received a grant from the Netherlands Organization for Scientific Research (NWO) (grant number 365-70-014) to write up a synthesis of my previous research. I spent part of that period at MIT, which gave me an opportunity to work on the Agree-based encoding of anaphoric dependencies. I am very much indebted to Noam Chomsky for stimulating discussion and for pointing out an interesting implication of my approach, which turned out to be

correct. My thanks go also to David Pesetsky for discussion of his approach to chain formation, which I adopted.

While at MIT I consulted with Jay Keyser about a possible venue for publication, and he suggested that I submit a book proposal on the basis of a collection of articles. When I was preparing it, I found that quite a bit of text was needed to connect the articles because of the time lapse and overall changes in theory between them. So, the manuscript I first submitted contained Reinhart and Reuland 1993 and Reuland 2001b as separate chapters, with quite a bit of connecting text, together with some more recent material. I received very stimulating and helpful reviews from three MIT Press reviewers, and I revised the manuscript along the lines they suggested, also incorporating the very helpful comments I had received from friends and colleagues. It circulated in that form for some time.

This final version, however, differs substantially from the intermediate version. This is largely because of the extensive comments on content and presentation that I received from Natasha Slioussar. She recommended a further integration and reorganization of the material; moreover, she convinced me to try to make the discussion as accessible as possible to a broader audience than the community of generative linguists. This, then, is what I have tried to do. I feel that in order to further our understanding it is essential that linguists with very different types of expertise work together. And I hope that this book contributes to this goal, although I realize that in its present form it gets only halfway there. It contains sections where basic issues of generative theory are explained, but it also has parts that in all probability are not accessible to readers without previous knowledge. So, in that sense it is not self-contained. On the other hand I have tried to present the material in such a way that the more technical parts can be skipped without making it impossible to understand what comes next, and the more elementary material can be skipped by readers who already know it.

Currently another project is underway that carries the research forward, a systematic investigation of universals and the typology of reflexives, a project that I am collaborating on with Martin Everaert, Alexis Dimitriadis, Dagmar Schadler, and Anna Volkova. This project, also funded by a grant from the NWO (360-70-330), is intended to result in a monograph that systematically investigates crosslinguistic variation, and hence will complement the present book.

The ideas in this book have been presented to a variety of audiences over time, and I have benefited enormously from the feedback I have

received. Space limitations only allow me to list a few audiences. Clearly, the audience in the original workshop was important; so was the GLOW audience in Tromsø in 1995, as well as audiences at various NELS conferences, as can be seen from the reference section. An all-too-short stay at the Netherlands Institute for Advanced Studies (NIAS) in the fall of 2006 (as a participant in Martin Everaert and Henk van Riemsdijk's Syncom project) allowed me to work on a synthesis of long-distance anaphora and related issues in Germanic. Somewhat later, I was able to participate in the Symposium on Reflexives and Reciprocals organized by Zygmunt Frajzyngier and Traci Curl in Boulder, Colorado, in 1997, which was also very important in shaping my ideas. I taught parts of this material on two occasions at a LOT school (together with Martin Everaert), and in 2001 at the Department of Linguistics at UCLA. The Workshop on Reciprocity and Reflexivity organized by Ekkehard König and Volker Gast at the Free University of Berlin in 2004 also turned out to be extremely stimulating, as was the Workshop on Asymmetry and Interface Conditions organized by Anna Maria Di Sciullo in memory of Tanya Reinhart (July 21–22, 2008, as part of CIL 18, in Seoul). Especially fruitful for the eventual organization of the book were the courses I was invited to teach in spring 2007 at Rutgers University (thanks go to Ken Safir), fall 2007 in Rochester (special thanks to Jeff Runner and Greg Carlson), and spring 2008 at St. Petersburg University. The NORMS Workshop Relating to Reflexives (Reykjavik, April 2009; thanks to Tania Strahan) stimulated me to make precise the status of the assumptions needed, as did the Conference on Minimalist Approaches to Syntactic Locality (Budapest, August 2009; organized by Balázs Surányi). A formalization of the notion of reflexive marking, recently developed together with Yoad Winter, was presented in the Eighth Tbilisi Symposium on Language, Logic and Computation in September 2009, and in the Discourse Anaphora and Anaphor Resolution Colloquium (Goa, November 2009).

Virtually every page of this book shows my indebtedness to Tanya, and our years of intense discussion, although she never saw the first draft. This book is written in fond memory of her.

When I moved from Groningen to Utrecht I was extremely lucky to find Martin Everaert as a colleague and friend who shared my interest in anaphors (and who, as an associate director, enabled me to find just enough relief from my directorship to keep my research alive). Over the years he has served as a constant source of inspiration, and I am extremely happy to continue working with him on our universals project

(which is now drawing him away from the daily chores of his directorship). If the introduction to this book is readable at all, it is due to his advice.

I have had the privilege of working with a large number of great doctoral students. Let me only mention a few whose influence on the present work is substantial. Taka Hara showed how reflexivity plays a role in Japanese, despite his original goal of showing that it doesn't. Marijana Marelj greatly contributed to developing θ-theory, providing crucial tools to distinguish between "syntax" and "lexicon" languages (not all of which made it into this book for reasons of space). Nadya Vinokurova convinced me that apparently complex binding patterns in Sakha become simple once approached in the proper way. Nino Amiridze showed me that Georgian has the most beautiful pattern of complex versus simplex reflexives I have come across so far. Anca Sevcenco provided evidence that even Romanian is simple after all, if one takes into account that certain anaphors require A′-antecedents. Arnout Koornneef produced crucial experimental evidence for a systematic division of labor between syntax, logical syntax/semantics, and discourse in the processing of anaphoric dependencies, which influenced the way I ended up thinking about economy.

I would also like to thank my friends and colleagues who commented on various versions of this book. As I mentioned earlier, Natasha Slioussar went over the whole manuscript and gave me important suggestions on how to optimally present my ideas. Her contribution was invaluable. Ken Safir gave me detailed comments on content and exposition, as well as challenging facts to account for. I know how hard it is to find the time to do this and am very grateful to him for his time and effort. Ken Safir, like Martin Everaert, strongly advised me to kill a lot of my darlings. I did, but if I did not kill enough of them it is not their fault. I am also very grateful to Denis Delfitto for his many stimulating comments. Alexis Dimitriadis gave me very valuable feedback on some of the more formal parts of the analysis. In addition, I am very much indebted to Yoad Winter. While we were going through the book in detail, we got stuck on the workings of reflexive marking in what was chapter 3 at that time. His suggestions led to a whole new line of research, only part of which is covered in chapter 6 of this book; the rest will hopefully lead to a new, joint, project. Thanks also to Dagmar Schadler and Anna Volkova for reading and commenting on a previous version.

What was intended to be a yearlong project (the period covered by the original NWO grant) turned out to last more than five years. Bad plan-

ning, an efficiency manager would say. Well, that's what it takes to get something done would be my answer.

But even so, writing a book is a task that weighs on you and on those around you. Wimke, Merijn, Ascelijn, Marike, and Michiel, thanks for making it so abundantly clear that there is a life out there. I would also like to thank Suus and Jane for their continuing interest in the project. I am extremely lucky that Wimke knows what one has to go through if one really wants to solve a question (her work involves immune responses, genetics, and our dentition rather than language). Nevertheless, she has been looking forward to a time when playing tennis, taking a nice long walk in the snow, or watching a good movie is not an irresponsible distraction from a "more important" goal. Wimke, thanks a lot for your love and support during all these years. As a minimal token of love and gratitude, this book is for you!

此为试读,需要完整PDF请访问: www.ertongbook.com

Contents

Series Foreword xi
Preface xiii

1 Introduction 1
1.1 Goals 1
1.2 Background 4
1.3 Variation in Binding 7
1.4 Toward Explanation in Linguistics 9
1.4.1 Linguistics as a Cognitive Science 9
1.4.2 A Minimalist Perspective on Natural Language Grammar 10
1.4.3 What Would Make C_{HL} Trivial? 14
1.5 Unity and Diversity in Anaphoric Dependencies 19
1.5.1 Universals and Sources of Invariance 19
1.5.2 Toward Explaining the Binding Conditions 22
1.6 Interpretive Dependencies 25
1.6.1 Binding and Coreference 27
1.6.2 A Definition of A-Binding 30
1.6.3 A-Binding: Logical Syntax and Semantics 34
1.7 The Canonical Binding Theory 38
1.7.1 An Overview of the CBT 38
1.7.2 Locality 40
1.7.3 BT Compatibility 42
1.7.4 Some Further Challenges to the CBT 43
1.8 Beyond the CBT 44
1.8.1 Types of Nominal Expressions 44
1.8.2 Parameters of Variation 46
1.9 Indices and Their Demise 53
1.10 Binding and Coreference Revisited 56
1.11 Summary and Structure of the Book 58

2 Structural Conditions on A-Binding 69
2.1 Background 69
2.2 The Status of C-Command in Binding 70

2.3 Pronominals versus Anaphors 79
2.4 Conclusions 80

3 A Modular Approach to Binding: Reflexivity, Chains, and Exemption 81
3.1 Defining Reflexivity 81
3.2 Condition B: Main Facts 83
3.3 Condition A: Main Facts 88
3.4 Semantic and Syntactic Predicates 95
3.5 The Structure of SE Anaphors and SELF Anaphors 96
3.6 An Independent Factor: Syntactic Chain Formation 100
3.6.1 Dutch versus Frisian 100
3.6.2 Chains and the Chain Condition 102
3.6.3 Where Neither the Chain Condition nor Condition B Applies 105
3.6.4 Chains and Hierarchy 107
3.7 Condition B in N- and P-Predicates 109
3.7.1 N-Predicates 109
3.7.2 P-Predicates 110
3.8 Toward Explaining the Binding Conditions: Reflexivity and Chains 115
3.9 Conclusion 120

4 Representing Anaphoric Dependencies: Issues of Economy 123
4.1 Introduction 123
4.2 The Nature of Economy: Its Rationales 126
4.3 Competition in Brazilian Portuguese 130
4.4 A Synthesis: The Competition between *Hem* and *Zich* Revisited 131
4.5 Conclusions 136

5 Binding by Chains: The Syntactic Encoding of Interpretive Dependencies 137
5.1 Introduction 137
5.2 Underspecification 138
5.3 Index-Free Binding 140
5.4 The Binding Requirement on Anaphors 144
5.5 Encoding Dependencies within C_{HL} 145
5.5.1 Dependencies in the Framework of Chomsky (1995) 146
5.5.2 Overt V-to-T 149
5.5.3 Checking *Zich*'s Features 151
5.5.4 Linking 151
5.5.5 Features and Feature Bundles 153
5.5.6 CHAINs and Chains 155
5.5.7 Covert V-to-T 156
5.6 Conditions on the Tail: What Blocks Chain Formation? 159
5.6.1 Recoverable Features 159
5.6.2 A Nonrecoverable Property: Number 162

5.6.3 A Further Perspective: The Role of D 164
5.6.4 Definiteness and POSS Anaphors 166
5.7 Binding versus Logophoricity 169
5.7.1 Subjunctive 170
5.7.2 Nonmatching Antecedents 171
5.8 Maximality of Chains and Conditions on Chain Heads 173
5.8.1 The Issue 173
5.8.2 SE as a Subject 173
5.9 Agreeing to Bind 174
5.9.1 Background 174
5.9.2 Implementation 176
5.9.3 An Empirical Consequence 178
5.10 Conclusion 179

6 Deriving the Binding Conditions: Encoding and Sources of Invariance 181
6.1 Introduction 181
6.2 Deriving the Binding Conditions: Why Conditions A and B? 185
6.2.1 Why is Reflexivity Marked? 185
6.2.2 Condition B and the IDI 186
6.3 Licensing Reflexivity 189
6.3.1 Operations on Argument Structure: The θ-System 192
6.3.2 From Lexical Reflexivity to Structural Case and Pronouns in English 202
6.3.3 Protecting a Variable 206
6.4 A Note on Binding and an Interim Summary 209
6.4.1 A Note on Binding 209
6.4.2 An Interim Summary 211
6.5 Deriving Condition A 214
6.5.1 The Syntax of Reflexive-Marking 215
6.5.2 Reference by Proxy and the Functional Semantics of Pronominals 219
6.5.3 How SELF Movement Is Enforced 222
6.6 Remaining Questions and Summary of Results 237
6.6.1 Revisiting Faltz's Typology 237
6.6.2 The Notion "Anaphor": Its Theoretical Significance 239
6.7 From Invariants to Variation: Masking 240
6.8 Conclusions 245

7 Reflexive-Marking by SELF Movement: A Case Study 247
7.1 Introduction 247
7.2 The Internal Structure of SELF Anaphors 247
7.3 Further Consequences of SELF Movement 249
7.4 The Definition of Syntactic Predicates: Which Property Attracts SELF? 253
7.5 Local Binding of 1st- and 2nd-Person Pronominals 255

7.6 Maximality of Chains and Conditions on Chain Heads 259
7.6.1 The Issue 259
7.6.2 Nominative Complex Anaphors 260
7.7 Summary and Conclusions 266

8 Variation in Anaphoric Systems within Germanic 267
8.1 Introduction 267
8.2 Local Binding of Pronouns in Frisian 268
8.3 German *Sich* 273
8.3.1 German *Sich* and Reflexivity 273
8.3.2 Case and Case Distinctions 279
8.3.3 Concluding the Discussion of Case and Chains 283
8.4 Long-Distance Anaphors in Germanic 285
8.4.1 Introduction 285
8.4.2 Anaphors across Germanic Languages 286
8.4.3 Capturing the Variation in Binding Domains 295
8.4.4 Discussion from Current Perspectives: Long-Distance Binding and Minimalism 302
8.4.5 Long-Distance Binding of Direct Object SE 311
8.5 Logophoricity: Icelandic Logophoric Anaphora 314
8.5.1 Introduction 314
8.5.2 Subjunctives 316
8.5.3 Infinitives 319
8.5.4 Summary of the Facts 320
8.5.5 The Interpretation of *Sig*: Binding versus Coreference 321
8.5.6 Conclusions and Open Issues 322
8.6 Summary and Conclusions 323

9 Discussion, Summary, and Conclusions 325
9.1 Introduction 325
9.2 How to Encode Anaphoric Dependencies: Theoretical and Crosslinguistic Variation 326
9.2.1 Kayne 2002 327
9.2.2 Zwart 2002 330
9.2.3 Boeckx, Hornstein, and Nunes 2007 331
9.2.4 Safir 2004a and 2004b 335
9.2.5 Hicks 2009 336
9.3 Overview and Summary of Results 337
9.4 General Conclusions 341

Notes 345
References 393
Author Index 419
Subject Index 425

1 Introduction

Alice laughed. "There's no use trying," she said: "one can't believe impossible things."

"I daresay you haven't had much practice," said the Queen. "When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast."

—Lewis Carroll, *Through the Looking-Glass*, 153

1.1 Goals

The use of language comes as naturally to us as breathing. This is why it is so tempting to take its properties at face value. A scientific enterprise, however, requires distance from the object of interest, and departing from one's everyday perspective. It starts with curiosity about what appears obvious and natural, and an open mind.

What the Queen is telling Alice is that impossible things are perhaps not so impossible after all, if you try hard enough (and perhaps that believing impossible things is fun, although we cannot be so sure in the case of the Queen). Turning around what she said, it surely is fun to think of familiar things every day (and perhaps six and before breakfast), to discover how curious they actually are. This is what we should do with language.

I begin this book with a simple fact of language that only reveals how curious it is if we are open to what small things may tell us. Let me put it in the context of Alice's world. The story of *Alice's Adventures in Wonderland* begins as follows:

(1) Alice was beginning to get very tired of sitting by her sister on the bank.

This fragment contains an occurrence of the pronoun *her* in *her sister*, and it is pretty clear that *her* can only be Alice. As we know, after this

the story introduces the White Rabbit, how the Rabbit popped down the rabbit hole, and how Alice went after it. The story goes on as in (2):

(2) The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping herself before she found herself falling down a very deep well.

This fragment has two occurrences of the word *herself*. *Herself* is an anaphor, and all speakers of English will without hesitation give these occurrences of *herself* the value Alice as well. So, in the context of this part of the story both *her* and *herself* receive the same value. What happens if we replace *herself* with *her* in (2′)?

(2′) The rabbit-hole went straight on like a tunnel for some way, and then dipped suddenly down, so suddenly that Alice had not a moment to think about stopping her before she found her falling down a very deep well.

Here, for some reason, *her* cannot be Alice, and since the text did not introduce any other suitable female character, this change makes the fragment unacceptable. The puzzle is, then, the following:

(3) Why can't the pronoun have the value *Alice* in (2′), although it can have the value *Alice* in other environments?

As illustrated in (4), freely improvising on other parts of the tale, there is another puzzle, and it relates to anaphors such as *herself*.

(4) a. *Alice* found *herself* falling.
b. **Alice* expected the Mad Hatter to invite *herself* for tea.
c. *The Mad Hatter invited *herself*.

In (4a) *herself* receives the value of *Alice* but in (4b) this is impossible. (In (4) and elsewhere, italicized expressions have the same values.) Whereas in (2′) our interpretive system can value *her* with any female individual other than Alice—if contextually available—and the sentence will be grammatical, in (4b) there is no escape, and the same holds true for (4c). No interpretation is available for *herself* in these environments. Summarizing, we have the puzzle in (3′):

(3′) Why can't the anaphor *herself* have the value Alice in (4b,c), although it can have the value Alice in other environments?

These seem small questions, but as we pursue them, they will turn out to bear on the core design properties of language.

此为试读,需要完整PDF请访问: www.ertongbook.com