Contents

Analytical Table of Contents ix

Preface xvii

PART I

The Basic Account 1

Chapter 1

Introduction 3

Chapter 2

The Evidence in Favor of Underlying Events 13

Chapter 3

Event Ontology and Logical Form 20

Chapter 4

Modifiers 40

Chapter 5

Thematic Roles 68

Chapter 6

Causatives and Inchoatives 105

Chapter 7

Explicit Discourse about Events 127

PART II
Reflections and Refinements 143

Chapter 8
Metaphysical Issues 145

Chapter 9
The Progressive in English: Events, States, and Processes 167

Chapter 10
States 186

Chapter 11
Tenses and "Temporal" Adverbials 207

Chapter 12
The Semantics of the Perfect and the Progressive in Modern and Old English 229

Chapter 13
Eventlish—A Fragment of English 257

Afterword 281

Notes 282

Bibliography 320

Index 329

Analytical Table of Contents

PART I

The Basic Account 1

Chapter 1

Introduction 3

The area of investigation of this book is "subatomic semantics," the study of those "formulas of English" that are treated as atomic formulas in most logical investigations of English. The main hypothesis to be investigated is that simple sentences of English contain subatomic quantification over events. Examples are given of linguistic phenomena to which this hypothesis is relevant. The methodology employed in this study is discussed, along with the notion of logical form.

1.1 Background 3

1.2 Subatomic Semantics 8

1.3 Methodology 9

1.4 Logical Form 11

Chapter 2

The Evidence in Favor of Underlying Events 13

The theory under investigation attributes to ordinary sentences of English (such as 'Brutus stabbed Caesar') logical forms that quantify over events. This chapter reviews some of the data of language that make such a theory plausible, setting the stage for a more detailed in-

2.1 The First Kind of Evidence: The Logic of Modifiers 13

2.2 A Second Kind of Evidence: The Logic of Perceptual Idioms 15

2.3 Implicit and Explicit Talk about Events 17

vestigation in later chapters. The evidence includes the logic of modifiers, the semantics of perceptual statements, the relations between implicit and explicit reference to events, and quantification over events. The chapter concludes by noting the robustness of the major hypothesis: its usefulness in tying together a wide variety of apparently diverse phenomena.

2.4 Explicit Quantification over Events 18

2.5 Robustness 19

Chapter 3
Event Ontology and Logical Form 20

The tradition in the literature that distinguishes events, states, and processes is discussed and the distinction between events and states is singled out as important (postponing processes until chapter 9). Various ontological assumptions about events and states are articulated: they have participants, they are particular (as opposed to generic), and they culminate or hold. These notions are used in attributing logical forms to sentences of English. The English tense system is discussed, as well as the differences among states, facts, and propositions.

3.1 Events, States, and Processes 20

3.2 Ontological Assumptions and Logical Forms 21

3.3 Tenses and Times 27

3.4 More Details about Tenses 28

3.5 States, Propositions, and Facts 31

3.6 Tests for Distinctions among the Categories 34

Chapter 4
Modifiers 40

This chapter begins by classifying modifiers in order to isolate "verb modifiers," which are to be construed as predicates of underlying events. The next two sections discuss various issues connected with verb modifiers: attributives, scope, conjunctions of modifiers, and the treatment of group NPs. Section 4 discusses various alternative ac-

4.1 Classification of Modifiers 40

4.2 Attributives 42

4.3 Group Readings, Scope, and Conjunctions 45

4.4 Alternatives to the Underlying Event Account 50

counts of the semantics of these modifiers; most of these accounts are either incomplete or incorrect. The chapter concludes with a discussion of modifiers other than verb modifiers.

4.5 Distinguishing Kinds of Modifiers 62

Chapter 5
Thematic Roles 68

The theory of thematic roles in linguistics holds that the subject and the direct and indirect object positions of NPs in sentences are surface clues to underlying relations between those NPs and the verb. Within the theory of underlying events, thematic roles are seen as relations between events and their participants, with certain participants seen as Agents of events, others seen as Patients ("Themes"), and so on. Section 4 extends the account to some phenomena concerning motion and location modifiers, such as the relation between 'onto' and 'on', and the possibility of multiple thematic roles. Objections to the theory are discussed. The theory is then extended to an account of the passive. Sections 7 and 8 discuss the significance of the use of thematic relations, as well as alternative accounts that are agnostic about thematic roles.

5.1 Thematic Roles in Grammatical Theory 68

5.2 Thematic Roles with Underlying Events 72

5.3 The Basic Account 73

5.4 Enhancements 77

5.5 Objections to the Use of Thematic Roles 83

5.6 Passive Sentences 91

5.7 The Utility of Thematic Relations 93

5.8 Cross-Verbal Thematic Roles 99

Chapter 6
Causatives and Inchoatives 105

Causatives are certain verbs that are paraphrasable in terms of 'cause', such as 'break the window' = 'cause the window to break'. Inchoatives are verbs that are paraphrasable in terms of 'become' plus an adjective, such as 'melt' = 'be-

6.1 Introduction 105

6.2 Causatives in the Generative Semantics Tradition 107

6.3 An Analysis of Causatives in Terms of Events 109

come molten'. This chapter analyzes causatives and inchoatives within the framework of the theory of underlying events and states. Sections 2–4 develop an analysis of causatives, building on early ideas from Generative Semantics. Section 5 discusses and rejects the possibility of a simpler account in terms of thematic roles. An analysis of inchoatives is given, and then the two accounts are combined in an account of causative-inchoatives. Section 8 discusses various complexities of how modifiers relate to causative-inchoatives, including discussion of locutions such as 'hammer the metal flat', 'open the door partway', 'load hay on the wagon'. The last section discusses alternative versions of the account.

6.4 Objections to the Analysis of Causatives 112

6.5 An Incorrect Analysis Based on Optional Thematic Relations 117

6.6 Inchoatives 118

6.7 Causative-Inchoatives 120

6.8 Modifiers of Events and Modifiers of States 120

6.9 An Alternative Version of the Theory 124

Chapter 7

Explicit Discourse about Events 127

English has a wide variety of locutions that are used to refer to and to quantify over events: terms such as 'Mary's singing', 'the destruction of the city', 'the accident that occurred last night', and so on. This chapter links these locutions with simple sentences of English. The first two sections develop an account of NPs that contain explicit reference to events, such as 'the stabbing of Caesar'; the remaining sections discuss sentences in which we use these locutions to say things about events. The last section discusses modifiers of verbs that apply to events.

7.1 Basic Principles 127

7.2 Nominal and Verbal Gerundives 132

7.3 Intransitive Event Verbs: 'Occur', 'Happen', 'Take Place' 135

7.4 Event Causatives 138

7.5 Event Perceptions 140

7.6 Transitive Event Verbs 140

PART II

Reflections and Refinements 143

Chapter 8
Metaphysical Issues 145

This chapter begins by reviewing what the theory tells us about events and states. Section 2 articulates various notions of reductionistic accounts of events and states and explains why such accounts are not given in this book. Sections 3 and 4 summarize issues in the philosophical literature about fine-grained versus coarse-grained accounts of event identity. (Fine-grained accounts distinguish actions finely, with extreme versions holding that "the singing" and "the loud singing" are different actions. Coarse-grained accounts would identify "my handwaving" and "my signaling" when I signal by waving my hand.) The theory developed here falls midway between these extremes. The last two sections discuss and criticize attempts to defend coarse-grained accounts by modifying the underlying event account.

8.1
The Nature of Events and States 145

8.2
Reductionistic Accounts of Events and States 148

8.3
Event Identity: Fine-Grained and Coarse-Grained Accounts 153

8.4
Arguments from the Philosophical Literature 159

8.5
Defenses of the Coarse-Grained Version Involving Postulation of Underlying Basic Actions 161

8.6
Defenses of the Coarse-Grained Version Involving Postulation of Universal Causative Analyses 163

Chapter 9
The Progressive in English: Events, States, and Processes 167

The first goal of this chapter is to formulate an adequate account of the semantics of the progressive aspect in English: the semantics of 'Agatha is making a cake', as opposed to 'Agatha makes a cake'. Some proposals in the literature are reviewed; all have difficulty with the so-called "imperfective paradox", that 'Mary is building a house' might be true even if she is interrupted in her building, so that 'Mary has built a house' is never true. Section 2 contains an account of the progressive in terms of underlying events,

9.1
History of the Problem: The "Imperfective Paradox" 167

9.2
An Analysis of the Progressive Using Events 170

9.3
Absent Processes and Unfinished Objects 172

9.4
Interval Semantics: Bennett's Refined Analysis 179

9.5
Processes and the Progressive 182

an account that is immune to the imperfective paradox. Sections 3 and 4 consider some objections to the analysis as well as other proposals by Dowty, Åqvist, and Michael Bennett. The second goal of the chapter, taken up in the last section, is to refine the notion of a process so as to account for the infamous "category switch" problem: how it is that modification of a verb like 'run' by an adverbial like 'to the store' can turn a Process phrase ('run') into an Event phrase ('run to the store').

Chapter 10
States 186

This chapter explores the idea that state sentences involve quantification over underlying states. The theory defended is that state verbs, adjectives, and locatives are all predicates of states but that nouns are not. The chapter concludes with an examination of puzzling sentences like 'The series converges rapidly' and 'The road from A to B goes uphill'.

10.1 Introduction 186

10.2 State Verbs 188

10.3 Adjectives 190

10.4 Locatives 194

10.5 Explicit Reference to and Quantification over States 198

10.6 Do Nouns have Underlying States? 200

10.7 Participants of States 202

10.8 States in Arithmetic 203

Chapter 11
Tenses and "Temporal" Adverbials 207

This chapter is concerned with various sorts of temporal adverbials and

11.1 Overview of Tenses and "Temporal" Adverbials 207

11.2 Frame Adverbials 211

how they interact with underlying events. Certain of these (Frame adverbials) set up a "frame of discussion"; they are discussed only briefly. The role of tenses is to constrain certain times at which events and states occur. Some adverbials constrain the same times that the tenses constrain. Certain other temporal modifiers constrain the events themselves. Frequency adverbials quantify various things in the sentence, sometimes constraining times and sometimes constraining events.

11.3
Tenses 212

11.4
Constraints on Times 215

11.5
Temporal Modifiers of Events 221

11.6
Frequency Adverbials and Subordinate Clauses 224

11.7
Interactions 227

Chapter 12
The Semantics of the Perfect and the Progressive in Modern and Old English 229

The perfect (as in 'Mary has eaten') is seen as adding a component to the sentence in addition to the tense. Accounts of the progressive and perfect are given in terms of states associated with events (or with states). Verbs, as usual, pick out events; the progressive is true if the "In-Progress" state associated with the event holds, and the perfect is true if the "Resultant" state associated with the event holds. These correlations explain the equivalence of the present perfect and the simple past when temporal adverbials are absent (e.g., 'Agatha ate' versus 'Agatha has eaten'). There follows a discussion of a popular view according to which the modern forms of the perfect and progressive evolved from certain adjectival uses of participles in Old English. This view is formalized, and the relation between the old and new forms according to the popular view is clarified, and

12.1
The Perfect in Modern English: Data 229

12.2
The Semantical Framework of Underlying Events and States 231

12.3
The Progressive and Perfect in Modern English 233

12.4
Participles as Adjectives 236

12.5
The Progressive and the Perfect in Old English 239

12.6
Unsolved Problems 246

12.7
Skeptical Reflections on Participles 250

12.8
Temporal Adverbials 253

some further problems are discussed. The last section discusses how the perfect interacts with temporal adverbials and provides a slight repair to the theory of the progressive.

Chapter 13

Eventlish—A Fragment of English 257

This chapter gives many of the details needed to formalize the theory. A series of templates is provided to permit the generation of atomic formulas of English, exploiting information about particular pieces of vocabulary contained in a Lexicon.

13.1 Introduction 257

13.2 The Templates 259

13.3 The Lexicon 263

13.4 Miscellaneous Matters 270

13.5 Simple Passives 272

13.6 Perception Sentences 273

13.7 Inchoatives 275

13.8 Resultative Tags 276

13.9 Causatives 277

13.10 Higher-Order Constructions with Causative Verbs 278

13.11 Higher-Order Verbs 279

13.12 Copular Sentences 279