

Contents

<i>Figures</i>	page xiii
<i>Preface</i>	xv
<i>Annotated Abbreviations</i>	xvii
Introduction	1
Overview	1
Language as a Biological and Psychological Phenomenon	3
The World 'Outside' versus the World 'Inside'	3
The Role of Language	4
The 'Framework'	4
Mind and Brain Contrasted and Compared	5
Two Levels of Description	5
Mind and Brain Together	7
What Is a Representation?	8
Representations and Equivalent Terms	9
Knowledge as a Relative Concept	10
The Mind as a Network	11
Alternative Views and Close Relatives	13
What Is Special about Language?	16
Summary	17
PART I Mechanisms of the Mind	19
1 The Basic Design	21
In This Chapter	21
The Module or 'Processing Unit'	21
How Many Experts?	24
The Store's 'Primitives'	25
Interfaces	26
Summary	28
2 Perception	30
In This Chapter	30
From Sensory Experience to Representation	30
Perception as Illusion, of a Kind	32
The Perceptual 'Group'	33
Five Senses Extended	35

Synaesthesia	35
Perceptual Systems Are Not Equal	37
Perceptual Experience without External Cause	38
Making Sense	38
Processing Is Bidirectional	41
The Auditory System	42
Taste and Smell	42
Body Sense	43
Perceptual Structures without Meaning or Value	44
Summary	44
3 Motion	45
In This Chapter	45
Interconnectivity	45
Imagined Movement	47
The Language of Our Ancestors	48
Integrating Motor Structures with the Perceptual Systems	48
Summary	49
4 Meaning	50
In This Chapter	50
Conceptual Representations	50
Thinking, Imagining and Sensing	52
The Conceptual System and the Brain	52
Integrating Conceptual Structures with the Perceptual and Motor Systems	53
Summary	54
5 Affect	56
In This Chapter	56
Evaluation	56
Neuroscientific Views	57
Valence and Appraisal	60
Basic Emotions	61
Integrating Affect with Perceptual, Motor and Conceptual Systems	62
Summary	63
6 Memory, Processing and Activation	65
In This Chapter	65
Memory	65
Communication between Modules	67
Working and Long-Term Memory	68
Indexing	71
Competition	72
'Construction' versus 'Association'	74
Processing Goes Both Ways and at the Same Time	75
Every Module Is Both Expert and Stupid	76
Summary	76

7	Consciousness and Attention	78
	In This Chapter	78
	Activation-Based Explanations of Consciousness	78
	Thinking Consciously Works Slowly and Sequentially	80
	Attention, Awareness and Activation	80
	Perception as the Engine of Consciousness	82
	Awareness of Emotion	83
	Summary	84
8	Developing Knowledge and Ability	85
	In This Chapter	85
	Knowledge and Ability Combined	85
	Knowledge as Relative	86
	Knowledge and Ability Distinguished	86
	APT and Bidirectional Development	87
	Resting Level as a Relative Concept	90
	Growth and Affect	90
	Summary	91
	PART II Language(s) in the Mind	93
9	Defining Language	95
	In This Chapter	95
	The Broad and Narrow Definitions of Language	95
	Organising Speech Sounds	96
	Organising Words and Parts of Words	96
	The UG-Controlled Zone	97
	Producing and Interpreting Utterances	98
	Summary	99
10	The Core System	100
	In This Chapter	100
	What's Special about Language and What Isn't	100
	The Two Core Modules	101
	Phonological Structure (PS)	103
	Syntactic Structure (SS)	105
	Complex Linguistic Structures	106
	Processing in Parallel, Bidirectionally and Not Always	108
	Successfully	108
	Summary	109
11	Language beyond the Core	110
	In This Chapter	110
	Language Sounds outside the Core	110
	Language Meanings outside the Core	111
	Language out of Context	112
	Language in Context	114

Language Articulation	116
Language Perception	117
The 'Colonising' Core	120
Communicating <i>without</i> Using the Core System	122
Summary	123
12 Two Ways of Knowing a Language	125
In This Chapter	125
Conceptual Knowledge of Grammar	126
Metacognition	129
Metalinguistic Ability and the Perceptual System	130
Summary	131
13 Language and Affect	133
In This Chapter	133
The Relevance of Affect to Language	133
Affect within the Core Language System	134
Affect beyond the Core Language System: Sounds and Meanings	136
Affect and the Auditory System (AFS and AS)	137
Affect and the Conceptual System (AfS and CS)	138
Grammaticality Judgements and AfS	139
Expanding the Connections: Affective, Visual and Motor Structures	141
Affect and the Visual System (AfS and VS)	142
Affect and the Motor System	143
Affect as an Inhibitor of Language	143
Summary	146
14 Language Development in the Monolingual	148
In This Chapter	148
One Size Fits All	150
The Tower of Babel	150
Language 'Input': A Misleading Term	151
Early Speech	152
Babies, Birds and Monkeys	153
Babies and Dogs	154
Acquisition: The Early Stages	155
The Silent Period and Baby Signing	156
Language Acquisition by Processing	158
Early Grammars	161
Applying the Framework	162
Conceptual Bootstrapping	163
Acquiring Language by Interpreting Utterances	163
Building Core Linguistic Structure from Speech Input	165
Language Acquisition outside the Core System	167
Simple Linguistic Systems	169
Language Acquisition and Age	171
Summary	172

15	Becoming Multilingual	173
	In This Chapter	173
	Accommodating Different Language Systems	174
	Escaping the Tower	175
	APT Applied to More Than One Language	178
	Competition Revisited	179
	Crosslinguistic Effects	180
	Code-Switching and Code-Mixing	184
	Heritage Languages	186
	The Growth of Metalinguistic Knowledge in Multilinguals	188
1.1	Multilingualism and the Ageing Mind	190
1.1	Summary	192
1.2	Two interfaced modules.	27
2.1	Conclusion	194
2.2	Overview	194
3.1	Fixed, Flexible and Dynamic	194
	The Relationship between Language and Vision	195
4.1	On the Myth of the Human Mind	196
	Social Context and the World Inside	196
4.2	Closing Summary	197
5.1	<i>Glossary</i>	199
5.2	<i>References</i>	211
6.1	<i>Index</i>	221
6.2	Two working memories with an interface connection.	68
6.3	Coactivated structures in two working memories.	69
6.4	Constructing and associating.	74
8.1	Different resting levels of activation.	89
9.1	Language: the core system and adjacent modules.	98
10.1	The core language system connections.	101
11.1	A visible language network (writing).	119
11.2	A visible language network (sign language).	120
11.3	The colonising core.	121
11.4	Two ways to understand 'horse'.	123
12.1	Two ways of knowing grammar.	128
13.1	Affect interface options for the core language system.	135
13.2	The AfS store interfaced with the sound and meaning structures.	137
13.3	Affect interfaced with motor and visual systems (MoS and VS).	142
13.4	Example of a 'taboo word' network.	144
13.5	Overview of the affective memory store and related connections.	146
14.1	Raw input, not 'words and sentences'.	149
14.2	All language systems stored and processed the same way.	150
14.3	A recipe for confusion?	151