

Contents

List of Figures	xv
List of Tables	xix
Prologue: Setting Out	xxi
The Principle of Unity.....	xxviii
The two dimensions of time	xxxiii
Can machines think?.....	xxxvi
An experiment in learning.....	xli
The science of consciousness.....	xlii
Healing the mind in Wholeness.....	xliv
Getting started.....	xlix
Consciousness is all there is.....	li
The Singularity in time.....	liv
Transforming the cultural-cognitive cycle	lx
The spectrum of consciousness	lxiv
The all-inclusiveness of IRL	lxix
Unifying the inner and outer	lxxii
Structure of book.....	lxxvi
Finding a language.....	lxxx
Part I Integral Relational Logic.....	1
The data processing watershed	4
The central information systems modelling problem.....	16
An outline solution	25
An evolutionary perspective	31
Chapter 1 Starting Afresh at the Very Beginning.....	35
Mindfulness meditation	44
Introduction to modelling	48
The beauty of maps.....	53
Mapping the Universe	65
Maps and territories	71
Mathematical mapmaking	75

Putting mathematics into perspective.....	80
The Principle of Unity	84
The voice of experience.....	98
Clearing the ground	102
Concept of concept	111
Painting a complete picture	133
Principles of conceptual modelling.....	140
Laying down the foundations.....	148
The Datum of the Universe.....	158
Being, the superclass of all concepts.....	162
Primal concepts.....	173
Chapter 2 Building Relationships	177
Bootstrap concepts.....	180
Entity-attribute relationships	183
Attribute types	187
Organizing our records	190
Relations	193
Domains of values.....	197
Semantic relationships	198
Hierarchical relationships.....	201
Generalization relationships	201
Aggregation relationships.....	207
Evolutionary relationships.....	208
Nonhierarchical relationships.....	211
Matrices	211
Other relationships	215
A system of coordinates.....	216
Chapter 3 Unifying Opposites.....	223
The Principle of Duality	225
The circle of duality	233
The triangle of duality	234
The cross of duality.....	238
Dualism, duality, and Nonduality.....	240
Chapter 4 Transcending the Categories.....	243
The Absolute Whole	244
Conceptual realization	246
Experiential realization.....	248
The Principle of Unity	249
The mystical experience.....	251
Consciousness is all there is	255
A cosmological perspective	259
Unifying science and mysticism.....	261
Who are we?	263

CONTENTS xiii

Our Shared Identity	263
Individual uniqueness	264
Unifying our Divine and human identities.....	265
The two dimensions of time	270
Liberating Intelligence from its mechanistic conditioning.....	274
Enlightening the shadow	278
Becoming androgynous beings	280
Working harmoniously together with a common vision	283
Glossary	287
Notes for Volume One.....	365
Bibliography.....	399
Index of Word Roots	447
Index of References and Influences	453
General Index	465

List of Figures

P.1	The Principle of Unity	xxix
P.2	The cosmogonic cycle	xxxii
P.3	Two dimensions of time	xxxiii
P.4	Loebner Gold Prize Medal for successful Turing Test	xli
P.5	Hardanger Fjord, Norway	xlii
P.6	Foundations of the URT	xliv
P.7	Major evolutionary turning points	lviii
P.8	The cultural-cognitive cycle	lx
P.9	The spectrum of consciousness	lxv
I.1	Wastage of software development	7
I.2	The application wedge	7
I.3	The programming maintenance problem	8
I.4	DP Manager becomes CIO	11
I.5	Four-sector classification of US work force, 1860-1980	13
I.6	Pools of consciousness	15
I.7	Sea of consciousness	15
I.8	Ocean of Consciousness	16
I.9	Information flow in organizations	17
I.10	Process-entity matrix	20
I.11	Growth curve of computing technologies	23
I.12	Continuous and discontinuous changes shown as paths on the cusp catastrophe graph	27
I.13	Business world	29
I.14	Knowledge and information about business world	29
I.15	Semantic model of business world	30
I.16	Underlying data model of business world	30
I.17	Witnessing modelling of Totality of Existence with self-reflective Intelligence	31
1.1	The blind men and the elephant	40
1.2	Cognitive science hexagram	53

1.3	Mappa Mundi in Hereford Cathedral	55
1.4	Mercator same-shape projection with fifteen-degree graticule	60
1.5	Gall-Peters equal-area projection with fifteen-degree graticule.....	62
1.6	Title page of Mercator's 1595 Atlas.....	63
1.7	Frederick Rose's 1877 satirical map of Europe	66
1.8	A star map for a winter evening in the northern hemisphere	67
1.10	Microwave view of the physical universe	67
1.9	The electromagnetic spectrum	68
1.11	The Earth viewed as an undivided whole	69
1.12	Drawing Hands	74
1.13	Bridges at Königsberg	75
1.14	A mathematical graph	76
1.15	A semantic network	79
1.16	Polar reciprocation	84
1.17	Self-dual tetrahedra: stella octangula	85
1.18	Cuboctahedron and dual rhombic dodecahedron.....	85
1.19	Japanese sangaku.....	86
1.20	Four circles problem and its inversion	87
1.21	Contextual inversion	88
1.22	The Principle of Unity	91
1.23	A limiting structure	103
1.24	A more accommodating structure	103
1.25	The Tower of Babel	104
1.26	Ada Lovelace.....	106
1.27	The workshop of the head.....	110
1.28	The factory within the human body.....	110
1.29	Two-part linguistic sign	118
1.31	Peirce's triadic network	121
1.32	The meaning triangle	126
1.33	Benzene ring	129
1.34	Uroborus	129
1.35	Peace rose.....	130
1.36	Words having similarities in spelling, pronunciation, or meaning	132
1.37	Fractal seed for a fern	134
1.38	A fractal fern	134
1.39	Koch snowflake.....	135
1.40	Filling an infinite plane	136
1.41	Penrose aperiodic tiling.....	137
1.42	Janus.....	149

1.43	Peirce's view of 'The Sciences in Their Order of Generality'	153
1.44	Foundations of panosophy	155
1.45	Mechanical processing	159
1.46	Most abstract class model in business	166
1.47	Overall design of the Universe	167
1.48	Kant's table of categories.....	169
1.49	Form, relationship, & structure	171
1.50	Wilber's basic categories in a quadrant	171
1.51	Foundations of all knowledge	172
1.52	Framework for an ecohouse	172
2.1	Basic data processing function.....	177
2.2	Bringing order to chaos.....	181
2.3	A perceptive illusion.....	183
2.4	Semantic diagram showing the relationships between entities	184
2.5	Table of fermions in standard model of fundamental particles and interactions	194
2.6	Tony Buzan's hierarchical mind map of the mind.....	200
2.7	A class hierarchy.....	203
2.8	Aggregation hierarchy	208
2.9	Class diagram for a family tree	209
2.10	An instance diagram for a family tree	210
2.11	A tiny portion of Douglas R. Hofstadter's 'semantic network'	212
2.12	Basic network.....	215
2.13	Periodic table	215
3.1	Dual sets within the universal set	225
3.2	Pascal's Mystic Hexagram	226
3.3	Brianchon's dual theorem	226
3.4	Relativity	227
3.5	The Principle of Duality	230
3.6	T'ai-chi-t'u.....	232
3.7	The Circle of Duality	234
3.8	Mapping of all rationals to countable integers	235
3.9	The Triangle of Duality	237
3.10	The Cross of Duality	238
3.11	Dualism	240
3.12	Duality	241
3.13	Nondual Consciousness	242
4.1	Wholeness, the union of Wholeness and Oneness.....	250
4.2	The primacy of Nonduality	250

4.3	Aum.....	254
4.4	Hardanger Fjord, Norway.....	255
4.5	Prototype of model of the Ocean of Consciousness	256
4.6	Radiant light of Consciousness.....	257
4.7	David Bohm	259
4.8	Indra's net as a spider's web	268
4.9	Indra's net as a network of jewels	268
4.10	Cyclic view of time	271
4.11	Horizontal and vertical dimensions of time	272
4.12	Schematic of life and death process	273
4.13	Three major paths of human ontogeny	275
4.14	Twin granddaughters	275
4.15	The psychic shadow	279
4.16	Our shared blind spots.....	279
4.17	A therapeutic mandala	281
4.18	A Cosmic yantra	281
4.19	A Tibetan mandala	282
4.20	Chenrezig sand mandala	282
4.21	Harmony Mandala.....	284
4.22	Apocalyptic way Home to Wholeness	284
4.23	Evolutionary enlightenment.....	285
B.1	"By God, for a minute there it suddenly all made sense!"	399

List of Tables

I.1	A framework for information systems	18
1.1	Duals in projective geometry.....	85
1.2	Approaches to scientific method	123
1.3	Terms for the meaning triangle.....	126
1.4	Similarities and differences in words with different meanings.....	133
1.5	Examples of simple equations.....	142
1.6	Aristotle's basic categories	169
2.1	Specifying entities	183
2.2	A table showing the relationship between the basic bootstrap concepts	185
2.3	A universal concept	185
2.4	Knowledge about a human being.....	185
2.5	A mathematical example	185
2.6	A basic demographic concept	186
2.8	Classes with identifying attributes	187
2.7	Entities with multiple attributes.....	187
2.9	Some entries from a telephone directory	193
2.10	Subtle differences of meaning.....	194
2.11	Members of a class of persons arranged in a relation.....	195
2.12	Members of a class of polygons	195
2.13	Concept relationships in SPINES Thesaurus	199
2.14	A subclass of the polygon class	202
2.15	An example of a subspecies.....	204
2.16	An example of a species.....	204
2.17	Biological classification	205
2.18	Top classes in Dewey's Decimal Classification System	205
2.19	The social sciences divisions	206
2.20	The education sections.....	206
2.22	The relation MATRIX by cells.....	214
2.21	Matrix relation by rows and columns	214
2.23	Class relation	219

xx INTEGRAL RELATIONAL LOGIC

2.24	Attribute relation	220
3.1	Class of dualities	228
3.2	Primary-secondary relationships.....	231
4.1	Absolute dualities.....	249
4.2	Levels and types of mechanistic conditioning.....	276