
CONTENTS

<i>List of Tables</i>	<i>xi</i>
<i>Foreword</i>	<i>xvii</i>
<i>Acknowledgments</i>	<i>xix</i>
<i>List of Abbreviations</i>	<i>xxi</i>

Part One: Introduction

Chapter One. Introduction—The Importance of Geometry	3
The Millennial Concern with Geometry	3
Mathematics and Geometry	4
The Varieties of Geometry.....	9
The Foundational Dogma of Geometry	12
The Theoretical Debate.....	14
The Selective Theory of Geometry	18
Gemoetry and Meta-Geometry	18
The Logic of Existential Dialectics.....	19
Sophisticated Methodological Holism	41
Chapter Outline	47
Three Clarifications	48

Part Two: Infinity

Chapter Two. Infinity and Its Finitude.....	99
The Awe of Infinity	99
Infinity and the Mind	101
Infinity and Nature.....	113
Infinity and Society.....	123
Infinity and Culture.....	128
The Counterweight of Finitude	135

Part Three: Symmetry

Chapter Three. Symmetry and Its Asymmetry.....	145
The Beauty of Symmetry	145
Symmetry and the Mind.....	146
Symmetry and Nature	151
Symmetry and Society	162
Symmetry and Culture	168
The Challenge of Asymmetry	176

Part Four: Dimensionality

Chapter Four. Dimensionality and Its Multiplicity	181
The Familiarity of Three-Dimensionality	181
Dimensionality and the Mind.....	182
Dimensionality and Nature	190
Dimensionality and Society	199
Dimensionality and Culture	216
The Difference of Higher-Dimensionality	224

Part Five: Conclusion

Chapter Five. Conclusion—The Future of Geometry	237
The Unfinished Work of Geometry	237
1 st Thesis: The Finiteness-Transfiniteness Principle	244
2 nd Thesis: The Absoluteness-Relativeness Principle	245
3 rd Thesis: The Explicability-Inexplicability Principle	246
4 th Thesis: The Simplesness-Complicatedness Principle.....	248
5 th Thesis: The Openness-Hiddenness Principle	249
6 th Thesis: The Symmetry-Asymmetry Principle.....	250
7 th Thesis: The Convention-Novelty Principle.....	252
8 th Thesis: The Post-Human Alteration.....	254
Beyond Conception, Intuition, and Imagination	256

<i>Bibliography</i>	345
<i>Index</i>	355