

---

# Contents

<b>1 Introduction</b> .....	1
<b>2 Relativistic Quantum Field Theories</b>	
<b>Viewed as Physical Theories</b> .....	5
2.1 The Empirical Domain .....	5
2.2 The Notion of a Relativistic Quantum Field .....	6
2.3 Local Gauge Symmetry .....	7
2.4 Particles versus Quantum Fields .....	8
2.5 The Facets of Quantum Field Theory .....	9
2.5.1 General Theory of Quantum Fields .....	10
2.5.2 Perturbative Renormalisation Theory .....	11
2.5.3 Constructive Quantum Field Theory .....	14
2.5.4 Lattice Gauge Theory .....	15
2.5.5 Local Quantum Physics .....	16
2.6 Renormalisability versus Effective Field Theories .....	17
<b>3 Particles and Fields</b> .....	21
<b>4 Theories of Signs and Symbols, and Structural Realism</b> .....	27
<b>5 A Theory of Symbols for Quantum Field Theory</b> .....	41
5.1 Symbols and Relations .....	41
5.2 A Semiotic View of Quantum Field Theory .....	44
<b>6 Summary</b> .....	51
<b>References</b> .....	53
<b>Name Index</b> .....	57
<b>Subject Index</b> .....	59