Contents

Preface to this edition by MARC LANGE *page* xi
Acknowledgements xiii

Part I A critique of the Regularity theory 1
1 Introductory 3
1 The importance of our topic 3
2 A possible difficulty in investigating our topic 5
3 Assumptions 7
4 The Regularity theory 9
2 Critique of the Regularity theory (1): The problem of accidental uniformities 10
1 The Naive Regularity theory of law 10
2 Classification of criticisms of the Regularity theory 11
3 Single-case uniformities 12
4 How to pass from single-case uniformities to multi-case uniformities 14
5 How to pass from local uniformities to Humean uniformities 15
6 Unrealized physical possibilities 16
7 Humean uniformities with non-existent subjects 17
3 Critique of the Regularity theory (2) 22
1 Spatio-temporally limited laws 22
2 Local uniformities as laws 24
3 Infinitely qualified laws 25
4 Probabilistic laws 27
5 Probabilistic laws: the retreat to Positivism 32
6 Functional laws 35
4 Critique of the Regularity theory (3) 36
1 Lack of inner connection 36
2 Laws of nature as Principles of Explanation 37
3 The Paradoxes of Confirmation 38
4 The Problem of Counterfactuals 43
5 The Problem of Induction 48

5 Can the Regularity theory be sophisticated? 56
1 Preliminary 56
2 Epistemic restriction upon uniformities 57
3 The Resiliency solution 60
4 Systematic restrictions upon uniformities 61

Part II Laws of nature as relations between universals 69
6 Laws of nature as relations between universals 71
1 The need for universals 71
2 The theory of universals 75
3 A first formulation 78
4 Laws as universals 81
5 Causation as a relation between particulars 86
6 Necessitation, universals and laws 89
7 Advantages and some disadvantages of conceiving of laws of nature as relations between universals 92
8 Braithwaite's and Popper's argument 99
7 Functional laws 103
8 Uninstantiated laws 109
1 Tooley's cases 109
2 Tooley's conclusions 110
3 Tooley's cases solved by the introduction of powers? 113
4 A sceptical treatment of Tooley's cases 115
5 Uninstantiated laws with nomically impossible antecedents 117
9 Probabilistic laws 119
1 The form of probabilistic laws 119
2 Probabilistic laws as probabilities of necessitation 122
3 Other types of probabilistic laws 126
10 Further considerations concerning the form of laws 128
1 Scientific identification 128
2 Laws with universal scope 131
3 Are there any Exclusion laws? 134
4 Iron laws and oaken laws 137
5 Disjunctive laws 140
6 Do laws always link the properties of the same object? 143
7 Formal properties of necessitation 145
11 Are the laws of nature necessary or contingent? 148
1 Arguments for the necessity of laws 149
2 Strong Necessity 152

3 Weak Necessity 155
4 Uninstantiated laws 158
Conclusions 161

Works cited 163
Index 166