Contents

1	Ackno	ix	
I	ntrod	uction	xi
I	List of	Abbreviations	xvii
BII	BLIOC	GRAPHY 1945-1981	
1.	Bibli	ographies	1
2.	Topics Related to the Disciplines		6
	2.1	Nature of Philosophy of Science	6
	2.2	Recent History of Philosophy of Science	14
	2.3	Relations Between the Disciplines	23
	2.4	Unity of Science	33
3.	General Works in Philosophy of Science		38
	3.1	General Studies	38
		Collected Papers and Symposia	68
		Textbooks	84
4.	Aspe	87	
	4.1	Scientific Method—General	87
	4.2	Evidence, Observation, Experiments	102
	4.3	Scientific Discovery	111
	4.4	Models and Analogies	121
	4.5	Simplicity	127
	4.6	Meaning of Scientific Terms	131
	4.7	Scientific Laws	149
	4.8	Theories	158

4.9 Research Programs		170
	ion	173
- 10 (17)	Science	191
	Science	193
4.12 Induction 4.13 Probability		221
4.13 Probability 4.14 Verification and Confirm	nation	248
4.14 Verification and Contine 4.15 Falsification, Duhem's T		265
4.16 Popperianism	116010/ 120110 111111	269
4.17 Operationalism		285
4.18 Measurement		287
5. Philosophical Issues Concerning	ng Science	294
5.1 Empiricism and the A P		294
5.2 Causality		300
5.3 Mechanism and Teleolo	ogy	308
5.4 Reduction and Emerger		316
5.5 Realism and Instrumen		322
5.6 Scientific Change and C		334
5.7 Objectivity and Ration		352
5.8 Truth in Science	·	360
5.9 Determinism and Indet	terminism	364
6. Special Topics in the Philosop	phy of the Physical Sciences	368
6.1 Physical Sciences—Ge	neral	368
6.2 Physics—General		371
6.3 Matter		385
6.4 Cosmology		389
6.5 Classical Mechanics		395
6.6 Quantum Mechanics		400
6.7 Relativity Theory		435
6.8 Space, Time, Space-T		454
	pphy of the Biological Sciences	478
7.1 Biological Sciences—0	General	478
7.2 Biological Species		496
7.3 Evolution		499
7.4 Genetics		514
APPENDIX 1. BOSTON STU	DIES IN THE PHILOSOPHY OF	
SCIENCE		517
APPENDIX 2. SYNTHESE LII	BRARY	522
	SITY OF WESTERN ONTARIO	
SERIES IN PHI	ILOSOPHY OF SCIENCE	531
APPENDIX 4. TITLES OF PE	RIODICALS CITED	533

539

Index of Personal Names