

TABLE OF CONTENTS

Introduction	ix
I. Conditioning of Events versus Causal Conditioning	1
1. Kinds of events and kinds of conditions	2
2. Some properties of the relation of conditioning: symmetry and transitivity	7
3. Temporal relations among events. The broadest interpretation of causal conditioning	8
4. A narrower interpretation of causal conditioning: events as changes	9
5. Other narrower approaches to causal determina- tion	10
5.1. Causal relation as a non-spurious statistical relationship	10
5.2. Causal relationship as a relationship con- firmed under experimental conditions	11
5.3. Experiment and spurious relationship	11
6. Relations among events, among features and among variables	12
7. Kinds of methods of establishing causal relations	14
8. Conclusions	16
II. The Simplest Case of Causal Analysis	19
1. Preliminary remarks	19
2. Statistical relationship	20
3. Dichotomous systems	23
4. Interactions among variables	25
5. Causal relationship as a relationship which is not spurious	26
6. Probabilistic definition of cause	31

7. Cause as a necessary component of a sufficient condition	32
8. Conclusions	34
III. The Causal Interpretation of Relationships in Non-experimental Single Studies	37
1. The occurrence and non-occurrence of causal relationships	37
1.1. Functional relationships and systems of linear equations	37
1.2. The role of coefficients in a linear equation	39
1.3. Causal valuation, the recursive model	42
1.4. The case of three variables	44
1.5. Partial correlation	46
1.6. Variables external to the model	46
1.7. An example of causal analysis	48
2. Intensity of causal relationships	50
IV. Verification of Statements on Causal Relationships in Diachronic Research	55
1. Kinds of processes and methods of studying changes	55
1.1. Classification of processes relative to the kind of their dependence on time	56
1.2. The structural classification of processes	58
1.3. Continuous registration and registration in time cuts	60
1.4. Trend analysis	61
2. The panel method and the verification of statements on causal relationships	63
2.1. The study of turnover	64
2.2. Transition matrix	65
2.3. Change of relationship in time	67
2.4. Asymmetry of interactions	69
2.5. Correlation with time lag	75
2.6. Assumptions made in inference about causes	80
2.7. Panel studies and processes with continuous time	82

