

Hume and the Problem of Causation

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For
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Preface

This work is an exposition and defense of David Hume's theory of causation. Hume's treatment of this problem proved to be the single most distinctive and influential achievement in a career of celebrated philosophical accomplishments. Virtually all parties to current disputes about causation consider Hume's account a live option, but the conclusions we reach in this volume are far more supportive. Indeed they vindicate Hume. We argue that Hume's account constitutes the most adequate general theory of causation yet to appear in the literature on the subject.

Our early chapters are largely interpretative and exegetical. We attempt to expound Hume's actual views about causation, cautiously extending his theory to questions about causation that he never explicitly faced, but which test the adequacy of his theory. This interpretative and expository undertaking in itself constitutes a sustained argument on behalf of Hume's theory of causation, for it enables us to undercut objections to the theory that rest on misunderstandings of its details and objectives. Our aims are not exclusively exegetical, however, and throughout we undertake to defend Hume's account of causation against substantive philosophical objections. While many of these objections were not explicitly anticipated by Hume himself, the viability of the Humean theory depends on its ability to counter all compelling alternative accounts. No adequate defense of a philosopher's general view can rest on retreat to a dignified silence in the face of pressing issues merely because those issues were not directly addressed in the philosopher's writings.

The interpretative and the philosophical elements of this work are a unified whole, so that any attempt to identify these dis-

crete elements by chapter contents would at best be artificial. Nevertheless, the structure of our presentation reveals a transition from matters almost wholly textual to issues that involve successively larger interpretative extensions and applications of Hume's original doctrine. Thus, the first chapter attempts to settle a longstanding controversy about Hume's two definitions of "cause," and the second challenges an equally longstanding orthodoxy about his views on induction. Chapter 3 is devoted to an exposition and defense of the regularity theory of causal connectedness, and Chapter 4 treats Hume's account of the causal laws underlying these connections. In these chapters our objectives bring us face to face with powerful contemporary arguments against Hume's views, arguments that turn on the alleged primacy of singular causal sequences, the prospects of causal indeterminism, and the nature of nomological necessity. In Chapters 5 and 6 Hume's discussion of spatiotemporal relations among causes and effects is reconstructed and defended, and attacks on his appeal to temporal priority as the ground of causal directionality are examined.

By this stage in our treatment expositional matters have receded, and most of the discussion involves issues of contemporary concern. Hume's insights are extended to new areas as much in the spirit of the text as in its letter. Thus, for instance, at the end of Chapter 6 we consider whether Hume need have been committed to the asymmetry or directionality of causation. The seventh chapter is almost entirely free of exegetical matters, addressing questions about logical form and ontology that have only assumed their present form in the last few decades. Finally, in Chapter 8 we apply Hume's theory to questions about causal judgment and explanation, assessing the adequacy of his treatment of causation by its implications for ordinary causal judgments and for explanation in the natural and social sciences. A brief synopsis of the arguments in each of these chapters is found in the Analytical Table of Contents.

Our book, then, is both a treatise on Hume's theory of causation and a Humean theory of causation. Overall it represents a radical departure from the traditional interpretation of Hume's views, and some may think that we have defended the Humean theory only by indelicate reconstruction. If our exegetical claims are correct, however, this accusation cannot be sustained. Post-

Humean philosophy seems to us to have framed a picture of Hume's position that he would only have recognized as a caricature. If our exposition is at least as plausible as those traditionally offered, philosophers interested in assessing Hume's contributions should be led to a closer examination of his arguments and their interconnections.

Mendocino, California
Syracuse, New York
March 1980

T.L.B.
 A.R.

Acknowledgments

The history of this book stretches over a decade, and the intellectual debts we have incurred during that period are extensive. Our interest in causation and in the work of Hume was initially encouraged in the late 1960s by Stephen Barker and Max Deutscher. At the same time Harry Silverstein's tenacious arguments helped improve our ideas. Although it has been more than a decade since we last had the advantage of criticism and advice from these three friends, virtually every chapter has been shaped by their formative influence.

In the years that followed, our interests took somewhat different courses. One of us specialized in the intricacies of Hume's text and the philosophical controversies generated by its commentators; the other critically investigated contemporary alternatives to Hume's analysis of causation. Despite this divergence of interest, we both came increasingly to hold the conviction that when properly interpreted Hume's analysis can withstand the arguments of his many critics. We tested this hypothesis in a series of papers, some written separately, some together, and some with other philosophers. A few of these papers have legacies in parts of the present work and are acknowledged below.

The program of work which led to this book was first outlined at a conference on the philosophy of causation sponsored by Canada Council and Dalhousie University, held over several weeks in the summer of 1973. We owe thanks both to the supporting agencies and to the participants for the opportunity and the stimulation provided during these weeks of discussion. Particularly valuable in the formulation of our views at this conference were conversations with David Braybrooke, Donald

Davidson, Jaegwon Kim, Robert Martin, Alex Michalos, David Sanford, and Fred Wilson—all of whom have continued to offer valuable suggestions in the years after this conference.

Among those whose critical comments helped improve our papers or arguments over the years, we must also name and thank Monroe Beardsley, Jonathan Bennett, Martin Bunzl, Richmond Campbell, Nicholas Capaldi, Arnold Davidson, John Earman, Ernest LePore, Larry Lombard, J. L. Mackie, Thomas Mappes, Joseph Margolis, Thomas McKay, Graham Nerlich, Nicholas Rescher, Daniel N. Robinson, Donald Seldin, Terry Tomkow, Stephen Toulmin, Peter van Inwagen, and Jane Zem-baty. (Davidson effectively served as a silent partner on parts of the concluding section of Chapter 7.)

Finally, we must thank many persons for their comments on portions of the manuscript as it neared completion. Their generosity in criticizing our views—which they often strongly opposed—helped us improve exposition and assessment of views in their own domain of expertise. Their efforts saved us from a large number of infelicities and errors. Any remaining errors persist in spite of the best effort of these philosophers to convince us otherwise. We hope our stubbornness will not be taken for ingratitude. These correspondents and colleagues include Jerrold Aronson, Wayne Davis, Herbert Feigl, Antony Flew, Steven Kuhn, James Leshner, David Lewis, J. L. Mackie, David Sanford, and David Stove. Although no footnotes in Chapter 2 reflect the fact, we were influenced in revising this chapter by an advance copy of David Fate Norton's forthcoming volume *David Hume: Common Sense Moralists; Sceptical Metaphysician* (Princeton University Press, 1982).

Our depth of indebtedness to John Mackie deserves special notice. Several years ago, in a review of his *The Cement of the Universe* (Clarendon Press, 1974), we wrote that "No member of the current philosophical generation has produced a body of work on the concept of causality more impressive and more influential than J. L. Mackie's contributions on the subject." The reader will find this claim confirmed by the frequency with which we are compelled, in the pages ahead, to confront his views about causation. Despite our frequent disagreements, we owe as much to him for our understanding of issues in the philosophy of causation as to any other

contemporary philosopher. We also thank him and his publisher for permission to use, on page 127 of this book, diagram vi from page 218 of *The Cement of the Universe*.

We wish also to thank the editors and publishers of several journals for permission to use material that originally appeared in articles they published. While material from these articles has been thoroughly revised before inclusion in this volume, the original sources are as follows: "Causation and Recipes: The Mixture as Before?" *Philosophical Studies* 24 (1973), pp. 378-85; "Hume's Two Theories of Causation," *Archiv für Geschichte der Philosophie* 55 (1973), pp. 281-300; "Mill and Some Contemporary Critics on 'Cause,'" *The Personalist* 54 (1973), pp. 123-39; "On Causal Irregularity: A Reply to Dretske and Snyder," *Philosophy of Science* 40 (1973), pp. 285-87; "Hume on Causal Contiguity and Causal Succession," *Dialogue* 13 (1974), pp. 271-82; "On Kim's Account of Events and Event-Identity," *Journal of Philosophy* 71 (June 13, 1974), pp. 327-37; six "Introductions" in *Philosophical Problems of Causation* (Encino, Calif.: Dickenson Publishing Co., 1974); "Vincula Revindicata" in *Philosophical Problems of Causation* (Encino, Calif.: Dickenson Publishing Co., 1974), pp. 217-22; "Is Hume Really a Sceptic about Induction?" *American Philosophical Quarterly* 12 (1975), pp. 119-29; "Propter Hoc, Ergo Post Hoc," *American Philosophical Quarterly* 12 (1975), pp. 245-54; "Singular Causal Statements: A Reconsideration," *Philosophical Forum* 5 (1975), pp. 611-18; "Concrete Occurrences vs. Explanatory Facts," *Philosophical Studies* 31 (1977), pp. 133-40; "Critical Notice of *The Cement of the Universe*," *Canadian Journal of Philosophy* 7 (1977), pp. 371-404; "Causation and Counterfactuals: Lewis' View Reconsidered," *Dialogue* 18 (1978), pp. 209-19; "The Extensionality of Causal Contexts," *Midwest Studies in Philosophy* 4 (1979), pp. 401-8. In the case of three of the above articles, coauthors must be acknowledged for allowing us to use material that in its original form they have as much right to call their own as do we. These coauthors are David Braybrooke, Thomas Mappes, and Robert M. Martin.

Finally, for many stylistic and philosophical improvements we are indebted to R. Jay Wallace, Jr., who read and criticized every section of the manuscript. Several students also contributed to the development of this book in a seminar on the manu-

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Analytical Table of Contents

1 Hume's Two Theories of Causation 3

Hume offers two definitions of causation. One definition emphasizes regularity of connection, while the other incorporates necessary connection. Which definition reflects Hume's true theory of causation and whether the two can be rendered consistent are controversial issues.

- I Hume's two definitions are motivated by different aims. 6
The first reflects a desire to account for the genesis of causal beliefs (including the belief in necessity), and the second constitutes a reductionist description of the truth conditions of causal statements.
- II Antony Flew maintains that Hume banishes the notion of necessity from his definitions, but the text reveals several ways in which necessity is retained. 11
- III J. A. Robinson has argued that the two definitions are neither intensionally nor extensionally equivalent, and that the first represents Hume's true theory of causation. There are at least five textually based reasons for judging this interpretation inadequate. 13
- IV Hume's reductionist and genetic interests explain his joint commitment to both definitions. Whether or not they are incompatible, Hume is committed to two different theories of causation. 18
- V In addition to the evidence cited by Robinson, other grounds support the interpretation that Hume holds a pure regularity theory. 21
- VI Equally strong textual grounds exist for the converse view that Hume's regularity theory is reducible to his necessity theory. 25
- VII Hume's theory of meaning further suggests that he is committed to both definitions, and to their compatibility. The 28

text provides no basis on which to judge either of the two definitions deeper or more important, for both are correct and primary.

- VIII In light of these considerations, Hume holds two different theories of causation; but a unified treatment faithful to Hume's intentions can be constructed. 31

2 Causal and Inductive Scepticism 33

Much of the rationale for attributing both a pure regularity theory and a causal scepticism to Hume rests on the conventional view that he is a sceptic about induction. This conventional interpretation cannot be supported.

- I Hume is not a sceptic about the existence of causal relations, although he does question both common and rationalistic beliefs about causation. 33
- II The conventional view that Hume is an inductive sceptic is instanced in the writings of Will, Kneale, Popper, Stove, Penelhum, and Bennett, whose common themes are expressed by two separate arguments. Yet the problem of induction, as currently conceived, is not raised in Hume's philosophy. 36
- III Hume's treatment of induction is an attempt to refute the rationalist belief that at least some inductive arguments are demonstrative. Mistakes about Hume's intentions turn on a failure to grasp how he employs the concept of reason. 41
- IV Hume provides criteria by which to distinguish justified from unjustified inductive arguments. His appeal to these criteria is compatible with his psychological thesis that all factual beliefs are based on instinct or custom. 52
- V Norman Kemp Smith's naturalistic interpretation and Barry Stroud's extension of it only superficially agree with this line of argument. They regard Hume as sceptical about induction and present strained interpretations of his views on custom, causal inference, feeling, belief, and reason. 57
- VI D. C. Stove claims that on Hume's view inductive arguments do not even render their conclusions probable. His argument rests on doubtful textual construals, as does Mackie's similar interpretation. 67
- VII Hume's views on induction are consistent with several contemporary attempts to solve the problem of induction, such as those offered by P. F. Strawson and Hans Reichenbach. 75
- VIII Our interpretation explains why Hume takes up inductive inference when discussing causal necessity. It also underscores the constructive side of his approach to causation. 79

3 Causal Laws and Causal Instances 80

Hume's theory of causation represents in the history of philosophy a shift from concern with singular statements about causal relations to an interest in causal generalizations or laws.

- I Hume denies the primacy of particular causal sequences, as contrasted with causal laws. This approach can withstand contemporary criticism, such as that due to G. E. M. Anscombe. 81
- II Four criteria for laws of nature are present in Hume's writings, and each is echoed in contemporary treatments of the subject. 84
- III Hume's criteria for causal laws face two immediate problems: plural causes and ultimate causes. Objections based on these problems—such as those advanced by C. J. Ducasse and John Passmore—reflect misunderstandings of Hume's position. 88
- IV Hume's claim that singular causal statements are true only if they instantiate a causal generalization is best understood in terms of Donald Davidson's theory that singular causal statements do not entail any particular law but do entail that there is some law instanced by the sequences they report. 93
- V The Davidson interpretation enables Humeans to counter claims that some singular causal statements are true even when no regularity is instanced. Fred Dretske and Aaron Snyder argue for this form of causal irregularity, but their conclusion cannot be sustained. 97
- VI Ducasse's argument for the primacy of singular causal relations also fails to refute the Humean view of implicit generality. 105
- VII Hume allows that causal judgments are possible in single cases, thus apparently substantiating Ducasse's criticism. Hume's position is not inconsistent, however, when his views on causal circumstances and analogical reasoning are appreciated. 112
- VIII Hume's treatment of single causes and causal laws has also been attacked by Richard Taylor, on grounds that it fails to distinguish causal conditions from accidental conditions. Taylor's argument rests on a particular view of causation and counterfactuals—the subject of Chapter 4. 115
- ## 4 Law, Accident, Necessity, and Counterfactuals 119
- Several major objections to Hume's theory turn on claims about the nature of counterfactual conditionals and Hume's alleged inability to account for the difference between causal and accidental regularities.

- I William Kneale argues that Hume's theory cannot account for the modal force of laws, as reflected in the truth of the counterfactuals they support; but Kneale's account of natural necessity is unsatisfactory. 120
- II J. L. Mackie tries to overcome Kneale's problems through an appeal to principles of persistence; but it is doubtful whether this account is more adequate than Kneale's. 125
- III Hume identifies two conditions on the basis of which accidental and lawlike generalizations can be distinguished. The first is the condition of inductive support. 131
- IV The second condition satisfied by lawlike causal generalizations, but not by accidental ones, is that of predictive confidence. A. J. Ayer and Nicholas Rescher have employed this Humean approach, but Kneale and his followers argue that the epistemological criteria it involves fail to capture the modal force of laws. 139
- V The Humean response turns on a general account of counterfactual statements, beginning with the observation that the evidence for a counterfactual is identical to the evidence for its associated general law. 145
- VI This observation can be deployed to circumvent the objection that Hume offers an epistemological account of causal laws where a metaphysical account is required. An allegedly "accidental" universal that meets Humean inductive tests of survival is a universal of law. 151
- VII Should the analysis of counterfactuals provide the analysis of lawlike generalizations, or vice versa? It is unclear which notion is fundamental and which derivative, but the Humean need not choose between them. 156
- VIII Possible worlds semantics provides the basis for new accounts of causation and lawlikeness. David Lewis's anti-Humean version of this theory fails to show the regularity account untenable. 157

5 Contiguity and Succession 171

Hume's arguments in the *Treatise* about contiguity and succession have generally been ignored or misinterpreted.

- I Hume's thesis that causes must be temporally contiguous with their effects allows for remote causes, provided that a causal chain obtains between them. Many objections to Hume's contiguity criterion confuse a metaphysical theory of events with an epistemological theory of explanation. 171
- II Hume's requirement of spatial contiguity should also be treated in terms of causal chains. His arguments against action at a distance are inconsistent with his empiricist

- epistemology, but this inconsistency does not undermine the spatial contiguity requirement.
- III Hume's spatiotemporal contiguity requirements can surmount two objections: the objection that quantum mechanics permits noninstantaneous action at a spatiotemporal distance and the objection that Hume's requirement invalidates the distinction between the cause and the entire causal chain that occurs before an effect. 181
- IV Norwood Hanson's attack on Hume's empiricism and on the use of causal chain notions is unconvincing. 184
- V Hume argues that effects must immediately succeed causes. According to some philosophers, his premises paradoxically lead to the conclusion that causes and effects are simultaneous rather than successive. 189
- VI Hume provides an uncharacteristically obscure argument for the "absolute necessity" of the immediate succession of effects, but it can be clarified by analysis of the terms "contiguity" and "succession." 192
- VII Bertrand Russell and Richard Taylor have both challenged Hume's contiguity and succession criteria. Their arguments collapse when an appropriate theory of instants and events is adopted. 195
- VIII Hume's contiguity and succession criteria presuppose "established maxims of natural philosophy" for which he never argues. These maxims raise problems of time order and causal order—the subject of Chapter 6. 199

6 The Nature of Causal Directionality 201

The causal relation is universally agreed to be asymmetrical, but there has been no agreement on the nature of causal asymmetry. Hume seems to have attributed the direction of causation to the temporal priority of causes, but several alternatives have recently been advanced.

- I Three conditions of adequacy for any acceptable non-Humean account of causal priority must be satisfied. Such an account must be noncircular, nontemporal, and provide a necessary component of causation as a whole. 202
- II The manipulability theory of causal priority, due to Douglas Gasking and G. H. von Wright, presupposes causal notions, and so fails the adequacy conditions—especially that of noncircularity. 203
- III J. A. Aronson's transference-of-quantity theory both presupposes knowledge of causal directionality and wrongly supposes that some privileged quantity is unidirectionally transferred in all causal sequences. 208

- IV J. L. Mackie's earliest non-Humean proposal also runs afoul of the adequacy conditions. It presupposes causal notions and fails to account either for simultaneous or for nonsimultaneous cases. 212
- V Mackie's revised theory of causal asymmetry, appearing in an extended treatment of causation, suffers from defects similar to those that vitiated his earlier account. An additional deficiency of the later theory is its incompatibility with determinism. 218
- VI David Sanford propounds a non-Humean account of directionality that denies the symmetry of the relation of conditionship and attempts explicitly to satisfy the aforementioned adequacy conditions. Although Sanford's theory suffers from three defects, it leads to significant conclusions that may be compatible with Humean analyses. 227
- VII Failures in the above accounts encourage a reconsideration of Hume's original theory. His views are defensible in the light of contemporary science, though they rest on the unsubstantiated "maxim of natural philosophy" discussed in Chapter 5. 236
- VIII There are reasons for thinking that Hume is not committed to any theory of causal priority, but is committed to the view that there is no causal priority. 240
- IX Should determinism be incorrect and indeterminism correct, the Humean may hold that there is no causal priority because there is no causation. Alternatively, determinism may entail that causation is nonasymmetrical. 243

7 Events, Facts, and the Extensionality of Causal Contexts 247

Hume does not treat the problem of causal relata, but his theory may be placed in the context of recent theories of the ontology of causation.

- I Textual analysis reveals no single theory of causal relata in Hume's writings. 248
- II Jaegwon Kim provides an ontology for causation that can be modified to reflect Hume's commitments. Hume's commitments can then be unified under Kim's category of a structured event. 250
- III The required modification of Kim's treatment stands in danger of rendering causal reports nonextensional; yet the Humean view of causation requires extensionality. 255
- IV Independent of Humean commitments, there are reasons for accepting the extensionality of causal statements. Modifications in the Humean ontology required by extensionality are defensible. 260

- V Prominent counterexamples to the claim that causal statements are extensional can be resolved by appeal to a revised criterion of extensionality that may be referred to as Nominal Extensionality. 264
- VI The criterion of Nominal Extensionality can be applied to resolve a problem generated by adverbial modification. This application commits the Humean to a multiplication of the number, but not the types, of causal relata. 269
- VII The Humean commitment to extensionality and to concrete particular events is defensible against J. L. Mackie's alternative program, which offers epistemological answers for metaphysical problems. 275

8 Causal Judgment and Causal Explanation 283

Causation and explanation present substantially different problems. Nonetheless, there are important connections between them, and it has been widely held that Hume's theory of causation is inadequate for the analysis of causal judgment and causal explanation.

- I R. G. Collingwood, H. L. A. Hart, R. M. Honoré, and others judge Hume's analysis incapable of treating singular causal judgments in historical, legal, and practical contexts. 285
- II Some of the objections offered by these critics are misdirected; others are met by the arguments of Hume and his successor John Stuart Mill. 291
- III Hume's descriptive and psychological theory of causal judgment is not an attempt to analyze ordinary causal judgments, and he need not deny the correctness of contemporary analyses. Nor is Mill's whole-of-the-antecedents thesis open to the alleged objections of many of his critics. 294
- IV Is Hume committed to a covering-law account of explanation? Although he seems indifferent to questions about explanation, he appears to support a revisionary analysis of explanation involving covering laws and is clearly committed to an account of explanation that is uniform across all empirical disciplines. 300
- V Certain problems that have bedeviled the covering-law theory may successfully be avoided by proponents of the regularity theory. The power of an explanation must ultimately rest on processes that are causal in Hume's sense. 305
- VI Both technical objections and counterexamples challenge the covering-law model, and it now appears that the model at best provides necessary conditions of explanation. Hume's account of causation is not impugned by these criticisms and actually helps overcome certain deficiencies in the covering-law theory. 309

VII	Humeans must confront doubts that the covering-law model can be extended to the life sciences and the social sciences. As a first step, they must argue that teleological explanations are causal and conform to a minimal version of the covering-law model.	314
VIII	Hume and all Humeans are similarly committed to a causal account of human action, to the use of covering-laws in such explanations, and to the compatibility of determinism and commonsense attributions of free will to human agents.	321
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Abbreviations

The abbreviations used in this volume and the editions they represent are as follows:

- A *An Abstract of a Treatise of Human Nature*, ed. J. M. Keynes and P. Sraffa (Cambridge: Cambridge University Press, 1938).
- D *Dialogues Concerning Natural Religion*, ed. Norman Kemp Smith (Edinburgh: Thomas Nelson and Sons, Ltd., 1947; as reprinted by Bobbs-Merrill).
- EHU *An Enquiry Concerning Human Understanding*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1894; Second Edition 1902), Third Edition as revised by P. H. Nidditch, 1975.
- EPM *An Enquiry Concerning the Principles of Morals*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1894; Second Edition 1902), Third Edition as revised by P. H. Nidditch, 1975.
- T *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1888), Second Edition as revised by P. H. Nidditch, 1978.