

Book Review

THE ATOMIC ENERGY CONTROL BOARD, by G. Bruce Doern, Law Reform Commission of Canada, 1976, ix and 85 pp.

N. W. Ingram*

This study is published by the Law Reform Commission of Canada in its series upon Federal Administrative Agencies. Unlike other writers in that series, Professor Doern is not a lawyer but an expert in public administration. As a result, the study purports to emphasise the organisational and administrative aspects of the Atomic Energy Control Board (AECB) rather than legal matters. Nevertheless, the overall concern of the study is said to be "the broader problems associated with the agency's practices and procedures" (p. ix).

Having been created some thirty years ago, the AECB has, as an administrative agency, enjoyed relative longevity. The functions of the Board are of an "umbrella" type and include not only the licensing of radio-active wastes and major nuclear facilities and the prescription of safety standards but also the allocation of research grants and the offering of technical advice to federal departments and agencies. The regulatory jurisdiction of the Board is broad, embracing the regulation of the use of nuclear energy in power plants, hospitals and universities, and in micro-technology, and the prescription of safety standards for uranium mining.

In New Zealand the Commission of Inquiry into Nuclear Power has brought the use of nuclear energy to the fore in the public mind. Having regard to the lengthy and far-reaching experience of the Canadian AECB, one might have anticipated that aspects of Professor Doern's study would be of particular relevance to New Zealand. That view is reinforced by the nature of Professor Doern's training and the institutional rather than legal emphasis which he purports to place on his study. Thus, to report that the study, far from being arrestingly relevant, is merely of marginal interest to New Zealand comes as a lamentable disclosure.

The reason for that lack of relevance does not relate to the subject matter considered in the study. Indeed, although the control of uranium mining has doubtful significance in this country, the other regulatory fields of the AECB — power plants, hospital and university equipment, and micro-technology — all have importance. Instead, the lack of significance of the study stems from Professor Doern's treatment of his subject.

The prime failure is the omission of any discussion upon the institutional question associated with the control of the use of atomic energy. Is the AECB suitably qualified to perform its allocated function? Could the task be better performed by central Government? It is noted that some public interest groups have suggested that the AECB be abolished and its role passed to the Federal Department of the Environment (p. 27). Notwithstanding the fact that it is given no specific consideration, that suggestion is impliedly rejected by Professor

* Lecturer in Law, Victoria University of Wellington.

Doern in his concluding observation that the AECB should enjoy greater independence and should practice greater openness (p. 41). References are contained in the study which indicate that Professor Doern possessed the material to analyse the relevant issues. On the one hand, the need for independent regulation is indicated by the Canadian nuclear industry being in a mixed economy sector (p. 22), dominated by State owned enterprises (p. 1), and complicated by conflicts between federal and provincial authorities (p. 2). On the other hand, certain areas of sensitivity have prevented the AECB from consistently performing its function in an independent manner (pp. 11, 19). Such references are, nevertheless, oblique. No attempt is made to justify the continued operation of the AECB. Professor Doern cannot be excused for his omission on the basis of his background for the institutional questions are essentially administrative and not legal in nature.

While less serious, two further omissions constitute additional short-comings in the study. In the first place it is stated that the AECB is influenced by non-statutory ministerial and cabinet policies (p. 9); the content of two such policy statements is outlined (pp. 9-10). However, the matter is pursued no further. No attempt is made to answer the questions of the legal consequences and the desirability of such practices. And should such practices be seen as necessary, no consideration is given to the specific form in which such directives should be issued. Professor Doern may be excused for not considering the legal question of acting under dictation. His failure to answer the administrative question relating to desirability, however, cannot be so readily dismissed. Secondly, in his call for openness, Professor Doern advocates broad public involvement enabling "the public to scrutinize and participate in a meaningful way as important decisions are made" (p. 43). In theory such participation is laudable, in practice it may be surrounded by difficulties. How does one ensure that public participation is not pressure group participation? How can participation be reconciled with the exigencies of the calendar? Those issues Professor Doern neglects to discuss.

The three case studies included in the work embrace widely differing subject matters: the licensing of a nuclear generating station; the licensing of a micro-technological item, a nuclear powered cardiac pacemaker; a uranium mining safety case. Those studies serve to illustrate the breadth of the jurisdiction of the AECB. However, to generalise upon the operation of the jurisdiction from so superficial a study would be unsatisfactory. The danger is recognised by Professor Doern (p. 7). It would seem, therefore, that the case studies serve no further purpose than to highlight the procedural chaos which occurred in at least one licensing case (see p. 73).

One may conclude that the value of Professor Doern's study for the New Zealand reader is extremely limited. Whilst the breadth of the subject matter of the use of nuclear power is revealed, one is left little wiser concerning the problems involved in the regulation of that use. Furthermore, one feels that even the Law Reform Commission of Canada will reap scant benefit from the study. An analysis which not only fails to consider fundamental administrative questions but also proposes simplistic reforms without regard for their consequences is not a work upon which sound proposals for the reform of administrative law and procedures can be based.

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Causation, theory, and uncertainty

Ian Macduff*

In this article Ian Macduff examines the concept of causation from the viewpoint of a 'principle of uncertainty'. The relative certainties of the classical legal models of responsibility and causation are contrasted with emerging trends in the social and physical sciences toward a recognition of the tentative nature of knowledge about the world. His purpose, therefore, is not to suggest any particular alternative to our existing models, but rather to suggest the necessity of a more flexible approach to causation.

'It is the theory which decides what we can observe.'¹

I. THE SUBJECTIVITY OF THEORY AND THE PROBLEMS OF KNOWLEDGE

It is well-documented knowledge that the prevailing model of individual and criminal responsibility is based on classical philosophy — on an historically specific image of human conduct. This is not, strictly speaking, a theory of criminal causation, rather it is a presumption as to the 'causes' of human conduct, and the elaboration of a philosophy of law and responsibility on that assumption. Classical ideology presumes the capacity, in each individual, for free and rational choice. Crime, to the extent that it has any identifiable 'cause' in this model, is the consequence of the exercise of that choice. The logic of this model of criminality and responsibility demands, also, that punishment be directed towards this capacity for reflection and choice. Deterrence, the principal justification and rationalisation for the imposition of criminal sanctions, proceeds from the assumption that the existence of the threat of punishment, made manifest in publicised cases, serves a kind of educative function, as an indication of the directions in which choices should be made. Deterrence may, of course, be divided into two aspects — general and specific — but in each case the underlying ideology and psychology is classical, and only the scope of the expected efficacy differs.

It is not the object of this paper to examine the logic or consistency of theories of responsibility or deterrence, for that logic is quite clear. Indeed, one of the principal attractions of classical criminal law must be its manifest coherence. What

* Lecturer in Law, Victoria University of Wellington.

1. A. Einstein, quoted in W. Heisenberg *Physics and Beyond: Encounters and Conversations* (New York, 1971) 63.

is intended, however, is an exercise in reflection on the problem inherent in theoretical and philosophical consistency: reflection on existing models of responsibility in terms of the problems of knowledge as such, and a speculation on the preferability of a 'principle of uncertainty' which emerges in other fields of inquiry, such as atomic physics, historiography, and anthropology. This, then, will involve inquiry into the diversity of criminological theories of causation, into sociolinguistics and the problems of explanation, and into trends towards a reflexive epistemology, questions not merely as to what we know, but rather into how we know it and how we express that knowledge.

Historically, we may concede the necessity for a classical ideology of individual liberty and capacity for free choice. Classical philosophy emerges as a part of the middle class doctrines of liberty and utility, as an ideological justification for the attack on aristocratic and status-based society and the defence of emergent values of individualism. The imperatives of philosophical consistency demand that concepts of responsibility in the law and in penal theory be seen in similarly individualistic terms. If, however, there is this sort of historical justification for a specific model of causation and responsibility in law, there remain the broader epistemological problems inherent in the concept of 'cause' as such. Given that there exists throughout our legal system a specific use of the concept of causation, it may prove useful to consider the processes involved in selecting and institutionalising what is essentially a linguistic, intellectual, and ideological construct. It is for this reason that we should step back from the immediate and analytical concerns of the jurisprudence of responsibility, in order to indulge in more broadly based speculation on what Korzybski refers to as the "too simple, two-term relation cause-effect".² From this kind of speculation it may be concluded that whatever we say of causes and causation — in the law or in other disciplines — is a representation of reality, the construction of a model and a theory in order to give meaning and coherence to experience. Causation theory, as it stands in law (in terms of images of responsibility), represents merely one conclusion that may be drawn from the experience and observation of human conduct.

The dilemma is, of course, that in legal thinking emphasis is placed on certainty, continuity and consistency, and it must seem anathema to that way of thinking to assert that the clarity and consistency achieved through steadfast attachment to established paradigms is merely a spurious clarity, and one which is achieved at the expense of a more flexible, tentative, and scientific approach to an understanding of human conduct in society. If juristic thinking prefers certainty, we will find that there is a steady move away from that tendency to theoretical intransigence in other disciplines. If it remains true that, in law, "Made-to-order legal philosophies make a virtue of judicial fatigue, bless judicial ignorance, and sanctify the impotence of the law",³ in other disciplines, as disparate as theoretical physics and cultural anthropology, it is recognised that "Results are always interim results, are always *only one way* of perceiving phenomena, one way of organising data. Enquiry remains open-ended."⁴

This paper is, in a sense, an invitation to jurists to share this sense of doubt about their established images of law and behaviour which social scientists have

2. A. Korzybski *Science and Sanity* (Lancaster, Pa., 1933) 217.

3. F. S. Cohen *Ethical Systems and Legal Ideals* (New York, 1933) 271.

4. B. Wilson *Magic and the Millennium* (St Albans, 1973) 3.

increasingly come to feel about their models of society. This is a sense of doubt which, far from leading to a paralysis of social and jurisprudential commentary, may serve to clarify the nature of the intellectual and theoretical tasks involved in law.

If we were to regard criminology as a kind of history of ideas, as a continuing inquiry into a specific issue, we would find a state of affairs falling far short of unanimity, that history reveals constant shifts in intellectual fashion, the occasional insight and creation of a new paradigm, a new direction for inquiry, and a plethora of more or less equally plausible explanations for criminal conduct. In the face of this diversity of offerings, jurists may almost be excused their retreat into the relative security of an established image of criminality which, while it may not have behind it the elaborate empiricism of other models, may at least have the certainty of its establishment as the legal image of reality. Such a retreat into the certainty of the law is, at best the pursuit of a spurious security, at worst a retreat into wilful ignorance, for if the diverse offerings of deviancy theory do not offer any coherent and ready-made alternative to classical ideology, they do at least reveal that there is no agreement on the 'causes' of criminality. And that, if it does not aid the administration of the law, it does have the virtue of demanding a degree of humility before the fact of uncertainty. Even Eysenck was moved to concede that "Where there is so much disagreement, it would obviously be unwise to be too dogmatic."⁵

The theoretical dilemma is two-fold. First, there is that fact that classical ideology is confronted by a variety of competing explanations for criminality. Second, there is the fact that, throughout the diversity — with significant recent exceptions — runs the idea of causality, a belief in the possibility of identifying 'causes' of crime. Thus, as Shalloo⁶ has observed

Crime and delinquency have been and are currently being explained by: the exploitation of the workers, lack of education, inadequate recreational facilities, defective glandular functioning, biological inferiority, police corruption, neglect in religious training, psychosomatic deficiency, emotional instability, frustration of the fundamental satisfaction drives, adult insufficiency, broken homes, lack of love, poverty, alcohol, narcotics, lack of intelligent parental control, the persistence of a frontier psychology, the doctrine of easy money, an unequal distribution of wealth and income, defective moral and social conditioning, exhausted nervous systems, focal infections, temporary insanity, social inadequacy, just plain stubbornness, incorrigibility, and perverseness, and, lastly, the modern doctrine of individual liberty.

These two elements — the diversity of theory and the persistence of the idea of causality — cannot be dealt with separately: each is a part of the same epistemological problem. If we examine the varieties of casual explanations, we must necessarily reflect that each of these images of human conduct centres on a single idea: causality. And if we explore the meaning and limitations of the two-term idea of cause and effect, we are made aware of the consequent limitations of theories, the unstated starting point of which is a belief in causality. Both of these issues, then, may be referred to in terms of a principle of uncertainty — a principle derived from the work of the theoretical physicist, Werner Heisenberg. The essence of such a principle, as it occurs in physics and in other disciplines,

5. H. J. Eysenck *Crime and Personality* (London, 1964) 17.

6. J. P. Shalloo, quoted in L. Taylor *Deviance and Society* (London, 1971) 21.

is epistemological; whatever theory we may formulate about the nature of phenomena, we must necessarily refer back to the starting-point of theory, to the theorist and the paradigms within which he works.

This again emphasises a subjective element in the description of . . . events, since the measuring device has been constructed by the observer, and we have to remember that what we observe is not nature itself but nature exposed to our method of questioning.⁷

In criminology — and in criminal law — then, the starting point is both the particular model of behaviour which is to be elaborated and the belief in causality.

Given the diversity of theoretical possibilities in criminology, it is hardly surprising that attempts have been made to examine the phenomena of crime in terms other than those of causation. Becker's labelling theory, for example, springs from the felt need to find new perspectives on criminality which "will not settle for mysterious invisible forces as explanatory mechanisms".⁸ The assumption here is that, before we can begin to talk about causes, it is necessary to reflect on crime as phenomenon, to see that "Deviance is not a property *inherent* in certain forms of behaviour; it is a property *conferred upon* these forms by the audiences which directly or indirectly witness them".⁹

Similarly, David Matza's phenomenology constitutes an attempt to move away from causal theory, given that causal theory is in large part an attempt to impose some sort of coherence-through-explanation on the nature of phenomena, and that coherence risks misrepresenting reality. The more important reasons for wishing to move away from causal explanations for crime, at least in Matza's terms, may be seen in the consequences of causal theory; the identification of causes lends itself too readily to the identification of cures. And, if we are uncertain as to the causes, we must be even more wary of the cures. Thus Matza's *Becoming Deviant*¹⁰ begins with a comparison of 'correction' and 'appreciation' — a comparison of the essentially 'pedestrian' nature of the correctionist tradition with the committed yet tentative perspectives of appreciative and phenomenological theory. It may be noted, too, that Matza's 'appreciation' is, like Heisenberg's physics, a subjectivist philosophy; the observer becomes participant, and 'neutrality' becomes an intellectual and existential impossibility.

If, for Becker and Matza, their explorations in deviancy theory begin from a less than explicit rejection of the idea of causation, for Quinney the problem of causation is quite clear. Quinney makes it explicit that we need to step back to consider just what kind of an exercise 'causal' theory is — and thus makes it clear that what we are involved in is the construction of theory, the modelling of the world to suit particular images of it.

A statement of causation does not necessarily state the nature of reality but is a methodological construction of the observer The scientist who defines a causal relationship has to see that it is a construct imposed by himself in order to give meaning to a significant theoretical problem. Confused, we often inadvertently turn the causal construct into a description of reality. Initially a heuristic device, a methodological tool, causation does not necessarily describe the substance of our observations.¹¹

7. W. Heisenberg *Physics and Philosophy* (London, 1963) 57.

8. H. S. Becker *Outsiders: Studies in the Sociology of Deviance* (New York, 1963) 193.

9. K. T. Erikson "Notes on the Sociology of Deviance" in H. S. Becker (ed.) *The Other Side* (New York, 1964) 11.

10. D. Matza *Becoming Deviant* (Englewood Cliffs, N.J., 1969).

11. R. Quinney *The Social Reality of Crime* (Boston, 1970) 5-6.

In these terms, 'causation' is simply the means by which we seek to connect the various parts of an event or phenomenon which we have separated for the purposes of description. Causality becomes the 'glue' of fragmented perception.¹² In talking about causation, we are thus thrown back to Heisenberg's principle of uncertainty, that reality does not necessarily conform to our models of it and that images of phenomena or nature are more accurately seen as images of our relationship to nature.¹³

The consequence of all of this is that, against the relative certainties of the law's models of causation and responsibility we need to place the uncertainties of deviancy theory and epistemology. This kind of division serves to exemplify the distinction, suggested by Kolakowski,¹⁴ between classes of 'knowers' — between the priests and jesters. For the priests, knowledge is certain. For the jesters, knowledge is only further questions, questions about the nature of knowledge and, ultimately, questions about those questions.¹⁵ If knowledge for the priests is always final, for the jesters knowledge is impermanent, uncertain — a truth for the time being only. If jurists are unwilling to accept the role of jesters in relation to the ideas and ideology of law, it may be because they are nurtured in the traditions of certainty which are the essence of the Rule of Law. Yet it becomes clear, from those who would play jester to the court of law, that the legal construction of reality is but one way of perceiving and explaining the nature of social organisation.

To say this is not necessarily to insist that the classical image of causation and responsibility is 'wrong', for to do so would be tantamount to insistence on the correctness of an alternative formulation. Indeed, this has been the error of the debate about free will and determination, especially in relation to law and sanctions. If we move away from the tendency towards theoretical dogmatism which is inherent in such debates, and accept the principle of uncertainty, we may begin to adopt a more appropriate perspective on such issues. Depending on the starting point of observation, we may develop a variety of more or less equally plausible explanations, each of which is true to the extent of the paradigm from which it stems. The traditions of legal certainty are, of course, equally matched by positivist traditions of scientific certainty which baulk at the possibility of a number of 'correct' explanations, and the tendency of theory is to seek supremacy rather than parity. What needs to be seen, however, is that certainty is based on an incomplete concept of knowledge to the extent that the rigorous empiricism of science has tended to leave out of consideration the element of the observer. If we add that element back into theory — if, for example, we always recall that

12. See A. Watts *Tao: The Watercourse Way* (London, 1975) 54.

13. Cf. Heisenberg: "Wenn von einem Naturbild der exakten Naturwissenschaft in unserer Zeit gesprochen werden kann, so handelt es sich eigentlich nicht mehr um ein Bild der Natur, sondern *ein Bild unserer Beziehungen zur Natur* Die Naturwissenschaft steht nicht mehr als Beschauer vor der Natur, sondern erkennt sich selbst als Teil dieses Wechselspiels zwischen Mensch und Natur." — "Das Naturwissenschaft als Teil des Wechselspiels zwischen Mensch und Natur," in *Im Zeichen der Hoffnung*, ed. Erwin de Haar (Munich, 1961) 447, 449-450.

14. L. Kolakowski *Toward a Marxist Humanism* (New York, 1968) 15-36.

15. Cf. A. R. Blackshield "Like Wittgenstein in the *Tractatus Logico-Philosophicus*, the thoroughgoing existentialist must finally deny the validity even of his own propositions." "The Importance of Being: Some Reflections on Existentialism in Relation to Law" (1965) 10 *Natural Law Forum* 67, 104.

responsibility is the consequence of a *legal* view of things, that a psychological view of deviance is as specific and unique as is the sociological view of deviance — then we may begin to get the various theories into some sort of perspective. Thus, as Glaser notes, the uneducated gardener, the plant physiologist, and the biophysicist will each have different ways of accounting for plant growth, which will reflect the experience and the (different) expertise of each. Further, “All three can be scientifically correct, since each interpretation may lead to predictions that can be tested and found valid by rigorous experiment or by systematic observations of variations in nature”.¹⁶

What this suggests is not so much the computer-based, multi-causal eclecticism of the Cambridge style of criminology but rather the necessity to examine, in each case, the origins (intellectual, political, historical) of images of the world. This is the approach which always asks of theory ‘says who?’ Without that question, knowledge is incomplete. What we find, then, in contemporary inquiry, is a tendency towards the reflexive epistemology implied in the ‘says who?’ question. Karl Mannheim, in his *Ideology and Utopia*,¹⁷ suggests that there is a tendency to turn to the problems of knowledge, to questions of theory, method, and perspective, “only in an age in which disagreement is more conspicuous than agreement”.¹⁸

One turns from the direct observation of things to the consideration of ways of thinking only when the possibility of the direct and continuous elaboration of concepts concerning things and situations has collapsed in the face of a multiplicity of fundamentally divergent definitions.¹⁹

Notwithstanding the relative certainties of the law’s version of responsibility and causation, it becomes quite clear that the social sciences are confronted with just such a divergence. Within the social sciences, of course, there are those who are, as much as jurists, prisoners of their own fictions.²⁰ But there must be a growing number who, in looking beyond their own paradigms, are confronted by “the alarming fact that the same world can appear differently to different observers”.²¹

The immediate consequence of this is an increased emphasis on the subjectivity of theory. The effect of this is two-fold: it serves to ground theory, not in an abstracted empiricism, but in its originating paradigm; and it serves to broaden the empirical basis of theory, simply by including the observer, not merely as passive outsider, but rather as active participant who, by his very participation, changes what is observed. To the extent, too, that this sort of perspective may contribute to a degree of humility in the formulation of theory, it should give rise to a recognition, by the theorist, of the place of his ideas within the larger history of ideas. Science has not, until relatively recently, shown signs of such humility and rather has tended towards an intellectual *hubris* — an overweening pride which, in terms of Greek mythology, may contribute to the fall of science. We do, however, see signs of a growing awareness of the jig-saw patterns of knowledge,

16. D. Glaser, “The Compatibility of Free Will and Determinism in Criminology: Comments on an Alleged Problem” (1977) 67 *J. of Crim. Law and Criminology* 486.

17. K. Mannheim *Ideology and Utopia* (London, 1936).

18. *Op. cit.*, 5.

19. *Idem.*

20. W. I. Thompson *At The Edge of History* (New York, 1971) 203.

21. Mannheim, *op. cit.*, 5.

a recognition of the cumulative rather than absolute nature of knowledge. Thus Dubos²²

The individual scientist may have only a dim view of the grand scheme to which his work relates; indeed, he may have no view of it at all, but his professional activities — limited in scope as they may be — contribute nevertheless to the collective building of the scientific enterprise. His individual paper, even in an obscure journal, is part of a highly effective mechanism of information building.

In these terms, the legal version of causation and criminality becomes one expression of a diverse, yet collective experience of a single phenomenon. What matters is not that the classical ideology of freedom and responsibility be replaced by another dogma, but rather that it be placed, consciously, within its historical and intellectual context and seen, not as absolute, but as contribution.

If the 'subjectivisation' of theory is something of a novelty in criminology (and quite unheard of in jurisprudence), it is well-established in history and, more recently, in sociology. The first barrier to be overcome is the ingrained belief in the possibility of and necessity for objectivity in science. An insistence on the subjectivity — and hence uncertainty — of theory is quite clearly contrary to all the established images of science. In history, the drive for objectivity is found in the insistence that the 'facts speak for themselves'; the function of the historian is not that of interpretation, but rather one of accumulation of history which, somehow, is 'out there' awaiting publication. In sociology, the pursuit of scientific status demands a 'value free' methodology. The very image of the sociologist and his intellectual task is founded on this belief in the non-partisan nature of inquiry. One response to this insistence on objectivity comes in the form of the 'politicisation of the social sciences'²³ — a conscious indulgence in partisan theorising, as an antidote to the timidity of consensual theory. This response insists on recognition of the political task of social commentary and, accordingly, a reappraisal of the role and values of the social scientist. Apolitical objectivity is, in contemporary society, seen as both intellectually and politically irresponsible.²⁴

The other response to the belief in objectivity is phenomenological rather than political. It is a simpler, and possibly more existential, approach in that it insists not on the necessity for the politicisation of theory (though this may be a consequence), but rather on the epistemological and ontological impossibility of objectivity. If the scientific tradition of the separation of fact and value, knower and known, results in an ideology of objectivity, subjectivity insists on the fusion of intellect and experience and on the impossibility of any Cartesian dualism in the construction of theory. Thus, there is a shift from the Archimedean traditions of science and knowledge, towards a rediscovery of a kind of Pythagorean synthesis of fact and value, science and belief, is and ought.²⁵ This, of course, is most clearly expressed in the work of those theoretical physicists, such as Bohr, Heisenberg, von Weizsäcker, and Capra, who consciously reject the certainties of Newtonian

22. R. Dubos *The God Within* (London, 1972) 165.

23. See, for example, I. Taylor, P. Walton, & J. Young (eds.) *Critical Criminology* (London, 1975) Introduction.

24. See, for example, A. W. Gouldner *For Sociology: Renewal and Critique in Sociology Today* (Harmondsworth, 1973) Ch. 1 & 2.

25. One consequence is the recognition that is and ought are no different: both are products of the way we see things. The only difference lies in the way that perception is stated.

mechanics in order to pursue the relative uncertainties of Pythagorean science. It is also clearly, and perhaps more simply, expressed in the work of historians such as Collingwood who see the task of history as something other than mere chronology.

For our purposes, the historical example is a useful one, if only because this is a discipline which makes use of the concept of causation. In both history and criminology we may deal with the issue of causation in a somewhat oblique manner, not commenting on specific versions of causation, nor even seeking to eliminate the concept from our vocabulary entirely, but rather commenting more generally on the kind of intellectual and empirical enterprise involved in the construction of historical narrative or criminological theory. The historiographical issue, in relation to the construction of narrative and the role of subjectivity is stated by Collingwood²⁶ in these terms

Everyone brings his own mind to the study of history, and approaches it from the point of view which is characteristic of himself and his generation; naturally, therefore, one age, one man, sees in a particular historical event things which another does not, and vice versa. The attempt to eliminate this 'subjective element' from history is always insincere — it means keeping your own point of view while asking others to give up theirs — and always unsuccessful. If it succeeded, history itself would vanish.

This, of course, is precisely the point made by Heisenberg in relation to physics and the observation of nature, the construction of theory inevitably involves the perceptions, objectives, and biases of the observer. This is not necessarily a result of the wilful manipulation of data to suit preconceived notions of the conclusions to be reached. Rather, it is simply a consequence of the nature of knowledge and of the fact that there can be no split between knower and known. This epistemological, and perhaps ontological, point is stressed by Rock in his comments on the problems of interpretative historiography: contrary to the positivist and materialist version of history, it becomes clear that 'history' does not exist as such until history is written by the historian. The retreat into the idea that 'history shows' anything — whether it be in terms of mere narrative or in terms of causal links in history — is a denial of the creative role of the historian in making history serve particular illustrative functions. In this, the historian may be no different from, say, the criminologist in the use of selected and interpreted materials to 'show' how things happen. But if we emphasise the subjective element — and, perhaps, as an antidote to the assumptions of orthodox methodology, overemphasise this element — we may begin to see the kind of intellectual exercise involved in the construction of causal theory. Of causal theory, as much as of history itself, it can be said that such connections and relationships do not necessarily have an existence of their own until 'creatively disinterred' by the theorist.²⁷

In history, then, as much as in disciplines such as criminology and physics, theory structures perception, and whatever is said of a concept such as causation reflects not so much what really happens as what we choose to see as having happened. Ironically, we are well aware of the capacity in history for propaganda,

26. R. G. Collingwood *Philosophy of History* quoted in A. Marwick *The Nature of History* (London, 1970) 80-81.

27. P. Rock "Some Problems of Interpretative Historiography" (1976) 27 *Br. Jnl. Sociology* 353, 355.

yet fail to see this as a necessary element — albeit with innocent motives — in our own representations of the past. The historian and the criminologist share with laymen the need to explain and thus order experience, and this is most commonly done in terms of causation. What is necessary is for the theorist to acknowledge that, in effect, he acts as ‘mediator and creator of order’, and, as such “. . . produces a particular kind of description whose coherence and plausibility flow from his techniques of reconstructing everyday reality”.²⁸

When, therefore, we find ourselves in agreement with an historian’s version of the past, or with a criminologist’s version of causation, it is because we share that writer’s world view and agree, implicitly, with the questions he asks of the world. Very often, of course, that shared perception stems not so much from conscious and existential awareness of the values and beliefs involved, as from the uniformity of belief which is the product of shared training and indoctrination. The relative rigidity of technical and intellectual boundaries, together with the comprehensive nature of professional training, means that, within specific disciplines, only a narrow range of orthodox views of reality are available. This must be particularly the case in law, where a specific image of reality and causation is established and institutionalised as Law. In this manner, expertise is as much a way of not seeing as of seeing.²⁹

We may, therefore, with Heisenberg, Rock, and Collingwood, stress the importance of the subjective element in the construction of causal theory and, at the same time, note that this cannot always be a purely subjective factor. Images of reality acquire validity and currency to the extent that they are understood and shared by others, not necessarily in the sense of being elevated to the status of an orthodoxy or dogma, but at least to the extent that they express a world view held in common by some. It is true enough that the historian, like the criminologist, is

. . . a man with an experience of his own; he experiences the world in which he lives; and it is this experience which he brings with him to the interpretation of historical evidence.³⁰

But it is also true that the perception of the individual theorist is constrained in a variety of ways, not least by the intellectual and cultural milieu in which he finds himself. Therefore, as suggested earlier, it is important to note that what we have in law by way of a theory of causation and responsibility is specifically a legal model of reality, which stands against competing sociological, psychological, political, medical, and moral models. The subjective element is, therefore, wider than just the individual theorist in scope, it refers to the grounding of theory in a particular *Weltanschauung* in which the theorist shares. The ‘law-ways’ of thinking about causation, as much as the psychologist’s or sociologist’s professionally

28. *Ibid.*, 354.

29. Cf. Theodore Roszak: “We can often glimpse forms of secularised initiation in the way people are prepared for life-long service in some professions or in the major corporations. Young initiates entering these careers may pass through a rigorously systematised curriculum meant to ingrain the world view of the organisation or to fit their consciousness to a prescribed reality. . . . The object of such subliminal pedagogy is really to maneuver students into a way of seeing — or of *not seeing* — the world around them.” *Unfinished Animal* (London, 1975) 172.

30. R. G. Collingwood *The Idea of History* (London, 1946) 137.

induced perception, provide the collective experience, the general questions, and the principal hypotheses for research and explanation.³¹

We may conclude from this, with Heisenberg, that causation theory represents not so much a science of behaviour but a science of the mind's knowledge about nature.³² This, too, serves to emphasise the nature of criminology — and, for that matter, jurisprudence — as a history of ideas, a history of perceptions of phenomena. The importance of the 'subjectivisation' of theory, both in individual and professional terms, is that it restores the mind to its place as the significant element in history. Heisenberg's student, von Weizsäcker, himself a prominent theoretical physicist and philosopher, insists that our consciousness of nature is, in fact, the real event in the history of nature.³³ In terms of theory and its consequences, what matters is our perception of nature and behaviour, rather than the material event itself. What matters, in all cases — and this must be especially so in the case of deviance — is the meaning we give to events through our perception of them. At the very simplest level, it is obvious that perceptions of deviance and causation determine policy in relation to deviants; this much is clear from our existing classical model of criminality, with its consequences in terms of concepts of individual responsibility (judicial policy), and the deterrent functions of punishment. The same may be said of the behaviourist alternatives to images of freedom and dignity and punishment.³⁴ In both physical and metaphysical terms, therefore, consciousness precedes form; perception of behaviour or nature precedes explanation and/or control of it. In these terms, mind — both individual and collective — "has to be looked upon as a very real event in the physical system".³⁵ Causation theory is not a statement of 'the way things are', but rather a statement of the way we see things to be.³⁶

As suggested above, the various ways in which we see behaviour and causation are constrained not simply by individual preferences but also by training and collective experience. Part of that collective experience which serves most effectively to constrain, and reflect, perception is language. Language serves as both the means by which we express our vision of reality and the means by which that vision is limited. This seems particularly true of a professional (for example, legal) vision of reality. The language of the law, along with an insistence on the pursuit of certainty and consistency through adherence to precedents, conditions the way in which initiates in the law come to view the raw material with which they have to deal. At one level, this serves effectively to translate all issues into legal problems, in order to fit behaviour and conflict to particular definitions and modes of resolution. At another level, it effectively precludes the legal resolution of such problems in terms other than those laid down already. Thus, the central problem of criminality and individual responsibility finds a definitive resolution and statement in the language of the law.

31. Cf. Mannheim, *op. cit.*, 4-5.

32. W. Heisenberg "The Representation of Nature in Contemporary Physics" in *Symbolism in Religion and Literature* (ed. Rollo May, New York, 1960) 209.

33. W. I. Thompson *Passages about Earth* (New York, 1973) 93.

34. See B. F. Skinner *Beyond Freedom and Dignity* (Harmondsworth, 1971).

35. Thompson, *op. cit.*, 93.

36. Cf. Thompson: "When we build a cyclotron to search for elementary particles, we do not observe elementary particles; we observe what happens when we try to search for elementary particles." *Ibid.*, 95.

II. LINGUISTIC ASPECTS OF PERCEPTION AND THEORY CONSTRUCTION

The particular problems of the language of causation — whether it is in law or in other disciplines — is that it is a reflection of a diachronic vision of time and matter. Our language reflects a linear and sequential logic, in which one event 'naturally' follows another, as opposed to the synchronistic vision of mysticism in which time is suspended and events are seen as mutually arising rather than as sequentially linked. Language and perception together, then, mean that virtually any model of causation expressed in terms of time and space (and it cannot be one without the other³⁷) will reflect this sequential logic.

It is for this reason that Korzybski frequently refers to causation as a semantic problem; it is not simply a problem of identifying and verifying connections, but rather one of thinking about those connections in terms of a certain linguistic and semantic heritage. Accordingly, just as much as the models constructed by the theorist do not necessarily represent nature, by virtue of their being projections of a certain world view, so it must be seen that any model of causation or nature is limited by virtue of the necessity to express that model in language. Thus Korzybski notes that the ideas of cause and effect represent a linguistic logic which is "not similar to the structure of the world".³⁸ The response to this fact takes two possible forms. The first is a recognition that 'causation' is merely a concept, a heuristic device which, as Quinney noted, is a methodological tool to enable us to make sense of the world. Accordingly, it remains essential to be aware of this inherent limitation in 'causation' and to avoid the trap of setting up the concept as reality itself. The other possible response is indicated by a small band of theoretical physicists who, in their approach to the study of matter seem to have more in common with the mystical traditions of the East than with the materialist traditions of the West. Like J. B. S. Haldane, who asserted that "The universe is not only stranger than we suppose; it is stranger than we *can* suppose", such physicists acknowledge the limitations of the conceptual and linguistic tools by which we seek to understand nature. The manner in which Heisenberg approaches the philosophy of physics is strangely similar to the way in which writers like D. T. Suzuki approach the essence of Zen Buddhism, or the way in which the essence of Taoist philosophy is stated. That is, it is seen that there is a 'reality' which it is beyond the capacity of language to grasp and express; concepts of causation are indications of the way we talk of causation; they do not necessarily explain 'cause' as such. Thus Heisenberg³⁹

When we represent a group of connections by a closed and coherent set of concepts, axioms, definitions and laws which in turn is represented by a mathematical scheme we have in fact isolated and idealised this group of connections with the purpose of clarification. But even if complete clarity had been achieved in this way, it is not known how accurately the set of concepts describes reality.

This is clearly the linguistic side to the principle of uncertainty; we can never know how accurately our linguistic forms represent reality.

If this is the rather more esoteric side to the conceptual and linguistic problem of causation, it remains important to acknowledge the overall constraints of language. At the very simplest level, language is the more or less coercive form

37. See F. Capra *The Tao of Physics* (London, 1975) Ch. 12.

38. Korzybski, op. cit., 217.

39. Heisenberg, op. cit., fn. 7, 96.

in which the conventional wisdom of society or of a particular world view is conveyed. This may be the language of politics which serves to identify and isolate political and ideological outsiders; it may be the language of popular orthodoxy which identifies the causation of deviance in terms of current explanations.⁴⁰ At another level, language is the device whereby the law explains and justifies its procedures in relation to criminality and sanctions. At every level, every language — whether it is lay or professional — is a special way of looking at the world and interpreting experience

Since the concepts people live by are derived only from perceptions and from language and since the perceptions are received and interpreted only in the light of earlier concepts, man comes pretty close to living in a house that language built.⁴¹

Moreover, this is the unconscious aspect of the construction of theory — since we live in the world of language, we remain largely unaware of the extent to which our perception of nature is determined by language. There is, in a sense, an unstated agreement to see and explain the world in particular ways.⁴²

What we may conclude from all of this is that any statement of causation — and this includes legal models of individual freedom and responsibility — is at best a statement of probability.⁴³ Methodological, epistemological, and linguistic elements suggest that our images of behaviour are, necessarily, only approximations for the time being. Not only is this an argument against theoretical dogmatism and intransigence — it is an argument against the tendency towards unrelenting attachment to the ready-made philosophies of behaviour in the law. Notions of causality are, of course, ingrained in our habits of thought and speech and, for the most part, these are relatively harmless habits. But the problem always arises at that point at which any such habit may have consequences in terms of control and sanctions. It is one thing to argue, at an intellectual level, against “harmful semantic disturbances”⁴⁴ involved in the idea of cause; it is quite another matter to be conscious of the consequences, in terms of policy, law and penalties, of a world view expressed as Law.

40. A delightful example of lay opinion is provided by Elkington: “I am convinced that if a smoking room were attached to all public libraries knowledge would be far better distributed, and men who would otherwise never dream of reading in a library would go there and so learn many useful things. . . . Personally, I am convinced that the ignorance of the working classes is solely due to the lack of smoking rooms in libraries, and if men like Mr Carnegie and other library founders would only institute them we would soon get rid of a lot of ignorance and the Liberal Government.” E. Way Elkington *Adrift in New Zealand* (London, 1906) 62.
41. R. F. W. Smith, “Linguistics in Theory and Practice” quoted in N. Postman & W. Weingartner *Teaching as a Subversive Activity* (Harmondsworth, 1969) 121.
42. “We dissect nature along line laid down by our native language. . . . We cut nature up, organise it into concept, and ascribe significance as we do largely because we are parties to an agreement to organise it in this way — an agreement that holds throughout our speech community and is codified in the patterns of our language.” B. L. Whorf *Language, Thought, and Reality* quoted in Postman and Weingartner, op. cit., 124.
43. “In this world, with the structure which it has, we can never suppose that a ‘cause’, as we know it, is *alone* sufficient to produce the supposed ‘effect’. When we consider the ever-changing environment, the number of possibilities increases enormously. If it were possible to take into account the *whole* of the environment, the *probability* that some event would be repeated, in all details, thus exhibiting two-valued relation of ‘cause’ and ‘effect’, which we took for granted in the old days, would practically be nil.” A. Korzybski, op. cit., 216.
44. *Ibid.*, 216.

In these terms we may begin to approach a principle of uncertainty in the use of causation in law and in the related fields of deviancy theory. We may begin, too, to recognise the essentially linguistic and epistemological nature of any discussion of causation. What it comes down to is an awareness that, on most occasions, what we talk about in law and jurisprudence is not causation as such but rather one idea of causation. To fail to see this is to mistake the map for the terrain; causation as a concept and heuristic device is, like a map, a means of making sense of concrete reality and experience; but the map is always, and only, a representation of the terrain and not the terrain itself.⁴⁵ Just as cartography has a variety of projections which produce a variety of quite different maps (though the terrain remains the same), so the social sciences and philosophy produce a variety of perspectives on the physical reality of human conduct. To cling to one particular version of human conduct is to retreat into a kind of 'as if' logic, that is, to behave consistently as if that one representation were in all cases true. This is a variation on what Koestler calls 'flat earth' thinking: for the purposes of drawing a map on a two-dimensional plane, we assume, for the moment, that the earth is flat and may be represented by a particular projection. Problems arise when we too readily fall into the trap of seeing the map as reality and coming to believe that the earth is, in fact, flat.⁴⁶

Thus, if, as Einstein pointed out, geometry is not inherent in nature but imposed on it by the mind of man, so too with the idea of causation. Of course, it may be that causation is inherent in nature, but our theoretical and empirical models simply cannot comprehend it adequately.⁴⁷ Instead, all we have identified for the moment is a number of possible dimensions of causation which reflect, in varying degree, the philosophical, political, and scientific preferences of the observer. Just as geometry serves to establish relationships in space, so causation theory serves as a means of making sense of the world. To this extent, the idea of causation is non-problematic. But problems can and do arise at the point at which we either seek to constrain others to see the world in the same way (through education, propaganda, etc.), or to develop social and controlling policies on the strength of a specific world view.

Theories of causation, like experimental or analytical models in physics, must therefore be regarded simply as methods of explaining phenomena. To the extent that physicists, along with some historians, sociologists, and anthropologists, recognise that their models are, at best, merely heuristic devices and tentative approaches to the understanding of phenomena, so jurists must acknowledge that all models of causation, and hence of responsibility, are equally tentative. The jurisprudence of causation will need to take account of theoretical trends in other disciplines and may, by this means, begin to overcome the innate conservatism which insists that, right or wrong, the law will stick by its existing model of reality (i.e. causation) until a firm and convincing alternative is produced. This kind of logic (i.e. the

45. Cf. Cohn: "Concepts . . . have a tendency to displace reality, to set themselves up in its place." G. Cohn *Existentialism and Legal Science* (New York, 1967) 12.

46. A. Koestler *The Ghost in the Machine* (London, 1967) Ch. 1.

47. "The chain of cause and effect could be quantitatively verified only if the whole universe were considered as a single system — but then physics has vanished, and only a mathematical scheme remains. The partition of the world into observing and observed systems prevents a sharp formulation of the law of cause and effect." Heisenberg *The Physical Principles of Quantum Theory* quoted in Korzybski, op. cit., 214.

demand for certainty and uniformity) neglects the possibility that there is no single alternative, and that the theoretical dissent in relation to causation and criminality is precisely indicative of this fact.

The legal insistence on certainty may be a logical consequence of the success of bourgeois ideology: an insistence on the Rule of Law⁴⁸ in terms of the elimination of discretion: an insistence on the possibility of human reason, institutionalised and settled in the maxims and tests of individual responsibility. But an insistence on rationality (here in terms of its capacity to explain individual 'causes' of criminality) becomes the practice of irrationality, precisely to the extent that rules, concepts, and models of human conduct preclude the possibility of empirical and experiential validation. The attempt to explain cause and effect, in whatever terms, becomes irrational at the point at which an experimental and philosophical hypothesis becomes a ground for institutionalised intransigence.

To the extent, then, that the jurisprudence of causation is not based on a reflexive epistemology, a constant inquiry and empiricism, and on a principle of uncertainty, we may agree with Thurman Arnold that "the writings of jurisprudence should be considered as ceremonial observances rather than as scientific observations".⁴⁹

48. "In the broadest sense, the rule of law is defined by the interrelated notions of neutrality, uniformity, and predictability. Governmental power must be exercised within the constraints of rules that apply to ample categories of persons and acts, and these rules, whatever they may be, must be uniformly applied. Thus understood, the rule of law has nothing to do with the content of legal norms." R. M. Unger *Law in Modern Society* (Glencoe, 1976) 176-177.

49. T. Arnold *The Symbols of Government* (New York, 1935) 70.