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TWO METHODS OF PROOF IN CRIMINAL PROCEDURE

MUCH of the literature on comparative criminal procedure has been devoted to considering the relative merits of adversary and non-adversary procedures.[1] Even critics who have questioned the fruitfulness of this approach because of the differing values that are embedded in different systems of procedure, have considered it useful to ask whether one type of procedure is more committed to truth than another. Damaska, for example, has concluded that European criminal procedure is more committed to truth than Anglo-American criminal procedure, although he has been anxious to point out that this is no argument for the adoption of such a procedure, if it is thought that Anglo-American procedure is better able to safeguard other values that are considered important.[2] Throughout the tendency has been to emphasise the differences in the methods of proof adopted in the civil law and common law traditions. In this paper it will be argued that despite the variations in procedure, both adversary and non-adversary systems are rooted in a particular epistemological tradition which embraces a single method of proof—the classic scientific method—that can be traced back to the sixteenth and seventeenth centuries. In its place another method of proof will be posited which it will be claimed is more in tune with modern conceptions of truth-finding.

THE CLASSIC SCIENTIFIC METHOD OF PROOF

It is commonly claimed that almost everything that distinguishes the modern world from earlier centuries is attributable to science

[1] This has been the subject of great controversy at least since the nineteenth century, see H. H. Jescheck, "Principles of German Criminal Procedure in Comparison with American Law" (1970) 56 Va.L.R. 139; M. J. Damaska, "Evidentiary Barriers to Conviction and Two Models of Criminal Procedure: A Comparative Study" (1973) 121 U.Pa.L.R. 507 at pp.525–526. Interest in the U.K. has been kept within bounds by academic writers who have advocated caution in making comparisons. See, *e.g.* L. H. Leigh, "Liberty and Efficiency in the Criminal Process—The Significance of Models" (1977) 26 I.C.L.Q. 516; L. H. Leigh and J. E. Hall Williams, *The Management of the Prosecution Process in Denmark, Sweden and the Netherlands* (1981), pp.6–7. But concern about a number of questionable convictions in the U.K. has prompted interest in aspects of European criminal procedure, see M. Young and P. Hill, *Rough Justice* (1983), pp.162–176; L. Kennedy, "A French Lesson for Lawyers," *The Observer*, March 5, 1985; T. Sargant and P. Hill, *Criminal Trials—the Search for Truth* (1986).

[2] *Ibid.*, p.588. See also M. J. Damaska, *The Faces of Justice and State Authority* (1986), pp.122–123.

which achieved its most spectacular triumphs in the sixteenth and seventeenth centuries with the emergence of the theories of Copernicus, Kepler, Galileo and Newton about the nature of the physical world.[3] The Copernican revolution in the sixteenth century which reduced the earth to a mere part in the universe, a planet in an immense space, not only conflicted, in Kuhn's language, with the previous paradigms of philosophy, science and religion by challenging the authority of Aristotle and Scripture.[4] It also challenged the very idea of resting knowledge about the world on authority whether it be of the Church, the early scholastic writers, the Bible, or the writers of classical antiquity by showing that individuals could make their own inquiries about the nature of the world.[5] The method of proof adopted by scholastic philosophy was to take a general proposition from some authoritative text and construct an account of the world by deducing what it must be like on the unquestionable assumption that the general proposition was absolutely correct. The new theories of Copernicus, Kepler, Galileo and Newton, however, suggested that individuals could make their own inquiries about the nature of the world and this view came to be reflected in the writings of philosophers as diverse as Descartes, Spinoza, Leibniz, Bacon and Locke. Whatever their differences these philosophers all came to agree that knowledge may be gained by anyone working on his own, rather than by appeal to authoritative propositions, a principle that has been called the principle of universal cognitive competence.[6]

But as the foundations of knowledge were no longer to be built on the authority of scholastic learning, a question remained about where the new foundations of knowledge were to be found. Following the methods of scientists like Gilbert and Harvey, it seemed that one could base knowledge on direct observation of natural phenomena. Francis Bacon was one of the first philosophers to give concrete expressions to this idea. He maintained a rigid distinction between theology and God's nature which could only be known through revelation of His word and natural science which was allocated a particular territory of its own and which could be known by observation.[7] In place of the deductive method of scholastic learning he devised a new empirical, inductive method of backing up general propositions from observed data and moving from these to broader generalisations which were to be checked at every stage by reference to the results of experiment. Observation and memory then supplied the basic data for reasoning, and it was only possible to go beyond this basic data by relying on general

[3] B. Russell, *History of Western Philosophy* (1946), Chap. 6.
[4] T. S. Kuhn, *The Structure of Scientific Revolutions* (2nd ed., 1970).
[5] L. J. Cohen, "Freedom of Proof" in *Facts in Law* (ed. W. Twining, 1983) pp.1, 10.
[6] *Ibid.*
[7] F. Bacon, "The Advancement of Learning" and "Novum Organum" in *The Works of Francis Bacon* (eds. J. Spedding, R. Ellis and D. W. Heath, 1879). See G. Novack, *Empiricism and its Foundations* (1968), pp.17–19.

propositions of cause and effect which are known entirely from experience when certain objects are found to conjoin with other objects.

If Bacon provided the inspiration for what has become known as the classic scientific method of proof, it is generally thought that Hume gave the most coherent and uncompromising formulation of the basic empirical tenets that underlie it.[8] For Hume it was from man's perceptions or impressions that all his ideas are ultimately derived. These impressions are our sensations and feelings, and every idea is a faint copy of our impressions. If we wish to test our knowledge of the world therefore we must ask from what impression it is derived. All knowledge about the world is therefore *a posteriori*, explicable only by observation and experience. In science we construct a number of experiments in order to determine how frequently particular objects are conjoined with other objects, and we will come to a conclusion on the basis of what Hume called "experimental inference" but which has since been called inductive or empirical generalisation.

Although Hume believed that this was a method which could not be rationally justified, it is a method that has been viewed with considerable appeal right up to the twentieth century. As Hume himself believed that it was the method that had been used with such success in physics, he had no hesitation in believing it could be extended to all science, including the "science of man." Throughout the nineteenth century the classic scientific method was claimed to be adaptable to the social sciences and history as well as the natural sciences. The tendency to view human behaviour in terms of analogies drawn from the natural sciences came to be called positivism and was given its most confident expression in the work of Auguste Comte who wanted to apply the methods and concepts of the natural sciences to the study of social phenomena.[9]

It is, of course, true that in the course of the last two centuries the classic scientific method has been developed by a number of philosophers of science. Although it was originally conceived as inductive in character, it has been developed to include an important deductive character as well.[10] According to Cohen and Nagel, "we obtain evidence for general principles by appealing to empirical material, to what is alleged to be fact, and we select, analyse and interpret empirical material on the basis of principles."[11] More recently philosophers of science like Hempel and Nagel have stressed the importance of constructing theories whose deductive

[8] D. Hume, "An Enquiry Concerning Human Understanding" in *Enquiries Concerning the Human Understanding and Concerning the Principles of Morals* (ed. L. A. Selby-Bigg, 1902).

[9] A. Comte, *The Positivist Philosophy of Auguste Comte* (trans. H. Martineau, 1896). See D. Phillips, *Wittgenstein and Scientific Knowledge* (1977), pp.56–57.

[10] See, *e.g.* H. Reichenbach, *Experience and Prediction* (1938); E. Nagel, *The Structure of Science* (1963); C. G. Hempel, *Philosophy of Natural Science* (1966).

[11] M. Cohen and E. Nagel, *An Introduction to the Scientific Method* (1934), p.396.

consequences have to be checked against the "facts of our experience."[12] In sum, the method can be characterised as one of elaborating principles by the method of induction and testing such principles by discovering to what extent matters that can be deduced from them correspond to the facts.

A number of basic assumptions follow from this method. First, it is assumed that there is a world of fact which exists out there as part of reality, independent of the human observer, and the work of the scientist is to discover as much of it as he can by comparing this reality with his own theories and hypotheses, what has been called the correspondence theory of truth. Secondly, it is assumed that although many conclusions can only be stated with probability, given time the complete truth is in principle capable of being revealed, the principle of universal cognitive competence. Third, since knowledge of reality can be obtained by using as a foundation the empirical evidence of our sense-experiences which is value-free, science can be conducted a value-free manner. A distinction is sometimes made between the context of justification and the context of discovery.[13] A number of psychological or social circumstances may lead to our discoveries, but these can be tested in a logically precise and exact manner by relying on the evidence of sense-experience and the rules of the classic scientific method.

The Classic Scientific Method in Criminal Procedure

It took some time for European procedures which were strictly based on canon law to adapt to the spirit of universal cognitive competence. Under Roman-canon procedure, criminal proof could only be satisfied by appealing to particular rules of proof which came to establish eye-witness testimony and the confession as the only sources of proof.[14] So, for example, at least two eye-witnesses or a confession were required before there could be a conviction. These rules preserved the medieval view that human testimony was a form of proof whose probative value could not be weighed and this view proved highly resistant to change. But in the sixteenth and seventeenth centuries the stringencies of these proofs were mitigated by resort to discretionary powers to impose penalties known as "poena extraordinaria" on the accused when there was persuasive circumstantial evidence against him. In these cases the accused was not technically convicted but was punished instead for the suspicion that had accumulated against him. By the eighteenth century a number of writers imbued with Enlightenment thought which was heavily influenced by the English empirical thought of

[12] C. G. Hempel, *op. cit., supra*, 1.

[13] H. Reichenbach, *The History of Scientific Inquiry* (1951), p.231. This distinction has appealed to legal theorists as well, see R. Wasserstrom, *The Judicial Decision* (1961), pp.26–27.

[14] J. H. Langbein, *Prosecuting Crime in the Renaissance: England, Germany, France* (1974); *Torture and the Law of Proof* (1978), pp.5–8.

Locke and Newton began to mount an attack on the whole system of legal proofs. Beccaria, for example, developed as a replacement for the system of legal proofs a system of moral proof by which the weight of evidence was to be assessed not by the sheer number of proofs but by the number of *independent* proofs that could be obtained.[15] But it took the full weight of the French revolution to reform criminal procedure in France, and other jurisdictions did not follow until the mid-nineteenth century.[16]

The key feature of reformed European procedure as it emerged in France and later in other European countries was the abolition of the doctrine of legal proofs. The pre-trial investigation, or *inquisitio*, remained the crucial stage of the criminal process but the examining magistrate was no longer fettered by the doctrine of legal proofs. Instead he was free to conduct an active investigation of the truth and evaluate the evidence according to his inner conviction, *intime conviction*. At the trial itself, the presiding judge dominated the process by his oral interrogation of the accused and his examination of witnesses on the basis of the pre-trial investigation file. An element of adversariness was permitted at the trial in that the accused could be represented by counsel but the role of counsel was limited to citing witnesses for questioning and suggesting questions that could be put. With certain modifications this is the model that is still in existence in most European countries today.

What is most noticeable about reformed European procedure is the degree to which it facilitates the methods of science as they were conceived in the last centuries. The legal inquiry is concerned with human behaviour as well as natural phenomena, but we have seen that the scientific method has been considered to be equally applicable to the social sciences. It merely means that the principles that are induced in the legal inquiry are not only concerned with the cause and effect of natural phenomena but also and more importantly with the cause and effect and regularities of human behaviour, all of which are derived from the experience of the trier of fact. These principles can then be tested by discovering to what extent matters that can be deduced from them correspond to the facts. Of course, legal procedures are highly formalised and institutionalised in an elaborate set of rules that have no counterpart in science.[17] Moreover, the legal inquiry unlike a scientific inquiry is most usually concerned with a particular event or events in history and not with forming general principles governing natural or human phenomena.[18] But Hume who later became an historian

[15] C. Beccaria, *An Essay on Crimes and Punishments* (1764, Eng. trans. 1804). See also Montesquieu, *Esprit des Lois* (1750), Bk. 15, Chap. 3; Voltaire, *Commentaire du Traite des delits et des peines* (1804 trans.), Chap. 22.

[16] A. Esmein, *A History of Continental Criminal Procedure* (1914), pp.393–426.

[17] L. Loevinger, "Law and Science as Rival Systems" (1966) 8 Jurimetrics J. 63.

[18] P. B. Carter, *Cases and Statutes on Evidence* (1981), pp.3–4. For discussion of the similarities and differences between historical and adjudicative inquiries into issues of fact, see W. L. Twining, "Some Scepticism about Scepticisms" (1984) 11 J.L.S. 137 at pp.154–157.

considered that the scientific method was applicable to history.[19] Like the scientist, the historian's data is founded on direct perception, the direct perception of certain documents in front of him and although there may be a number of links in the chain these documents are ultimately derived from the direct perceptions of eye-witnesses. The reliance which is given to the evidence before him and the conclusions he draws are founded upon the very methods of induction and deduction that are used in science. In other words, the historian and legal fact-finder arrives at a judgment on whether the evidence before him, whether oral or documentary, is reliable on the basis of his general knowledge of causes and effect and of regularities governing human behaviour which are derived from past experience. The fact that the subject matter of the historical or legal inquiry is quite different from scientific inquiries has not been thought by philosophers of the empiricist tradition to entail the conclusion that history or legal fact-finding has some unique epistemological status.[20]

As a mode of reasoning, the classic scientific method can be easily applied within reformed European criminal procedure. Like the scientist, the examining magistrate has apparent freedom to collect what evidence in a particular case that he can and to evaluate it according to general principles based on his experience. Frequently, the evidence will have been collected by the police into a file, but the magistrate is free to make further inquiries himself or to commission further inquiries. On the basis of the evidence, a theory will emerge that a particular accused is guilty and the investigation must then proceed to test the theory by listening to the accused and any witnesses that he wishes. The fact that there may be a number of investigations performed by different fact-finders, the police, the prosecutors, examining magistrates and trial judges again conforms to the scientific method where a number of experiments are conducted to see if they support a particular theory. As one contemporary description of criminal procedure has put it:[21]

> "The procedural phases, understood as proceedings aimed at the cognition of some fact, resemble measuring experiments carried out in physics where the given measurement is measured several times (and each measurement yields a somewhat different result) in order to determine the value (with several measurements). They resemble experiments in chemistry where the same process is repeated several times in order to ascertain that the same result is obtained at the end of each experiment. Great importance and probative value is ascribed to such procedures and scientifically proved truth is

[19] D. Hume, *A Treatise of Human Nature* (ed. L.A. Selby-Bigg, 1888), Bk. 1, Part 3.
[20] P. Gardiner, "Historical Understanding and the Empiricist Tradition" in *British Analytical Philosophy* (eds. Williams and Montefiore, 1966), pp.267, 273.
[21] T. Kiraly, *Criminal Procedure—Truth and Probability* (1979), p.48.

not accepted without numerous experiments and repeated experiments."

By way of contrast Anglo-American procedure has been less able to adapt to such a rigorous scientific method of proof, although the spirit of universal cognitive competence was quicker to make an impact on Anglo-Saxon than on Roman-canon procedure.[22] In the seventeenth century non-jury witnesses began to be used in the courts and the principle that a verdict must be reached on the evidence presented in court came to be established. But it was established without importing the full rigour of the technical rules of Roman-canon law such as the two-witness rule.[23] Leading judges of the day like Coke and particularly Hale began to see that the important question was not the number of witnesses or the kind of witnesses but the probative force of their testimony. It is true that a number of exclusionary rules such as the hearsay rule began to be developed in the late seventeenth century but rules such as these were directed to the question of weight rather than to the kind of witness who gave the testimony.[24] These rules qualified the principle of universal cognitive competence but they did so out of concern that the excluded evidence could not be or would not be measured properly. A common rationale of the hearsay rule, for example, is based on the inability to test rigorously and thereby properly measure such evidence. By the nineteenth century the two principles which Wigmore claimed underlie the whole structure of the modern system of evidence were established—first, none but facts having rational probative value are admissible, and, second, all facts having rational probative value are admissible unless some specific rule forbids.[25]

Apart from exclusionary rules another feature of Anglo-American procedure that appears resistant to a scientific method of proof is adversary procedure itself. Instead of the court, whether it be the pretrial magistrate or the trial judge, determining what facts are to be determined, the parties control the range of the dispute within the confines of the criminal law. Again, the parties and not the court collect the evidence and instead of being questioned by the court, witnesses are questioned primarily by the parties themselves, the judge generally intervening only to clarify points that are made by the witnesses. What is interesting about the attitude of the majority of Anglo-American writers on evidence and procedure, however, is that although they fall within a rationalist tradition of evidence scholarship traceable back to the English empirical writings of Bacon and Locke, the very writings which had such an

[22] Cohen, *op. cit.*, n.5, pp.8–9. See also J. D. Jackson, "Theories of Truth-finding in Criminal Procedure: An Evolutionary Approach" (1988) Cardozo Law Review (forthcoming).

[23] W. Holdsworth, *A History of English Law* (1920), Vol. 9, pp.185–197.

[24] 5 *Wigmore on Evidence* (3rd ed., 1940), pp.1362–1364.

[25] 1 *Ibid.*, pp.9–10. See also J. B. Thayer, *A Preliminary Treatise on Evidence at the Common Law* (1898), p.198.

influence on the French Enlightenment and on the reform of European procedure,[26] they have traditionally favoured adversarial procedure over non-adversarial procedure. This has been not just because in their view this model is better able to cater for values other than truth-finding such as the values of party participation and human individuality, but also because it is a better aid to truth-finding itself.

To recall, the classic method presupposes that scientists collect as much evidence as is relevant to their inquiry as they can, collate this evidence and then develop a theory from it in a detached, value-free manner. Taking these ideals as their standard, many Anglo-American writers have believed that adversary procedures offer more completeness of evidence and more detachment than non-adversary procedure. Jeremy Bentham, for example, was passionately committed to rectitude of decision-making as the end of procedure and was deeply imbued in the empiricist tradition.[27] But he believed that one of the saving graces of English procedure was its adherence to the adversarial principle of oral interrogation and counter-interrogation.[28] In his view, if questioning was to be effective, it was best conducted by an advocate who unlike the judge has appropriate information in all its plenitude and has the zeal that is necessary to turn it to full account. The best provision is made for completeness of evidence only when all the interested parties in the case are interrogated by each other. So far as the value of detachment was concerned, this was best guaranteed by enabling the tribunal of fact to stand back as a passive observer and not become too involved in interrogation, for the very quality that was likely to make interrogation effective, zeal, was a quality that was incompatible with the proper endowments of a judge.[29]

It would therefore appear that adversary and non-adversary modes of procedures represent not two different epistemological traditions but rather two different means of arriving at the truth within the same epistemological tradition that can be broadly characterised as empiricist. Both procedures in effect provide different means of justifying conclusions that have been reached by observation and experience. Non-adversary procedure puts the emphasis on providing for a number of separate investigations conducted by different personnel such as police, prosecutors,

[26] W. L. Twining, "The Rationalist Tradition of Evidence Scholarship" in *Well and Truly Tried* (eds. Waller and Campbell, 1982), p.211.

[27] W. L. Twining, *Theories of Evidence: Bentham and Wigmore* (1985), pp.52–66.

[28] 1 *Rationale of Judicial Evidence* (1827), p.585. Wigmore believed that the practice of examination and cross-examination is the greatest legal engine ever invented for the discovery of truth, 5 *Wigmore on Evidence*, 1367.

[29] For a modern aggressive defence of adversarial procedures claiming that they maximise both completeness of evidence and the neutrality of the trier of fact, see S. Landsman, *The Adversary System: A Description and Defence* (1981), American Enterprise Institute for Public Policy Research. More recently, however, defences of adversary procedures have tended to focus on their ability to maximise justice rather than truth, see J. Thibaut and L. Walker, "A Theory of Procedure" (1978) 66 Cal.L.R. 541.

examining magistrates and judges. Adversary procedure prefers to make a sharper distinction between the investigative pre-trial trial stage of inquiry and the proof stage of the trial. This also reflects an important feature of the classic scientific method of proof which as we have seen makes a distinction between discovery and justification. Some scientists have even seen the process of justification conforming to the trial adversary model.[30] Any theory has to be subjected to rigorous examination not just by the scientists who have discovered it but by other scientists not actively involved in the experiments, and it is accorded the status of truth and recorded in the authoritative textbooks only if it survives this scrutiny.

DISENCHANTMENT WITH THE CLASSIC SCIENTIFIC METHOD OF PROOF

During the course of this century the classic scientific method of proof has been under increasing attack. The ideal of the scientist who gathers facts from sense-experience and then little by little forms a hypothesis from them is now widely questioned and many philosophers of science now believe that the principles of the classic scientific method do not conform with actual scientific methodology. Popper, for example, has characterised it as representing a bucket theory of knowledge according to which the mind resembles a container in which perceptions and knowledge accumulate.[31] In his view this gives a very misleading picture of the way science is practised, for if one looks at actual scientific inquiry one sees that the scientist does not begin with a collection of sense-experiences which provide the foundation of knowledge.

To show how this so, Feyerabend has suggested that we try to conceive of a sensing subject without any theoretical knowledge and suggests that such a subject would be in a stage more primitive than a small child.[32] A small child does not learn by being presented with a series of sensations which form the foundation of knowledge. Instead learning only gets started because the child reacts correctly towards signals and interprets them correctly, in other words because he possesses means of interpretation even before he has experienced his first sensation. Observations are not therefore given, but always interpretations in the light of our background assumptions. Furthermore, when it comes to actually making an observation-claim, this must be expressed in terms of concepts and categories which transcend particular sense-experiences. To state that this is an apple is to make a claim that moves far beyond any evidence which we may have out our disposal to warrant such a claim.[33] Of course, we can say that this seems to be an apple but then one is no longer making an objective observation claim. As for

[30] M. Levine, "Scientific Method and the Adversary Model" (1974) Am.Psychol. 661.
[31] K. Popper, *Objective Knowledge* (1972), pp.341–342.
[32] F. K. Feyerabend, "Science without Experience" (1969) 66 J. Philosophy.
[33] N. Rescher, *Scepticism* (1980), pp.27–28.

the inductive method itself, the problem, as Hume himself saw, is that we must rely on certain principles such as the uniformity of nature which again transcend our experience. Apart from this logical objection, there is a practical objection that laws or principles in science are rarely found by enumerating and summarising observables.[34] Induction may be a method for testing a finished theory,[35] but it does not explain how the theory was arrived at.

These insights challenge the basic assumptions of the classic scientific method. First, it seems difficult to sustain a correspondence theory of truth according to which there is an invariant correspondence between our perceptions and stimuli which provide them. If our perceptions are themselves interpretations in the light of background assumptions, then there is no independent reality which we can use to ground our theories and hypotheses. Secondly, it seems that we can never gather all the information that there is about a subject. If the facts of nature cannot be observed and verified independently from the explanatory theories that are devised, observations must always be selective. As Popper has said, "an observation is always preceded by a particular interest, question or problem. And its description presupposes a similarity, classification which in its turn presupposes interests, points of view, and problems."[36] Thirdly, if scientific inquiry requires a chosen object or problem, this requires a choice of problem, which must be made by scientists. Value-free science becomes impossible to sustain.

As the ideals of the classic scientific method, in particular the ideal of complete, objective knowledge, have come to be challenged, Hume's original scepticism about the possibility of justifying an external world and the inductive method has come back to haunt philosophers and those who work in particular fields of knowledge.[37] Even when the ideal of a discoverable truth has not been totally shattered, there has been considerable questioning about the ability of particular disciplines to achieve this ideal within existing methods and procedures, and it is not surprising that this scepticism has infected legal methods of proof and procedures as well.[38] Criticism of reformed European procedure indeed began almost as soon as it was introduced. Around the middle of the nineteenth century a number of famous German scholars argued that the defence be given

[34] N. R. Hanson, *Patterns of Discovery* (1958), pp.70–71.

[35] Some philosophers of science have even denied this, see, *e.g.* K. Popper, *The Logic of Scientific Discovery* (1959). Others have seen an important role for a kind of eliminative induction which can be used to eliminate possibilities, see, *e.g.* L. J. Cohen, *The Implications of Induction* (1973), *The Probable and the Provable* (1977).

[36] K. Popper, *Conjectures and Refutations* (1972), p.46.

[37] For comment on the prevailing scepticism in the philosophy of science, see D. Phillips, *Wittgenstein and Scientific Knowledge* (1977), pp.143–144. For examples of scepticism in history, see C. Becker, "Everyman His Own Historian" (1932) 39 Am.Hist.Rev. 221; C. A. Beard, "Written History as an Act of Faith" (1934) 39 Am.Hist.Rev. 219, and for discussion see Twining, *loc. cit.*, n.18, pp.151–157.

[38] R. Collingwood, "The Limits of Historical Knowledge" in *The Historian as Detective* (ed. R. W. Winks, 1968); M. Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (1958), pp.27–30; Twining, *loc. cit.*, n.18, p.285.

a more effective role in procedure and some even argued for the adoption of full adversary procedures along the lines of the Anglo-American model.[39] Certain European codes of criminal procedure as a result contain provision for party examination of witnesses, but these provisions are rarely invoked.[40] Another feature that has been considered to subvert the rights of the defence has been the expanding role of the police in pre-trial investigation. According to the nineteenth century codes, the police were to take only the necessary first steps in an investigation and then either the examining magistrate or the public prosecutor was supposed to conduct the investigation. But in practice the police have been given an increasingly important investigative role.[41] The result is that the police file which contains the prosecution case including the details of police interrogation without the presence of the accused's counsel is able to dominate the later stages of investigation. The defence is only able to inspect the file at a later stage of investigation when the time for investigation by the defence may be short.

Apart from the problem of one-sided and incomplete evidence, some European jurists have also questioned whether the active participation of examining magistrates and judges in judicial proceedings is compatible with impartiality. As early as the 1840s Zachariae amongst others believed that it was impossible to require unbiased impartiality for someone whose task was to investigate and discover those who are guilty. In a landmark article published a little later von Kries exposed the myth of impartiality by showing that the job of the examining magistrate to investigate criminal offences and detect the perpetrators made it more important for him to find the guilty than to prove the innocence of those wrongly prosecuted.[42] Even if the examining magistrate could retain his detachment, there is the further problem of dependence on the police investigation file. At each phase of procedure, including the trial itself, the investigator has access to the evidence gathered in the phase below and insofar as this points to the guilt of the accused, it is very difficult for an investigator not to assume guilt in the conduct of his investigation.

Although many of the critical European jurists have looked to Anglo-American procedure to mitigate these defects, there have also been criticisms of adversary procedures throughout this century. Jerome Frank's "fact-skepticism" contrasted a "fight" theory of justice as practised in the United States with a "truth" theory of justice

[39] J. Stepan, "Possible Lessons for Continental Criminal Procedure" in *The Economics of Crime and Punishment* (ed. S. Rottenberg, 1973).

[40] Strafprozessordnung ss.245–2 (W. Germany); Ley de Enjuiciamiento Criminel art. 704 (Spain).

[41] J Stepan, *op. cit. supra*, n.39, pp.186–187; E. A. Tomlinson, "Non-adversarial Justice: the French Experience" (1983) 42 Md.L.R. 131; D. E. Murray, "A Survey of Criminal Procedure in Spain and some Comparisons with the Criminal Procedure in the United States" (1964) 40 North Dakota L.R. 7.

[42] von Kries, "Vorverfahren und Hauptverfahren" (1880) *Zeitschrift fur die gesante Strafrachtswissenschaft.*

which would give greater priority to the discovery of truth,[43] and many have been critical of the ability of adversary procedure to achieve completeness of evidence.[44] The principle of party control means that adversary procedure is not concerned with the truth of the material facts but only the truth of the facts put in issue by the accused. As a result pleas of guilty, if considered voluntary, are not investigated. The system of party collection also ensures that relevant evidence which is considered harmful or potentially harmful to both sides is not presented. So far as party prosecution is concerned, it has been pointed out that completeness of evidence by party examination and cross-examination presupposes that the contending parties are more or less on a par as regards access to sources of evidence.[45] But the growing importance of the police in investigating the evidence has been a feature of Anglo-American procedure as much as European procedure.[46] The police have much greater resources for assembling a case with the result that, as in European procedure, their inquiries at the preliminary phases of the criminal process dominate the later stages. Apart from the problem of completeness of evidence, Anglo-American jurists have not all agreed that adversary procedure is superior in ensuring that the tribunal of fact is impartial. Although the emphasis on party control, collection and presentation of evidence enables the tribunal of fact to stand back as a passive observer, if it is accepted that the evidence presented is incomplete and one-sided, the impartiality of the trier of fact becomes a myth. The trier's mind may start off as a *tabula rasa*, but it is filled up for the most part with police evidence or evidence obtained by the police.[47] The passive role that he must adopt requires that he accept the evidence that is presented and decide the case according to its weight.

What has emerged as a central criticism of both European and Anglo-American procedures is that the greater resources of the police in being able to assemble a case and to question witnesses including the accused before the formal processes of criminal justice get under way ensure that the evidence that is available at the formal processes is weighted in favour of the prosecution. It is true that the European trier of fact has greater power than his adversarial counterpart to control the evidence and ask questions of witnesses. But the trial takes place after a full pre-trial investigation conducted in practice by the police and extensive use is made of the investigative file. The result is that although the court is responsible for producing and

[43] J. Frank, *Courts on Trial* (1949).

[44] J. Brett, "The Implications of Science for the Law" (1972) 18 McGill L.J. 170; R. Eggleston, "What is Wrong with the Adversary System?" (1975) 49 A.L.J. 428; M. E. Frankel, "The Search for Truth: An Umpireal View" (1975) 123 U.Pa.L.R. 1031.

[45] Brett, *ibid.*, p.188.

[46] E. M. Morgan, *Basic Problems of Evidence* (1962), pp.147–148, Y. Kamisar, "Equal Justice in the Gatehouses and Mansions of American Criminal Procedure" in *Criminal Justice in our Time* (ed. A. Howard, 1965), pp.11–38, Lord Devlin, *The Judge* (1979), pp.70–71.

[47] McBarnet, *Conviction* (1981), Chap. 5.

taking evidence and may call witnesses in addition to those named by the prosecution and defence, in practice it is the file that points to which witnesses should be called and it provides the basis for the interrogation of the witnesses.

THE DIALECTIC METHOD OF PROOF

To stem the tide of disillusionment with the ideals of the classic scientific method of proof, many philosophers and scientists have abandoned the central empiricist idea that the inquirer build up a theory from certain objective data derived from sense-experience and have instead started from a completely different epistomological tradition that puts the inquirer right in the centre of the picture from the beginning and sees an important role for human imagination. The tradition can be traced back to Kant's Copernican Revolution which was to centre the world around the knower rather than the knower around the world.[48] The analogy of a building has been used.[49] Classic scientific method says that we must first assemble the bricks, then build the wall. Instead we can invert the process and arrive at a single process of determining the right components for the wall through the very process of assembling. We therefore start not with certain fixed data but with a theory that directs our attention to asking certain questions. If we get answers that do not fit the theory then we have to refine the theory to fit what we have newly discovered. This replaces a correspondence theory of truth with a coherence theory. Instead of asking whether the theory we have constructed corresponds with the facts, we ask instead whether our theory fits into a coherent whole.

Modern philosophers of science have supported this view by claiming that scientists do not roam about casting up random hypotheses to be tested. Hanson, for example, argued that a physicist rarely searches for a deductive system *per se*; instead he is in search of an explanation which his data will fit intelligibly alongside better known data.[50] This involves rejecting the dichotomy between discovery and justification, and recognising that there is a kind of logic in discovery, which involves justification, what has been called abduction.[51] The classic method tells us what to do after the physicist has caught his hypothesis. But in Hanson's view it is arguable that the ingenuity, tenacity, imagination and conceptual boldness which has marked physics since Galileo shows itself more clearly in hypothesis-catching than in the deductive elaboration of caught hypotheses. He pointed out that Galileo struggled for 34 years before he was able to advance his constant acceleration hypothesis with confidence.

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[48] S. Korner, *Kant* (1955), p.30.
[49] N. Rescher, *Cognitive Systematisation* (1979), p.34.
[50] Hanson, *op. cit.*, n.33, p.72.
[51] C. S. Peirce, *Collected Papers* (1867), Vol. v, 146. See D. Schum, "Probability and the Processes of Discovery, Proof and Choice" (1986) 66 B.U.L.R. 825.

Imagination plays a crucial role in Polanyi's recent theory of science.[52] In his view the scientist starts his inquiry by thrusting forward ideas he feels to be promising because he senses the availability of resources that will support them and his imagination goes on to hammer away in directions felt to be plausible in bringing up material that has a reasonable chance of confirming these guesses. This thrusting forward of promising ideas involves what Polanyi calls the "tacit dimension" of knowledge.[53] Conscious inferences from isolated or randomly given clues do not give us knowledge or meaning. Instead we rely on knowledge that we cannot completely tell, a "tacit dimension." Taking the example of awakening one night to noises, Polanyi said that we immediately try to integrate the various noises we hear into an explanation, perhaps that a burglar is in the house. We cannot explain how we reach this conclusion. We simply leap from noises to a burglar in the night. Gestalt psychology provided the clue for Polanyi to how we perform these acts of tacit integration. According to the theory of gestalt psychology we know the coherence or pattern of an object by a spontaneous equilibration of visual clues or stimuli that are impressed on the brain. We are unaware of the particulars or clues themselves, but we know them in the object that we recognise. The difficulty with gestalt theory was that it assumed that the brain passively received the visual clues or stimuli. Polanyi, on the other hand, preferred to emphasise the active involvement of the person in knowing and he saw the gestalt as the outcome of an active shaping of experience performed in the pursuit of knowledge. Although he was primarily interested in developing a new theory of scientific knowledge, he was anxious to point out that his theory applied to all knowledge and this is why he used examples from everyday life. It is interesting that he even applied his theory to court triers of fact.[54] The jurors he said may see a pattern of circumstances pointing to the accused. But it is always conceivable that the pattern may be due to chance. How unlikely a chance should they admit to be possible? No rule can decide this. The decision must be arrived at under the discipline of a given personal responsibility.

The problem is that this new emphasis on the personal role of the trier of fact seems to leave the way open for the kind of scepticism that has characterised much twentieth century writing. In particular it would seem that the knowledge that is finally claimed is highly subjective and incapable of proof. But the flaw in the classic scientific method was to assume that we could start with objective data derived from sense-experience and infer matters from this. As Hume saw, the certainty of perception holds only for the perceiving subject, and as soon as we go beyond this certainty to claim that something is true we leave the private world of sense-experience and enter the public

[52] M. Polanyi, "The Creative Imagination" cited in R. Gelwick, *The Way of Discovery* (1979), pp.88–89.
[53] *The Tacit Dimension* (1966).
[54] "Logic and Psychology" (1968) 23 Am.Psychol. 27.

intersubjective world of language. This is why it is now claimed by a number of philosophers that we cannot ultimately separate the criteria for truth from the criteria for the warranted assertion of truth-claims. As Habermas has said, "experience supports the truth claim of assertions . . . But a truth claim can be made good only through argumentation."[55] The classic scientific method made a distinction between discovery and justification, but when we abandon the idea that truth is derived from sense-experience, we see that we cannot make any claim to discovery until we have justified what we have discovered.

What method of proof then should argumentation or justification take? Classic scientific method claimed that we ought to be able to demonstrate in a logically compelling way how we arrive at certain conclusions. But if, as has been argued, there is an inevitable evidential gap between the content of our claims and the supporting evidence that we have for making them, the jump that we make from certain evidence to a conclusion cannot be demonstrated according to strict logical rules. Nevertheless we can still give reasons for our conclusions by appealing to the evidence we have and to the ground rules of our experience, what has been invariably called "the facts of our experience"[56] or "our forms of life."[57] Because the evidence that is appealed to will be necessarily selective, it seems important to explain not just *why* a particular conclusion is arrived at but *how* it was arrived at. We may be able to show, for example, that a certain conclusion is supported by evidence but we have no direct access to all the evidence and we must therefore explain how we came upon the evidence that we did. This requires us to focus on the procedures that have been adopted to reach the conclusion, what Bankowski has called truth-certifying procedures.[58] As he has said, the search for truth is something we only undertake through institutional procedures which give us criteria enabling us to describe our activity as truth-seeking. These criteria are not obvious for all to see, but are rather normative criteria which themselves have to be justified as much as the conclusions that have been reached by such procedures. If we gain support for the procedures, then we are entitled to have more confidence in the conclusion that are reached.

We appear to arrive at a kind of consensus theory of truth of the kind which C. S. Peirce developed in the last century. "The opinion which is fated to be agreed upon by all who investigate is what we mean by the truth."[59] A number of philosophers of science this century such as Kuhn and Feyerabend have held that it is the consensus of one's fellow scientists or inquirers who share a particular

[55] "Wahrheitstheorien" in *Wirklichkeit und Reflexion: Festschrift fur Walter Schultz* (1973) 218, cited in T. McCarthy, *The Critical Theory of Jurgen Habermas* (1978), p.301.
[56] C. G. Hempel, *op. cit.*, p.1.
[57] L. Wittgenstein, *Philosophical Investigations* (1953), p.226.
[58] Z. Bankowski, "The Value of Truth: Fact-scepticism Revisited" (1981) 1 *Legal Studies* 257 at p.265.
[59] C. S. Peirce, "How to Make Our Ideas Clear" (1878), cited in McCarthy, *supra*, p.299.

paradigm which determines whether a statement is true or not. Such a theory is open to the difficulty that what is true for a particular community of investigators may not hold true for another community of investigators. Paradigms change and scientists operating within different paradigms may come to different conclusions. On the consensus theory there would seem to be nothing to choose between them. Kuhn himself denied the possibility of making judgments about the choice of paradigms and there can therefore be no good reason for choosing one over another.

To avoid this kind of relativism, Habermas has argued that we must distinguish between the way knowledge is constituted within a particular paradigm and the way it can be tested in argumentative discourse. For him there was a crucial contrast between communication which remains tied to the context of action and discourses which transcend the constraints of action.[60] The criterion for truth "is not the fact that some consensus has been reached, but rather that at all times and all places, if only we enter into a discourse, a consensus can be arrived at under conditions which show the consensus to be grounded."[61] In other words, if the agreement is to be rational, it must be reached in the absence of structural constraints on argumentative reasoning. The discourse must be "an ideal speech situation."[62] Of course, Habermas admits that such a situation is almost always non-existent in real life, but in rational discourse we nevertheless presuppose such a situation by conceiving of criteria which aid its fulfilment, and if we see that such criteria are not complied with, we will consider any truth claim made to be suspect. We may, for example, be able to show that a particular claim was made as a result of a threat from outside, or as the result of the particular disposition of a participant to make such a claim come what may, or as the result of giving undue weight in the procedural process to particular interests at the expense of others.

This method of proof is best characterised as dialectic because at its heart lies the idea that each participant must be free to engage in dialogue with himself and others which is not constrained by forces which are inclined to prejudice the result of the inquiry.[63] Individuals cannot engage freely in the dialogue if they are not given a free and equal chance with others to make their claims. Conversely, individuals who are predisposed to favour a particular claim must be made to account for it, and if they are unable or unwilling to do this, their claims are unworthy of the spirit of rational dialogue and can be discounted. Conceived in this way, dialogue takes the form of an interaction between on the one hand a particular theory and on the other hand various evidentiary sources which support or do not

[60] J. Habermas, *Theory and Practice* (1973).
[61] "Wahrheitstheorien" 239, cited in McCarthy, *supra*, p.308.
[62] *Ibid.*
[63] C. Perelman, *The New Rhetoric and the Humanities* (1979), p.73.

support the theory and perhaps require it to be modified.[64] The arguments adduced will not have the compelling force of demonstration but they ought to be strong enough to gain the adherence of every conceivable rational person. In this process there are perhaps many fact-finders and there is no ultimate court of appeal to call a halt but clearly the greater the range of agreement for a particular conclusion or theory, the greater the support that can be given to it.

It is not easy to apply this dialectic method to legal fact-finding procedures where clearly there is a need for an ultimate court of appeal to ensure that a decision is arrived at and where there may be other values apart from truth-finding which compete for importance. Another constraining factor is the interest that many of the participants have in a particular outcome and the unwillingness they may have to engage in the spirit of rational discourse. Adversarial procedure has been characterised as dialectic,[65] but it is only truly dialectic as between the parties in the dispute, prosecution and defence, each of whom is predisposed certainly by the trial stage to favour a particular outcome. They may try to compel each other at this stage to account for their competing claims, but this accountability takes place at a late stage in the process when each of the parties will have rehearsed its account to sound as plausible as possible. What is missing in adversarial procedure is any effective dialectical role for the judicial triers of fact. Their power to ask questions during the trial is severely restricted and although jurors may argue amongst themselves after the event they are heavily dependent on the information that has been given to them in court. Triers of fact have a more active role in continental procedure but they are also heavily dependent in practice on the dossier that has been built up at earlier stages of the investigation.

What seems to be required is that the dialectic method be made to work throughout the entire fact-finding process and that all participants in the process be made to justify their methods of inquiry during the inquiry. This requires effective and independent supervision of participants by other participants who are in turn supervised themselves, for only if there is effective access to and supervision of the activities of the participants can there be any assurance that they are engaging in rational discourse. If discovery and justification are to go hand-in-hand then supervision must run parallel with the activities of the various participants or as near parallel as possible. It has been seen, for example, that the police have been given a very important role in the investigation of crime and there is a strong case for this expanded role to be accompanied by expanded supervision. The methods of police interrogation can be supervised, for example, by requiring detailed records including tape and video recordings of the interrogation and by requiring disclosure of records as soon as

[64] *Cf.* 1A *Wigmore on Evidence* (Tillers rev. 1983), pp.1084, 1119.
[65] Loevinger, *loc. cit.*, n.17; M. J. Damaska, "Presentation of Evidence and Fact-finding Precision" (1975) 123 U.Pa.L.R. 1083.

possible to other participants including the defence. If defence solicitors cannot be present at the interrogation, they should at least be allowed access to the defendant after the interrogation and be shown the records immediately. The defendant can then be confronted with what he has said and other lines of inquiry can be taken up.

It seems then that procedures should be devised which allow the dialectic between prosecution and defence to begin at a much earlier stage of the inquiry than is permitted at present in adversarial and continental procedures. These would have to provide for the availability of defence lawyers to suspects at an early stage if necessary before charge, the full disclosure of information by each side including written records of interviews that may later be relied upon, the presence of both sides at certain important stages of the inquiry such as, for example, at an identification parade or at interrogation after charge or at a confrontation between the suspect and other witnesses, and the availability to both sides of experts to conduct forensic or medical examinations. These rules would have to provide some means of enforcement, probably the appointment of an independent magistrate who could always be available to both sides and would be present at certain key stages of the inquiry.[66] This magistrate would be able to require certain steps to be taken at the request of a party or of his own motion but he would not be a formal trier of fact and in this respect his position would differ from that of the *juge d'instruction* in France. In not requiring him to come to a formal recommendation that there are sufficient grounds for guilt, he would not be pressured psychologically into aligning with a particular side, although he would perhaps have the power to stop a clearly insufficient case. His position would be similar to that of a trial judge in a common law jury trial. His function would be to see that the rules of procedure were actually enforced rather than to find any facts, and he would compile a report that would incorporate the evidence that had been disclosed to both sides, a record of the stages of inquiry he was present at and perhaps a statement of lines of inquiry that could be followed up. At the trial itself the dialectic between prosecution and defence would be widened to include active questioning by the triers of fact who would have received in advance of the trial a copy of the independent magistrate's report. Questioning could be conducted by a "friend" of the jury who would be responsible for ensuring that matters arising out of the magistrate's report were put to the parties and for putting jurors' questions to them.[67] Prosecution

[66] It would seem that Lord Devlin had something like this in mind when he advocated the creation of judicial intermediaries, *The Judge* (1979), pp.74–78. But Lord Devlin appeared to see the judicial intermediary taking an active part in investigating the facts. He drew parallels with an officer like the procurator-fiscal in Scotland. But there is evidence that procurator-fiscals there rely heavily on the police file, and frequently "rubber-stamp" police decisions, see Moody and Tombs, *Prosecution in the Public Interest* (1982). See also *The Times*, March 13, 1985.

[67] An analogy can be made with calls for greater recourse to the use of an *amicus curiae* in civil proceedings. See, *e.g.*, Lord Justice Woolf, "Public Law—Private Law: Why the Divide? A Personal View" [1986] P.L. 220, pp.236–7, "A Hotchpotch of Appeals—the Need for a Blender" (1987) 7 C.J.Q. 44, 50. *Cf.* the role of the Advocate-General in the European Court of Justice, J. Usher, *The European Court of Justice* (1983), pp.237–239.

and defence witnesses, including the accused, would therefore be questioned from three sides and the triers would be able to call for other witnesses including, if necessary, the independent magistrate if there were matters in his report requiring further clarification. There would have to be provisions for appeal against any decision arrived at and the appellate tribunal would again have powers to recall witnesses and to call fresh witnesses before them. This is by no means a comprehensive account of how a true dialectic procedure would look like but enough has been said to show that, whilst incorporating many aspects of present adversarial and continental procedures, it is not modelled on any particular system which exists at present.

Of course, mistakes of fact will still be made in any form of criminal procedure. This is partly because the criminal process is not exclusively a search for truth but must ultimately reach a decision on what is available. But it is also because we have no direct access to the truth which can give us the assurance of infallibility. As one writer has put it, we have no lines of communication with the Recording Angel.[68] The mistake of the classic scientific method was to assume that we could arrive at the truth if only we used its methods. The dialectic method makes no such claim to infallibility but recognises that we can only assess the truth of claims by methods which are far from perfect. The attraction of the method in the current climate of twentieth century scepticism is that it offers a rational way of arriving at decisions in factual disputes. For it assumes that although there is no inherently objective way of arriving at the truth and no guarantee that a "correct" decision will be reached, the more the participants in the process are able to question and compelled to justify the various claims that are made, the more the evidence will be maximised and the greater confidence we are entitled to have in the decision reached. If no one individual has any privileged access to the truth, it seems that we must rely on procedures which make participants justify their methods as they seek to discover the truth. The spirit of universal cognitive competence must be replaced by a spirit of universal communicative competence with a strong element of communicative compellability as well. The "truth" may be ultimately inaccessible, but if an active and inquiring tribunal of fact arrives at a decision after all the participants have been made to justify their claims and have been allowed as much fair and equal access to the process as is possible, this is surely as good as we can get.

There remains room for debate about how exactly an "ideal" truth-finding procedure should be constituted. The notion is likely to remain an ideal only in adjudication, as constraints may be justified on grounds other than truth-finding. Even when an attempt is made to promote rational discourse as an end in itself, there is likely to be argument about what precisely participants should be made to do and not do, and about how fair and equal access can be provided. In

[68] N. Rescher, *Scepticism* (1980), p.135.

the end devising truth-finding procedures is a highly political matter, and perhaps the most that can be hoped for is that as wide a range of interests and groups are able to contribute to the process. If it is accepted that there is no objective way of arriving at the truth, then no one individual or group can claim a monopoly of wisdom on how truth-finding procedures should be constituted. This would seem to suggest that a political entity which aspires to unite its citizens in what has been called "civility" will be better able to give expression to rational discourse than one which tries to unite its citizens in common goals formulated by the state.[69] If procedures are formulated and reviewed by as many interests, groups and individuals as possible, then they should be better able to reflect a genuinely dialectic method of truth-finding.

J. D. JACKSON*

[69] M. Oakeshott, "On the Civil Condition" in *On Human Conduct* (1975), pp.108–184, R. Rorty, *Philosophy and the Mirror of Nature* (1980), p.318, Damaska, *op. cit.*, n.2, p.75.

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