INTEGRATION OF SCIENTIFIC PROOF WITH TRADITIONAL LEGAL PROCEDURE IN INDONESIA *

The purpose of this paper is to discuss some of the problems the forensic, scientist encounters in court and the manner in which they may be resolved. It is not enough for the forensic scientist to do a first - rate job in the laboratory or in the field. His findings must also be effectively presented in the courtroom where his demeanor and his attitude on cross examination are put to the test. This paper examines the fundamental relationships between law and forensic science in the context of the social control of individual moral behavior. The perspective is specific to Indonesia; that is, we are interested in exploring the relation of its legal - cultural values with desirable reform proposals in the fields of forensic medicine and of criminal procedure generally. Within this setting, the intent is to suggest a method of approach to the analysis of ethical and legal problems of medical practice, rather than to attempt their resolution.

In connection with the law presently valid in Indonesia, and this includes the subjects of criminal law and procedure, the second clause of the so-called [1] transitional provisions provides that all existing institutions and regulations of the state shall continue to function so long as new ones have not been set up in conformity with this constitution. The general principle of continuity of existing law is therefore of great importance because during the period of transition laws in force at the time of promulgation of the constitution would remain in force until revoked or amended. This provision stipulating the continued validity of law existing at the coming into force of the present constitution should be linked with similar provisions in constitutions preceding the present one. The same principle is expressed in article 142 of the provisional constitution of 1950, and also in article 192 of the federal constitution of 1949.

Apart from provisions such as those mentioned above, the constitution contains with regard to substantive matters only general principles, and leaves their detailed elaboration to special enactments. In this way, the basis of the continued validity in many fields of law of the bulk of the prewar Netherlands - Indies legislation becomes apparent.

* A paper submitted to the 3rd World Congress on Medical Law, held at the University of Ghent, Belgium, on August 19 - 23, 1973.

1. Clause II of the transitional provisions of the 1945 constitution of the Republic of Indonesia, which says:
"All existing institutions and regulations of the State shall continue to function so long as new ones have not been set up in conformity with this constitution."

The desirability of unifying or at least modernizing the laws in Indonesia has been the subject of vigorous public debate in Indonesia for more than one hundred years. Throughout that time there have been advocates of a single national law applicable to the entire population. Others, including the great majority of Indonesian legal scholars, have resisted efforts to unify, and have concentrated instead on the need to reform specific provisions in the laws thought to be outdated or undesirable.

This struggle over unification is specifically relevant to any discussion of criminal law and procedural reform; a relevance that in turn justifies the following brief discussion of the value system underlying unification and modernization efforts.

The preamble of the 1945 constitution of the Republic of Indonesia contains fundamental ideas (also included in line four of the Jakarta Charter) charging the government of the state of Indonesia to protect the whole of the Indonesian people and their entire native land of Indonesia, to advance the general welfare, to develop the intellectual life of the nation, and to contribute to the implementation of order in the world, based upon independence, abiding peace and social justice.

The preamble emphasises the form of a democratic state which is based on the five principles, or the Pancasila. These embody the philosophy of the Indonesian state and its basic concepts concerning the place of the individual in society. With Pancasila human beings are seen in constant bondage to their blood relations; nevertheless, they are respected and protected individually. In short, the aim is to achieve a harmony; hence the use of the word family. This is the reason for the clarification of the 1945 constitution stating that the constitution is based on the system of family relationship. The family system is meant here as a system of harmony which may lead to cordial and intimate relationship.

The philosophy of Pancasila which underlines the preamble as well as the body of the 1945 constitution is a philosophy extracted from the essence of the dynamic and positive Indonesian personality. By dynamic is meant that it can adjust itself to changing conditions and is not bound to out-dated social values; by positive is meant that it aims at consciously building up the unity of the Indonesian nation which culminated in the unitary republic of Indonesia.

Among the five *silas*, the fifth sila is the sila of social justice for the whole of the Indonesian people; it means that everybody in Indonesia shall have an equal position before the law; that there shall be just dealing in regard to political, social, economic, and cultural affairs; and that the exploitation of man by man shall not be tolerated in the effort to achieve a just and prosperous society.

If we now turn to the law in effect until this point in time in Indonesia, we must confess that the law, in the sense of a package of written, codified rules, is derived from a society which is different in type, characteristics and philosophy from the basic philosophy of the Indonesian state reflected in the 1945 constitution and in the Pancasila.

These general and introductory comments may be best understood by means of a brief study of one specific though important issue — that of the rules of evidence governing forensic medicine in Indonesian courts. It should be apparent that only through focussing on such concrete applications can the often overly abstract search for justice in the law enforcement practices of Indonesia or any other state win a foothold in reality, and thus contribute to the actual implementation of modern principles of social justice expressed, for example, in the Pancasila. It is an approach which has much to recommend it, particularly to those who labour daily at the interface of law and medicine and who propose an expansion of the classical orientation of forensic medicine, as handmaiden to the law. This ancient orientation, essential though it may remain, is no longer sufficient to the medical problems of the law and scarcely touches the newer legal problems of medicine. Today the interface between medicine and law looks in two directions, and the physician-lawyer, whose disciplinary boundaries are imperfectly defined, finds himself looking outward across the border, concerned not only with how medicine can best serve law but also with questions of how law can best serve medicine.

At a basic socio-cultural level, of course, there is no conflict between the role of forensic medicine and that of law. In Indonesian terms, failure to eliminate the consequences of an evil act (particularly if, as in the case of murder, a human soul is involved) by the arrest of the perpetrator and the imposition of a proportionate sentence, would make the society restless. And the same disharmony would occur if defective rules of criminal procedure were to prevent the scientific medical proofs necessary to justify a conviction.

In its basic provisions Indonesian law, found in the Revised Inlands Regulations (Het Herziene Inlands Reglement) sets up the necessary, and everywhere common, evidentiary principles. The law pays attention to two interests: first, the interest of the society that he who infringes the law must be brought to justice and must receive a proportionate sentence, for the good order of the society, and secondly, the interest of the accused that he must be treated fairly and impartially, so that no innocent person may be convicted and no guilty one sentenced disproportionately to his fault.

For this reason criminal procedure must be seen primarily as a system for the search for material truth. The decision made by a judge must be accepted as impartial by the society where the crime was committed; that is, it must be acceptable as for the benefit of the society, in accordance with the "collectivistic" philosophy of the Indonesian people. On the other hand, the rights of the accused as an individual within the society must be upheld and respected as human rights. Article 294 of the Revised Inlands Regulation provides the basic guide for the judge: a person may be sentenced only when the judge, using the evidence received in accordance with the codes, finds his guilt to be true and to have been proven, i.e., first, that a criminal act was committed according to the law, and second, that the accused is guilty of committing that act, is therefore responsible, and may be sentenced.

Article 294 of the Revised Inlands Regulation further stipulates two conditions the judge must meet before imposing sentence: first, he must be convinced of guilt, and secondly, the conviction must be based on evidence received under the codes.

When we turn to the provisions concerning expert evidence (articles 68, 69, 70, 83b and 286 of the Revised Inlands Regulation) the tensions between scientific and legal concepts of certainty become evident. Somewhere along the course of the history of law evolved the notion of utilizing the "expert"[2] witness besides the lay witness. The latter had long been depended upon, but the need for the specialist, both in criminal and civil cases, developed as litigation found itself increasingly dealing with technical and sophisticated areas. Expert status gives a witness the privilege of assessing and interpreting data and giving opinions within his expertise in matters which are regarded as beyond the complete understanding of the judge.

The task and responsibilities of the law are complex and increasingly difficult. The administration of justice can never be easy, but it must be carried out daily, both for the sake of the parties involved and for the perpetuation of social stability. The gathering, sorting and weighing of relevant data is the first and easier step. The second step, judgment by a judge or society, is far more difficult.[3]

2. Reglement op de Strafvordering titel 20, 21 voor de raden van justitie op Java en het hooggerechtshof van Indonesie (afgekondigd bij publicatie van 14 September 1847, s. no. 40, goedgekeurd en bekrachtigd bij K.B. van 29 September 1849 no. 93, S. no. 63).

   Article 382: De rapporten van zaakkundigen, van ambtswege benoemd om over bijzonderheden of gesteldheid eener zaak hun oordeel en hunne bevinding te verklaren, kunnen alleen dienen om tot des regters inlichting te verstrekken (Sv. 35v, 83 241v, IR 306).

3. *Visa Reperta*.

   Bij ordonnantie van 22 Mei 1937 in S. 37 no. 350 is, met intrekking van de ordonnantie in S. 92 no. 106 jo. 22 no. 198 bepaald:

   art. 1: De visa reperta van geneeskundigen, opgemaakt hetzij op den beroepseed, afgelegd bij de beëdiging der medische studie in Nederland of in Indonesie, hetzij op een bijzondere eed, als bedoeld in art. 2, hebben in strafzaken bewijskracht, voorzover zij eene verklaring inhouden omtrent hetgeen door een geneeskundige aan het voorwerp van onderzoek is waargenomen.

   art. 2: (1). Geneeskundigen, die noch in Nederland noch in Indonesie een beroepseed hebben opgelegd, als bedoeld in art. 1, kunnen den navolgenden eed (of belofte) afleggen: 'rlk zweer (beloof), dat ik schriftelijke verklaringen, welke bestemd zijn om in rechten te dienen als bewijs van hetgeen door mij als geneeskundige is waargenomen, naar mijn beste weten en vermogen zal opmaken. Zoo waarlijk help mij God Almachtige (dat beloof ok).

   (2). De eed bedoeld in het eerste lid, wordt op verzoek van den deneeskundige afgenomen in de Gouvernementslanden van Java en Madoera door de Assistent bestuur van den woonplaats van den geneeskundige.

   Van de beëdiging wordt opgemaakt een proces verbaal in drievoud, waarvan een exemplaar wordt uitgereikt aan de(n) beëdigde een wordt ingediesd aan het Hoofd van den Dienst der Volksgezondheid, en een wordt opgeborgen in het ten kantore van den bestuursambtenaar, in wiens handen de eed is afgelegd, berustend archief.

Experts bear a heavy burden in court appearances. Frequently they fail to distinguish basic differences between law and science. When an expert steps into the judicial arena, he may not initially realize that he has become involved in a battle between antagonists, each seeking to establish his own version of the facts. Any attempt by the legal system to become scientifically objective is doomed to failure from the very beginning. From the sociological viewpoint one of the chief aims of a legal system is the prompt resolution of personal and community tensions. Thus it serves a purpose inconsistent with methodologies of objective truth and must bend to the necessity of resolving social disputes.

In legal controversies an immediate resolution of conflicts must often be made. Even if the courts were better trained in scientific methodology and the use of scientific techniques, they cannot, for practical reasons, spend the time working out problems comparable to that of the laboratories. The legal process is already too time-consuming. Thus legal certainty is founded on the pragmatic proposition that an expert's testimony must prove his proposition beyond a reasonable doubt in criminal cases and by a fair preponderance of the evidence in civil cases.

It is necessary to make a further distinction between physical evidence and non-physical proof. The expert must understand that the average judge is not a mathematician or scientist. For example, it is imperative that when the expert uses mathematical probability in any part of his testimony he carefully and lucidly explains to the trier of fact that some physical evidence does not fit into such a concept. The expert witness is produced to give his expert opinion, based on facts proved in court. We shall presume that such expert has testified on direct examination and is then subjected to cross-examination, when an effort is made to discredit his testimony. The problem is sometimes confused by the terminology used by the courts. An expert's job is to bring his testimony to or beyond the point of reasonable probability or certainty. Some courts say that an expert must testify to a reasonable degree of scientific certainty, and other courts use the standard of reasonable probability. For example, when an expert testifies to a reasonable probability to the existence of fact B from the assumed existence of fact A, he is using commonly accepted principles pertaining to circumstantial evidence, except that he utilizes his scientific training to reach his conclusion. At the stage that his testimony is given, the court is considering only his right to state his expert opinion or conclusion. It is not concerned with the burden of proof at that time because that as a matter of law is settled by the trier of fact. From a strictly legal standpoint, when the expert testifies to a reasonable scientific probability, he has satisfied his obligation to the court. The expert is not required to satisfy a party's burden of proof, although the expert's testimony may be quite persuasive when the question arises.

If the case goes to trial, the expert may be called as a witness to testify before the court. If requested to do so, he must explain in detail the methods and techniques he has employed in arriving at his conclusions. He may be subjected to cross-examination. This is both fair and necessary since his testimony may seriously affect the liberty

or even the life of the defendant. In order to see how the forensic scientist performs both inside and outside the courtroom, let us consider briefly some important cases in which scientists have figured significantly.

The scientist in the courtroom must take a witness's oath, except for medical doctors whom article 1 of the State Gazette of 1937 number 350 exempts from trial oaths on the basis of the oath taken on entering the medical profession. Why is this distinction between a medical doctor and the other scientists made? At trial, the expert regardless of whether he is a medical doctor, a pharmacist, etc., is called to testify regarding his findings before a court. Thus all scientists by their appearance before the court are obliged to obey requests to explain in detail the methods and techniques employed to reach their conclusions.

Under ordinary conditions, the first meeting between the expert and the prosecuting attorney in the first investigation, and the lawyer in the court, takes place in the office or in the court. The first order of business is to discuss the qualifications of the expert and the manner in which his testimony is to be presented. Only the judge, on the motion of the prosecutor, can decide whether it is important or not to use an expert witness. The prosecutor is handed two lists of suggested questions. One serves to establish the background of the expert, the other acts as a guide for his direct testimony. The less cautious the expert is the greater the chance that his testimony will be construed by the trier of facts as falling in the area of speculation. The more positive an expert becomes the more persuasive his testimony will be. An expert who does not recognize this basic concept will soon find himself in a legal whirlpool. By testifying the expert places his honour, his integrity, his knowledge and his reasoning on the altar of justice.

Why should the expert be asked or permitted to give an ultimate opinion? What is the value in his doing so? It should be clear that at issue is not the presentation of data and opinion, but the step beyond, namely the juxtaposition of such testimony in the context of the existing law. In the case of criminal responsibility for instance, the expert may make the mistake of assuming that scientific criteria are the only ones relevant in such a determination. Since there are moral, philosophical and legal issues also involved, the responsibility should not be his, but rather that of the judge.

The legal process, then, at least the part of it which involves the courtroom situation, can be divided somewhat arbitrarily into three steps. First, the gathering and the presentation of data, in part contributed by the expert witness. Second, data analysis through examination and cross-examination, where different issues are raised, challenged and weighed. Third, evaluation of the testimony against existing law and the reaching of a judicial decision.

We submit that the scientist should be limited to the first step. He should not be involved in the legal evaluation of his testimony. He has a contribution to make regarding facts. This contribution can, and must be made, in order to be of any value, in understandable terms, avoiding foreign scientific terminology confused with legal concepts. The expert's testimony should be regarded as but a part of the evidence

to be considered in arriving at the eventual judicial decision. Such experts should never be asked the ultimate question of guilt, negligence etc. Their expertise does not include knowledge of the law. Their opinions on these issues would be clear invasions of the province of the judge.

The emergence of forensic sciences to a position of great respect in the courtroom is a fine tribute to those who pioneered this effort many years ago. Forensic science, the study and application of all the sciences to law, in the search for truth in civil, criminal, and social behavioral matters, has now a long tradition as a handmaiden to law. The end of this philosophy is justice in conformity with the preamble and body of the 1945 constitution of the Republic of Indonesia.

I suggest that law has incurred hereby an obligation which has at last come due. As a guardian of the public morality exists, the law must devote more of its time and talents to the search for answers to questions which, for Cardozo, were issues equivocal and silent. I do not believe the law lacks competence in these matters. However I do fear that without organized pressure from the discipline of forensic science for a judicial, contemplative and investigative approach to these problems, the law of medical practice will again be plagued by *ad hoc* precedents and emergency legislation hastily contrived in response to public pressure and emotional reactions to particular medical calamities (e.g. article 1 of the State Gazette of 1937 number 350, which is in contradiction to article 83b (2) of the Revised Inlands Regulation, which distinguishes among those who bear the qualification of "expert"). Some examples of such problems may be useful and may illustrate the central problem alluded to earlier: how can a society modernize and still use a criminal or civil procedure, or indeed an evidence code, originally imposed as a foreign transplant upon a completely different local legal-cultural structure, and yet give due respect to the modern embodiment of that local cultural tradition? In a recent case a pharmacist was charged with negligent homicide, having caused the death of a child by confusing a prescription. Expert testimony as to causation differed. The state's medical witness found a casual relation; an expert summoned by the defense denied this. The body had to be exhumed, months after burial, for scientific investigations. The judge based his entire opinion on his rejection of the need for an autopsy, and on the fact that the 1937 law mentioned above exempted doctors from trial oaths. He held that an autopsy would violate cultural norms of the community and rejected the resulting evidence for that reason. The latter exemption he held to violate the still-operative Revised Inlands Regulation, and he therefore rejected the testimony proferred without oath.

A second example, from the civil codes, may be instructive by analogy. Acceptable evidence of the legitimacy of children is defined strictly by birth no earlier than six months after marriage or no later than the termination of the "iddah" period of three months and ten days after the divorce or death of the husband. The natural father of a child born outside of these periods or out of wedlock entirely is

not the lawful father and the child remains classless without a father.[4] Similarly, article 33 of the Civil Code prohibits a woman from remarrying for a period of 300 days after the dissolution of a previous marriage.

If these time periods are prescribed to determine legitimacy it is apparent that scientific techniques for determining pregnancy (including x-ray and blood tests) could be substituted as evidence and would not only clarify the real situation but would relieve women of the necessity to wait almost a full year before remarrying. In these cases knowledge about the meaning of the role of scientific proof plays a big role.

To my knowledge, nothing is being done on a national level among lawyers to assist this effort or to accommodate the needs of the legal profession in this area. Article 6 of the Emergency Law of 1951, number 1, Government Gazette 1951 number 9 established the Revised Inlands Regulations as a guide in criminal cases. We know that the State Gazette of 1937, number 350 was created from article 382 of the Regulation of Criminal Procedure derived from the Dutch colony (State Gazette 1849 number 63). We are not aware of any efforts on the part of the judiciary to assist either profession in this effort. The cooperation of the judiciary is essential to the promulgation of any successful code. Their participation must be secured. The forensic scientist's opinions should be sought for they will be respected and accepted by both professions. We unequivocally recommend immediate efforts to produce and adopt a natural code of ethics between the lawyers and the forensic scientists.

Let me stipulate some points of the lawyer's responsibilities as prosecutors, defense attorneys or judges. As prosecutors, first, the officer must learn the law of his own jurisdiction, because criminal law and its procedure cannot be taught on a national basis. Secondly, prosecutors should be available for consultation during the process of the investigation. Thirdly, prosecutors also have responsibility to assist investigators in the preparation of cases which will later come to them for trial. Fourth, the prosecutor's duty is to prosecute where a good case is presented and to pursue his case heedless of considerations of personal gain.

The responsibility of lawyers as defense attorneys is to be prepared to scrutinize effectively through cross-examination the increasing amount of scientific testimony presented in cases. The application of science to law enforcement has made great strides in recent years. In this surge of progress, there is sometimes a tendency to present psuedo-science and a tendency for persons not genuinely qualified to make judgments. This tendency can be controlled by well prepared defense attorneys.

As with judges, lawyers have at least two special responsibilities toward law enforcement agencies. First is the responsibility to avoid abuse of police officers on the witness stand. When there is absolutely no evidence of police misconduct some limit should be set beyond which

4. Djojodigoeno & Tirtawinata, Het Adat - privaatrecht van Midden Java. p. 159.

defense attorneys should not be allowed to impute such misconduct. This is a responsibility which judges share with prosecutors and defense attorneys. Secondly, law enforcement agents are required to appear before judicial officers for an independent judgment of the facts at several stages of their investigations. Such appearances are required before either arrest or search warrants are issued. This requirement is fundamental to the law of procedure. Police officers are not normally allowed to make either arrests or searches without judicial sanction.

On the other hand, we may observe that the expert witness must stand quite a bit of abuse from the modern sergeants-at-law. First, he must be a position for or against a party and is therefore placed in a posture of bias. Second, he cannot pursue his own methods of scientific investigation but must present his truth according to lawyer-made artificial rules of evidence. He must be capable of demonstrating reasons for the conclusions reached. Third, he cannot express his opinion freely, even though he is sworn to tell the truth, unless he meets the legally acceptable standards for determining truth. The forensic scientist is not an advocate, he is an informant of factual truths. Fourth, his findings, learning and conclusions are often ridiculed by the sergeant-at-law, whose lack of training in scientific fields is common. Finally, he learns early in his practice that legal rules of evidence are not and never will be based on principles of science.

Under these conditions the expert may well resent the role which society has trust upon him. But men must live and resolve conflicts and the ordeal of battle still permeates our judicial system. As distasteful as his job may be the expert, in many cases, must take the stand and may be crucified on the altar of justice.

SUMMARY.

1. The concept of justice as a right of all nations is expressed in the preamble as well as the body of the 1945 constitution of the Republic of Indonesia. Here, in the search for justice, forensic science is considered a handmaiden of law.

2. Religious, cultural and philosophical factors are not a hindrance to the development of an independent country like Indonesia in this fast-moving world. The philosophy of Pancasila which underlines the preamble as well as the body of the 1945 constitution of the Republic of Indonesia is extracted from the essence of the dynamic and positive Indonesian personality.

3. The Indonesian code provisions which allow expert evidence are found in articles 68, 69, 70, 83b and 286 of the Revised Inlands Regulation, which are suited to the conditions in Indonesia, in accordance with two basic premises which follow the "negative according to the law" system of evidence ("negatief wettelijk").

4. The exception for medical doctors who, under article 1 of the State Gazette of 1937, number 350, are free from the witness's oath is in contradiction to article 83b(2) and 286(1) of the Revised Inlands

Regulation, the articles which oblige every expert whomsoever to obey the rules of court. Here, we must distinguish between the oath taken by medical doctors according to article 1 of the State Gazette of 1937, number 350, on entering their profession, and oaths taken in court as expert witness.

5. Lack of knowledge among law enforcement agents about the meaning and role of scientific proof and the limited number of people who qualify as "expert", combine to produce timidity in the presentation and use of expert evidence, both in criminal and civil cases.

HERMIEN HADIATI KOESWADJI *

* Associate Professor of Law, Airlangga University School of Law, Surabaya, Indonesia. This article was prepared at the University of California in Berkeley, where the author held an Asia Foundation grant in 1972 -1973. The author is indebted to Professor Richard M. Buxbaum, School of Law, University of California, for a critical review of the paper, and to Professor Abdoel Gani, LL.M., M.S., Dean of the School of Law, Airlangga University, Surabaya, Indonesia, for his encouragement and suggestions.