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Causation: A Medico-Legal Battlefield

Albert Averbach*

I

Introductory Remarks

Most doctors will concede that anything is possible in medicine, as medicine is not an exact science.

Many laboratories have performed experimental studies on the traumatizing of animals, and such studies are conceded to be inconclusive, as to whether or not trauma can "cause" certain of the medical mystery diseases. As a result, the medical profession at the present time concedes that the exact cause of multiple sclerosis, the muscular dystrophies, hepatitis, arthritis, diabetes, epilepsy, carcinoma, leukemia, tuberculosis and heart disease is unknown.

Notwithstanding the fact that the medical profession concedes that it does not know the exact cause of many of the ills of the human body, we frequently find doctors in trauma cases taking the view that the described accident could not cause, for example, cancer or multiple sclerosis.

This type of testimony many times leads to bitter cross-examination and a courtroom medico-legal battle on causation.

An example of such cross-examination is found in the demonstration of a trial of a multiple sclerosis case at the NACCA Convention at Cleveland which began August 15, 1955. The cross-examination of Dr. M. D. Friedman by Emile Zola Berman is well worth reading; as well as the cross-examination by Leo Karlin of Dr. Julius Wolkin; and especially recommended reading is the cross-examination of Dr. Harry W. Slade by Melvin M. *

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1 Published by EngagedScholarship@CSU, 1957

2 Ibid., pages 640-657.

3 Ibid., pages 664-677.
Belli. Belli shows very graphically the proper approach in cross-examination where a doctor admits that "anything is possible in medicine," yet denies that trauma could aggravate multiple sclerosis. In this cross-examination, Belli dwelt upon the medical interpretation of the words "possible" and "probable." It will be noted that Belli was able to get the doctor to concede that no one could positively state that multiple sclerosis could not be aggravated by trauma. The doctor conceded that medical science is still groping as to whether or not there is a relation of causation or aggravation by trauma to multiple sclerosis.

The summations of Emile Zola Berman and Harry A. Gair touch upon this medical controversy and are well worth examination.

During the medico-legal session at the Convention (August 16, 1955), in discussing the possibility of a single trauma causing or aggravating a cancer, Dr. Simon Koletsky, of Cleveland, Ohio, conceded, in answer to a question put to him by Leo Karlin:

"Dr. Koletsky: I do not think we can disprove the fact that this trauma may have initiated the carcinoma, and I would give the patient every benefit of the doubt. The mere fact that we cannot disprove this fact, or one might put it the other way, that we cannot prove it at this time, would not necessarily mean that it can be absolutely eliminated as a possible etiologic factor."

* * * *

Mr. Karlin: Is that not based upon the belief among you men of the medical profession that you look for the absolute certainty?

Dr. Koletsky: Wherever possible.

Mr. Karlin: I assume that you appreciate from your experience with lawyers, Doctor, that, in the law, absolute proof or certainty of proof is not required. Rather, that what a lawyer must prove in proving such a case is enough facts from which a reasonable inference can be raised?

Dr. Koletsky: Yes. You have put it much better than I did. That is the reason that I state that I will accept the conclusion that the trauma may have been an initiating factor.

* * * *

4 Ibid., pages 698-708.
5 Ibid., page 699.
6 Ibid., page 705.
7 Ibid., page 708.
8 Ibid., pages 709-715; Mr. Gair, pages 715-721.
9 Ibid., pages 208 et seq.
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Mr. Karlin: Let me put it this way, Doctor. In this particular case that we are discussing, as you analyzed the fact, was there not in your own mind a conscious reaction that this was the kind of a case where, notwithstanding the scientific tests, you might be impelled to believe that there was a causal connection between the trauma and the cancer?

Dr. Koletsky: Yes, and I so stated.

Mr. Karlin: And yet even though there is such conscious impelled thinking, the scientific tests sometimes cause a doctor to take an opposite view, isn't that true?

Dr. Koletsky: Yes. I think where one is not satisfied as to the scientific evidence, and this is our business, not the philosophic side, I think our business is in the establishment of the truth and not in the establishment of a theoretical possibility.

I can see the theoretical possibility. I am unhappy about the scientific evidence that would establish this as an item of truth.

Mr. Karlin: But the lawyers can't furnish that scientific evidence, can they?

Dr. Koletsky: I don't think so.

Mr. Karlin: Then is it then the problem of the medical profession?

Dr. Koletsky: Yes.

Mr. Karlin: Doctor, do you know that it is on the basis of that conflict in thinking that at least two courts in the United States, Minnesota and Rhode Island, have reached a conclusion that since in all of these cancer cases doctors can't agree, they are going to follow the sequence-of-events theory, and if the lawyer proves the person was healthy before the trauma, and after the trauma had a cancer, it is a question of fact for the jury?" 10

Dr. Harry Goldblatt of Cleveland, in discussing the same cancer case, said:

"Actually, in any group of medical men, when it comes to the matter of relationship between a single injury and the development of any condition or disease in the human body, there is likely to be a definite division of opinion. Sometimes it's about a fifty-fifty division, for a very good reason. That is that though there may be evidence for the pro and the con, the proof is difficult to adduce in such cases. This particular one is particularly so, for very obvious reasons.

"As a matter of fact, every medical student is taught, and medical doctors grow up with the view, that it is better to adopt a sort of an attitude of stringent criticism or stringent skepticism toward this whole view of injury and the development of cancer, and especially, of course, a single mechanical trauma of which this case is an illustration."

10 75 R. I. App. 191 (1950); 48 N. W. 2nd 735 (Minn., 1951).
Cancer From Single Trauma

"The textbooks, for example, on the subject start out very boldly, as a rule, with an unequivocal statement that there is probably no relationship, or it is difficult to prove in a given case any direct relationship between the single trauma and the development of cancer, and yet as you read down in those paragraphs in the textbooks you find that they begin to weasel a bit and wind up by saying that there may be certain special cases in which such a relationship can and probably does exist, and then they go into the details on the special conditions that would lead any expert in the field to admit that there was probably a relationship between the two." \(^{11}\)

Joseph Schneider of Boston, in interrogating Dr. Harold Feil of Cleveland, \(^{12}\) in connection with the heart case, hit at the root of the medico-legal problem correctly by translating it into percentages, by saying:

"Mr. Schneider: We must establish it was a greater probability that the accident contributed to the infarct than that it was spontaneous. We are not met with the burden of proof that you doctors like to have us die and then open us and then see for yourselves. * * * Isn't that so, all we need is a 51 per cent opinion?
Dr. Feil: Yes. I will agree with that.
Mr. Schneider: Fifty-one per cent?
Dr. Feil: I will agree to that."

In order to adequately develop the premise of the title of this article—that there is a "battlefield" between the medical and legal professions in connection with causation—it will be necessary to quote extensively from several articles and court holdings touching upon the subject. It seems incongruous to the trial lawyer to have doctors take such a positive view in connection with causation, and sometimes with aggravation and precipitation, of diseases and ills with obscure, or unknown etiology, especially in the face of many court decisions supporting the lawyer's view that such diseases or ills are caused, aggravated or precipitated by trauma. The lawyers, of course, are armed with such court decisions, and also with opinions of the medical profession in authoritative medical books or journals. This invariably leads to a battle in the court room and to misunderstanding between the two professions. It must always be borne in mind that the controversies as to causes of medical conditions

\(^{11}\) Trial and Tort Trends (1955), page 201.
\(^{12}\) Ibid., page 231.
and diseases primarily are "doctor-made," and not "lawyer-made." There are different schools of thought among the doctors as to causation, aggravation and precipitation of many of the so-called "medical mystery ills."

Dr. Cannon, in *The Wisdom of the Body*, has compiled an imposing list of the various disorders which he believes may be caused, precipitated or aggravated by *emotional* trauma, with or without coincidental physical injury. Included in this list are bronchial asthma and da Costa's syndrome affecting the respiratory tract, angina pectoris, hypertension and neuro-circulatory asthenia affecting the cardio-vascular system, rheumatoid arthritis affecting the locomotor system, mucous colitis and peptic ulcer affecting the digestive system; retention of urine, enuresis and impotence affecting the genitourinary system; thyro-toxicosis and diabetes mellitus affecting the endocrine system, and neurodermatitis and psoriasis affecting the skin.

It should be emphasized that it is unlikely that any of these disorders can be properly regarded as an expected consequence of an emotional trauma in an average person. In most, if not all of these instances, the part played by emotional disturbance incident or subsequent to trauma is probably no more than a trigger mechanism by which a pre-existing and latent disorder is brought to light. This last consideration, of course, does not militate against legal redress.

It has long been recognized that the emotional disturbances evoked by trauma, or by its complications, may cause or contribute to a wide variety of psychic or psychosomatic disorders.

One of the outstanding authorities on the psychosomatic effects of psychic trauma is Dr. Hans Selye of the Institute of Experimental Medicine and Surgery, University of Montreal, Canada. The research of this pioneer indicates that there may be a common cause for almost all disease, namely, a chemical (endocrine) imbalance in the body caused by stress. He also propounded the concept of the post-traumatic reaction termed "General Adaptation Syndrome." This syndrome, initiated by

14 Neurocirculatory asthenia (weakness).
15 Paroxysmal breast pain.
injury, is divided into three stages—the alarm reaction, the stage of resistance and the stage of exhaustion. Dr. Selye believes that the excessive and continued elaboration of hormones by the anterior pituitary and adrenal cortex, incident to protracted or repeated trauma, may predispose to, or cause, various forms of cardio-vascular, renal or joint disease. These he refers to as the diseases of adaptation. Among them are nephro-sclerosis, poly-arthritis, carditis and arthritis. While these findings are based principally on animal experiments, there is some evidence that they also obtain with respect to the human physiology.

Cortisone and ACTH have been effective on a wide variety of maladies which have always been considered unrelated. Selye's answer as to how this could be so, was that the same types of diseases had been induced experimentally in animals by excess, DCA, or STH (adrenal hormones). A disease being caused by this imbalance was relieved when the chemical balance was restored by the application of ACTH and cortisone. His theory was widely publicized in the January, 1955 issue of Reader's Digest, in an article entitled "Is Stress the Cause of All Diseases?"17

In the court room, the trial lawyer strives to introduce medical testimony as to the cause of a condition or disease. Resort in many instances is made, through a hypothetical question to a non-attending physician, as to whether or not the accident described was a competent cause of a later-described or assumed condition, or "might," "could," "would," or "was" competent to have caused it. A great conflict exists in the various states as to the permissible range of inquiry in such cases, depending upon the particular jurisdiction's interpretation of the requirement that medical opinions must be reasonably certain or reasonably probable.

II

Authorities Collated and Discussed.

Reported cases indicate that medical opinion testimony has been admitted to the effect that practically any disease or bodily

injury known to medical science "could," "would," or "might" have been caused by traumatism.\textsuperscript{18}

Some of the states require the phrasing of a question, with reference to causation, to be within the rule of "reasonable probability," and some states require an answer to be within "reasonable certainty."

Others, however, permit a question to be put to an expert, as to whether or not a stated condition "might" or "might not" have produced a given result, and whether a given result "might" or "might not" be attributable to a suggested cause. Some states take the view that, for a witness to state "I believe the injuries described were the result of the accident" is objectionable, in that it elicits from the witness a conclusion upon the precise matter presented for the jury to determine, and thus "invades the province of the jury."\textsuperscript{19}

Dean Wigmore has suggested that the labored efforts of courts to differentiate between questions seeking opinions as to what could, or what might, or what did, produce a given result are pointless; that the purpose of expert opinion is to aid the jury, and that its function cannot be usurped, because in all events it is free to accept or reject the offered opinion.\textsuperscript{20}

Some of the states require the doctor to definitely state that the injury and consequent disability are results of the accident.

Other states, however, have adopted a far more lenient rule, which permits a doctor to answer a hypothetical question to the effect that trauma "could" or "might" have had a causal connection with a described or resulting injury or disease.

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It is my firm opinion that lawyers must take the time to discuss with the medical experts, in person, this vexing problem of the legal or lawyers’ definitions of “causation,” “aggravation,” and “precipitation” as distinguished from the medical definitions. Too many doctors think in terms of differential diagnosis when they are asked a hypothetical question to whether or not a given state of facts was, in the doctor’s opinion, within the degree of reasonable medical certainty, a competent producing cause of the medical ills found on the examination. When this problem has been clarified by personal discussions with the doctor, then the resulting medical testimony is far better received in the courtroom.

It is distressing to note that a great number of the doctors testifying in trauma cases are totally unprepared for the thinking of the legal profession on the subjects of “causation,” “aggravation” and “precipitation.” We find that the doctors, because of their training, are thinking in terms of the exact, precise, and one and only cause of a particular condition, while the lawyers, because of their training, are thinking not of an exact knowledge, but of the reaching of an inference of reasonable medical certainty from a sequence of facts from which that particular inference can be derived. This is particularly apparent in cases involving the so-called “medical mysteries,” or obscure diseases such as multiple sclerosis, arthritis, epilepsy, the muscular dystrophies, diabetes, carcinoma, leukemia, hepatitis, tuberculosis and heart disease. The doctors seem to feel that until they know what definitely causes these diseases, they are not prepared to say that trauma might or could have caused them or aggravated them.

In those states in which a causal relation must be proved, between the accident and the disease, by a hypothetical question, it is simpler to establish aggravation or precipitation between the trauma and the disease than to establish causation, if the state permits an answer by a doctor that such accident could have a causal connection, in the opinion of the doctor, within reasonable medical certainty. But in those states that call for a direct “was” or “is” answer, the plaintiff’s attorneys find that it is much more difficult to establish causation by testimony of the medical witness.

A very fine discussion of this vexing problem is contained in a magnificent article by Ben Small, Professor at Indiana University Law School. It is entitled “Gaffing at a Thing Called
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Cause: Medico-Legal Conflicts in the Concept of Causation." 21 Professor Small discusses the meaning of the doctor's phrase "cause," the lawyer's phrase "cause," and the workmen's compensation phrase "cause." He says: 22

"But if the doctor is horrified at the lawyer's cause in those cases where even he must admit precipitation, what must his feelings be when the lawyer brashly defines cause in a medical area where even the medical profession fears to tread and is in a state of collective disagreement over precipitating circumstances? Take cancer causation as an example; it is an especially good one because the lawyers seem to know so much about it and the doctors so little."

In discussing the lawyer's view, Professor Small says:

"The lawyer simply is not after the same cause as the doctor, and therefore cannot be expected to reach the same causal ends." 23

Further, in discussing the reasons for the divergence between the view of the doctor and that of the lawyer, Professor Small says: 24

"The differences between doctor and lawyer on cause for cancer should, by this time, be obvious. The doctor, while he does not know the one single, certain cause for cancer, does seem to know what the one single, certain cause for cancer is not—it is not trauma, as the word is commonly used. In the face of this more or less chronic assertion, the lawyer has gone about proclaiming busily that he knows the cause and it is trauma. He cites judicial decisions in tort and workmen's compensation cases by the dozen to prove his point—that trauma has caused all sorts of cancer harms, aggravations, accelerations, activations, metastases, and yes, even the formation of brand-new cancer out of previously normal tissue."

Professor Small concludes with the following observation: 25

"However, while some lawyer-cause cases may be deserving of attack, the doctor would do well to look deeper into the remainder before criticizing. He would find that most of the cases, both in tort and in workmen's compensation, have been decided on an entirely honest application of lawyer formulae which relate to the placing of legal responsibility. To be sure, the lawyer's formulae contribute little toward finding

22 Ibid., page 632.
23 Ibid., page 639.
24 Ibid., page 647.
25 Ibid., page 658.
the source or etiology of a disease, but the doctor must realize that they are not designed for that. The formulae, both proximate cause in tort and occasionment in workmen's compensation, are liability standards—they are used to allocate legal responsibility equitably on the basis of a sufficiency, not a totality, of causal risk. The doctor must realize that a determination of legal responsibility is not the same as finding a pathological cause or source for disease. The doctor must make room for both approaches and credit the same respectability to the standards of the lawyer in the pursuit of his function as he assigns to the standards which he uses in his own. Then the doctor will understand how his secondary causal factors can become lawyer's liability pegs. When he understands the differences between pathological sources and cost pegs, he may be more inclined to drop his post hoc charge, realizing that cause is a word of many uses, many meanings.

In *Pittmann v. Pillsbury Flour Mills, Inc.*, a cancer case, the court said:

"Although the absence of exact medical knowledge on the cause of cancer makes it impossible to say with absolute certainty whether a particular injury caused or aggravated a particular cancer, we are hardly compelled to say that a finding of cause and effect in a given case is without support in the evidence because such tenuous uncertainty exists. A great many findings made by juries, courts, and other triers of fact rest upon something less than absolute certainty."

Dr. Theodore J. Curphey, Chief Medical Examiner of Nassau County, Hempstead, New York, in an excellent article entitled "Trauma and Tumours," makes many references to Professor Small's article, and says:

"My remarks are directed more towards the medico-legal rather than the strictly medical aspects of the problem, and will be in the nature of an attempt to determine the reasons for the confusion and conflict that exists between the physician and the lawyer in the matter of causation, as it concerns the subject under discussion. It is hoped thereby to provide a better interpretative background, against which both the lawyer and the physician can individually project his ideas, and while not necessarily coming to any common agreement, at this time, can at least understand each other's thinking on the matter. If this initial step meets with any success, it might even be possible later to approach a common

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ground of agreement on certain, if not all, of the conflicting viewpoints in this field in which medicine and the law have common responsibilities to society at large.

* * * *

"this matter of changing concepts of disease on the basis of current medical advances is one that bears strongly on the perennial difficulties encountered between medicine and the law. The medical expert is bound to stay within the limits of knowledge in his field when he appears in court to testify, and it requires little thought for him to recognize that there are many gaps in the available current knowledge about any medical subject. Therein lies his vulnerability, which the clever lawyer knows only too well, and accordingly pursues fully for the benefit of his client.

"Assuming the role of the devil’s advocate for a moment, I should like to point out how mistaken the doctor frequently is in his estimate of the legal process. Unfortunately, we find at times amongst us in medicine, the type of physician nurtured in the rarefied atmosphere of the medical school or hospital or research institution, and conditioned beforehand in the narrower limits of the academic environment—who resents what he considers to be a rebuff to his carefully considered opinions at the hands of the equally carefully prepared lawyer—and who, as a result, withdraws from one of his medico-social responsibilities by shunning the law courts for the rest of his professional days. The basic foundation for this action on the physician’s part lies in the fundamental differences between the two professions in their approach to a problem involving both legal and medical issues. In medicine, the physician thinks of the cause of a disease in terms of its inciting agent; to him, the tubercle bacillus is the cause of tuberculosis, while in the instance of cancer, there is as yet no known cause as he understands it. Similarly, the physician envisages the course of a certain disease as following a certain generally accepted clinical pattern, and finds it hard to admit the existence of any extraneous factor in the environment as being operative in affecting such a course, especially when there is no clinical evidence of change in the predictable pattern attributable to the action of this extraneous factor. This is all very well as far as it goes in medicine; the difficulty is that in the case of the law, it does not go far enough.

"In this connection, one of the bones of contention between the doctor and the lawyer lies in the field of semantics, and concerns their respective concepts of certain word images. For example, the word ‘sanity’ has different connotations, depending on whether it is used in the medical or legal sense. Similarly, the word ‘cause’ means one thing to the physician dealing with disease, and another to the lawyer concerned
with the legal concept of causation in workmen's compensation and in tort. It is an interesting fact that as time has progressed, the lawyers and the doctors have more or less accepted each other's conception of the word 'sanity' and have agreed to go their separate ways in recognizing the difference in definition between medical and legal sanity. Not so, however, in the case of 'cause' where at present there still exists a wide difference of opinion between 'cause' in the medical and 'cause' in the legal sense.

"There is no need to elaborate on the medical concept of 'cause' to a group such as this, but it might be well to attempt an understanding of the term when used in a legal sense, for it is this basic difference that has led in the past to such confusion and acrimony in court, especially in the much litigated questions as to whether trauma can 'cause' a tumour.

"Thus, Webster's Dictionary defines 'cause' as used in law as 'A suit for action in court; any legal process by which a party endeavours to obtain his claim, or what he regards as his right; case; ground of action.' With this definition in mind, it immediately becomes apparent that the lawyer places an entirely different connotation on cause than does the physician.

* * * *

"From the above, it is evident that the concept of cause in the legal sense has no common meeting ground with that of cause in the medical sense and that the sooner this fact is recognized, the better will be the inter-relationships between the lawyer and the doctor in court. For one thing, it should put an end to many of the pontifical and sometimes not too pertinent remarks of some of our medical brethren, who, lacking the appreciation of this difference, are wont to be caustic in their criticism of the intelligence and even the integrity of those physicians who testify in court, to say nothing of the low repute in which they hold the lawyer who would claim that trauma 'caused' a cancer in his client.

* * * *

"It is true that these existing conditions call for definite improvement, but one must be mindful of the fact that in day-to-day living, these conditions are always with us, and as medical people, we have a social obligation to lend our skill and assistance to society in attempting to assist the law in coming to as just a decision as to causal relationship, as the admittedly imperfect evidence in a given case permits. No single case for litigation in which medical facts are involved can ever assume the nature of a controlled scientific investigation, any more than a single case of disease treated by the physician can be assured of an exact diagnosis and specific

therapy. Why then should we demand more rigid criteria for adjudicating a medico-legal problem than we do in our routine daily activities in diagnosing and treating disease? It simply resolves itself then to a situation where the physician involved in a legal action of causal relationship between trauma and tumour must do the best with the facts he has at hand and render an opinion based on the evidence coupled with his current medical knowledge. It is an inherent error of reasoning to assume that such an opinion has to be an absolute one—it would cease being an opinion if it were! And here again lies the basis for confusion as to what 'opinion' really means. In the medical sense, it is 'a formal expression by an expert,' a definition to which the physician naturally cleaves and which to him might seem to be in the nature of an oracular revelation at times. To the lawyer, however, the medical expert is nothing more than an opinion witness, and he chooses the definition of 'opinion' instead as 'A belief stronger than an impression, less strong than positive knowledge.' Mindful of this difference then, if the physician would only learn to regard himself and his opinion in the same light as the lawyer's estimate of him and his opinion, his amour propre in court would be seldom violated and his contribution to the case would be considerably enhanced thereby.

"It would seem to me then that once these semantic differences in the use of the words 'opinion' and 'cause' are recognized and accepted by the two groups, and after some sort of truce is declared, leading to a peaceful coexistence in respect to causal relationship, that the doctor would do well to revise and re-evaluate his concepts in the matter of causation and aggravation of malignant tumours by trauma. Admitting that much of the confusion in the past in the matter of causation has been due to each profession misinterpreting the intent and purpose of the other in the usage of the word, would it not be better for the doctor in testifying on the matter of causal relationship between trauma and tumour, to stay within the rigidly defined limits of the experimental and clinical evidence in his field and to cease from speculating on the possible and probable relationships involved in a court case?

"Thus, current experimental evidence relating single trauma to causation of malignant growth offers no support whatever for the contention.

* * * *

"Unfortunately, this is not always possible in every case, so that at times the physician is forced to admit the possibility even though he is prepared to deny the probability and that on the basis of present knowledge only. Medical opinions reflect current medical knowledge, which is in turn subject to modification and change in the light of advances in the
field. Such opinions in a court of law, however, carry no
greater weight from the medical witness than any other
piece of evidence in the case—frequently one is tempted to
think it currently carries less—so that the doctor should
refrain from speculating as to probable and possible rela-
tionships and stay within the confines of his knowledge on
those cases where the evidence of causal relationship in the
medical sense is not clear cut.”

“As times goes on, the very exceptional case is seen where
a single injury does cause or aggravate a malignant tumour,
so that at times, the hypothetical possibility does exist in
fact, but when this occurs, the chain of evidence is readily
appreciated and leaves little need for speculation in respect
to cause and effect. Taking this as the basis for positive
testimony, the physician in court should not hesitate to ex-
press the opinion of lack of relationship between trauma
and tumour, if the case does not fulfill the necessary pos-
tulates. His attitude in this regard should be no different to
the scientist who refuses to accept a bacterial agent as the
cause of a disease unless the evidence is such as to fulfill
Koch’s postulates. If the doctor sticks to the medical con-
cept of causation when he testifies in court, fully recognizing
that the lawyer’s concept is different from his, he might not
be as welcome a witness at times, but he will certainly be a
more factual medical expert in both the medical and the legal
sense.”

Corpus Juris Secundum states, in an opinion as to actual
cause:

“On the ground that the testimony would invade the province
of the jury, it has been held in some cases that the witness
may not testify what specific occurrences actually caused
a particular condition; whether a given cause produced a
given bodily result in a given case; or whether detailed
circumstances actually produced the injury or death.

“On the other hand, it has been stated that the distinction
made in cases which permit a doctor to state what might have
caused plaintiff’s injuries but do not permit him to state
that, in his opinion, a particular accident caused his injury
is of doubtful significance and too fine and fanciful as a
practical matter; and in a large number of cases the expert
has been permitted to state his inference as to the cause of
certain injuries, of an observed physical condition, or, ac-
cording to the decisions on the subject, of the death of a
person, particularly where an injury or disease is of such
character as to require a person skilled in the science or
practice of medicine to determine its cause.” 29

29 32 C. J. S., Evidence, Sec. 534, and cases there cited.
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American Jurisprudence, takes the view that: 30

"Nature and Form of Opinion That May be Expressed. With regard to the nature of the opinion that may be rendered by an expert testifying to the causation of injury or death, there is some diversity of opinion. The general rule is that a medical expert may express an indirect opinion as to the cause of injury or death. Such witnesses have been permitted to state what in their opinions was the 'possible,' 'probable' or 'likely,' etc., cause of, or what 'might' or 'could have' caused, a particular physical condition. An opinion so expressed is not too uncertain. It seems to be permissible for an expert witness to express his opinion that the injury in question was due to, or caused by, 'some such' external violence as that which the plaintiff suffered. Some courts have adopted the rule in medical cases that although an expert may express an opinion as to what 'could' or 'might' have caused a particular physical condition or sickness, he cannot be permitted to express an opinion that an alleged cause 'did' cause the particular condition or sickness, where the actual cause is a disputed issue of fact, the ground being that in such case that question is the ultimate fact for the jury, and an expression of opinion thereof by an expert would be an invasion of the jury's domain. Other courts hold that the question must be so framed as to make the answer the opinion of the witness instead of his conclusion."

The criticism of the distinction between "might" and "did" has been considered in some cases to be of doubtful significance. 31

H. Kornblitt, LL.B., M. D., and Editor of Current Medicine for Attorneys, 32 in the February 1957 issue, under the heading of "An Old Misunderstanding Between Doctors and Lawyers" says: 33

"It is therefore necessary for doctors and lawyers to realize the partisan nature of each of their professions in determining causation. Causation can never be impartial when doctors and lawyers argue."

In an article entitled "A Primer for Medical Evidence," written by Theodore I. Koskoff, Esq., in the December, 1955 issue of Medical Trial Technique Quarterly, it is said: 34

30 20 Am. Jur., Evidence, Sec. 869, pages 733-734.
31 136 A. L. R., Anno., p. 1002, and cases there cited; see also, Anno., 27 A. L. R. 2d 1263; 136 A. L. R., Anno., Admissibility of opinion evidence as to cause of death, disease, or injury, pages 965-1007.
32 Current Medicine for Attorneys (Brookline, Mass.).
33 Ibid., Vol. 4, No. 15, page 3.
34 Medical Trial Technique, Dec., 1955, pages 89 et seq.
"If one searched for a single medico-legal problem that gave the most difficulty to doctors and lawyers alike, the doctrine of reasonable probability is that problem. The requirement of legal proof that a particular injury was caused, aggravated, precipitated or 'lit up' by a particular trauma is met when it appears that it is reasonably probable that it is so. It is not necessary that it positively, scientifically in every case is so. It is only necessary that it be reasonably probable in the particular case. One treatment of this extensively debated subject expressed it this way:

"The methods used in medicine and in law to arrive at the truth are very different. In law it is only necessary that the doctor give an opinion on the probability, not the certainty (of a medical fact). When the subject of reasonable probability is approached in court, the doctor begins to hedge. He will not state in the courtroom things about which he may have little doubt privately. He is too inclined to think of himself as a pure scientist and to think of legal proof in the same terms as he does of scientific proof. Unless a statement can be proven conclusively, he rarely admits in court that in his opinion it is so."

* * * *

"Whereas all of these factors are medical in nature doctors frequently confuse their importance, insofar as reasonable probability of causation is concerned. For example, as bad as the physical or psychic condition of a person is before sustaining an injury, the fact that the trauma superimposed on this condition causes an injury or disease which in an otherwise normal person would not be caused, doesn't make the trauma any less a causative factor of the injury or disease. For the oft-repeated statement that a person is not entitled to a perfect specimen upon which to inflict injury is legally true."

Leo Karlin of Chicago eloquently discussed this subject of causation at the Boston Convention of NACCA, after Dr. Grantley W. Taylor of Boston, had said:

"It is very hard to say whether an injury has or hasn't anything to do with cancer until we can tell you what causes cancer, and we are very far from that happy state."

Dr. Lester Adelson, in an article entitled "Injury and Cancer," in Physician in the Courtroom, said:

36 See Brahdy & Kahn, Trauma and Disease, 18 (Lea & Febiger, Phila., 1941). See also, Reed & Emerson, Relationship Between Injury and Disease (Bobs-Merrill, 1938).
37 Trial and Tort Trends (1954), pages 440 et seq.
"The consensus of opinion of modern investigators is that a single trauma has never been known to cause or produce a malignant tumor in either human beings or in animals. * * * A single trauma has never been known to produce a cancer in an experimental animal. The consistently negative results indicate that simple trauma, in and of itself, does not possess the essential elements of a cancerigenic agent. Study and analysis have widened the breach between real causation of malignant tumors and the theory that they may be caused by a single trauma. The new facts do not warrant exclusion of trauma as a possible factor in many tumors. * * * There is no organ in the human body in which the development of a cancer has not at some time or another been ascribed to injury. * * * Law reports enumerate many cases where the sequence of trauma-cancer is considered a consequence with the trauma causing the cancer. Every variety of trauma has been incriminated in this confusion of sequence and consequence.

* * * *

"From this brief survey it is evident that an overwhelming mass of documented scientific evidence opposes the theory of a traumatic origin of malignant tumors. Practically all leading modern medical authors and students of the problem have discarded any theory which postulates the traumatic origin of a malignant tumor. The etiologic importance of a single trauma in the genesis of a malignant neoplasm is no longer a matter of interest to the scientist. The question is not revived by academic or scientific curiosity, but rather by commercial interest because of the increasing accessibility of compensation for injuries.

"A major reason for the continuing controversy is the phrase 'in my opinion.' Most physicians avoid using the word 'impossible' in discussing a disease whose etiology is not completely known. Many authors who in general absolutely deny the role of trauma in the genesis of tumors do not take as rigid a stand in an individual case. (Italics ours.)

"The dispute at this time is more philosophic than scientific. The statement, 'A single trauma has never been proved to be the cause of animal tumor,' can certainly not be contradicted. Such a statement cannot be made flatly in human beings since the possibility of a pre-existing tumor can never be safely excluded. On the other hand, 'has never been proved' should not be interpreted as 'can never be the cause.' The philosophic solution from this line of reasoning is that although the traumatic genesis of tumors has never been scientifically proved, equally unproved is the assertion that trauma cannot be an etiologic factor in the origin of malignant growths. However, the weight of direct and indirect evidence is highly in favor of the former concept. (Italics ours.)"
"Despite insufficient knowledge, the law requires testimony as to a causal relationship between a tumor and a preceding trauma. In rendering such an opinion one cannot in many instances give cold, scientific fact, only probabilities. The probability of casualty should be embraced or rejected on the basis of the weight of all the scientific facts that can be accumulated and studied. One cannot argue without facts.

"Every question of trauma and tumor is complicated by the following factors:
1. The ready suggestibility of most human beings.
2. The difficulties of life from which trauma frequently offers an escape.
3. Poor management of traumatic cases on the part of doctors and lawyers.
4. The practically universal encouragement of litigation.
5. Modern industrial organization and compensation provisions.

"The legal difficulties are increased by the general insistence on a positive opinion which a doctor cannot always give and by the conflicting testimony of experts who take sides in doubtful cases."

The "reasonable medical certainty" rule has been the subject of a great deal of legal writing, both in court opinions and in law journals. 39

The genesis of the so-called "reasonable certainty rule" in New York State seems to flow from Strohm v. New York, Lake Erie & Western R. Co. 40 However, in Cross v. City of Syracuse, 41 the Court of Appeals explained its prior decision by the following comment: 42

"In the Turner case (Turner v. City of Newburgh, 109 N. Y. 301, 309, 16 N. E. 344, 4 Am. St. Rep. 453) Judge Gray said that the rule established in the case of Strohm v. N. Y., L. E. & W. R. R. Co., supra, 'simply precludes the giving of evidence of future consequences which are contingent, speculative, and merely possible, as the basis of ascertaining damages,' and that it in no wise, conflicted with the rule allowing evidence of physicians as to a plaintiff's present condition of bodily suffering or injuries of their permanence and as to their cause." (Italics ours.)

39 See Charles T. Hvass, Esq. (Minnesota cases), Appendix to Trial and Tort Trends (1955), pages 36 et seq. See also, Ibid., text, pages 729, 730.
40 96 N. Y. 305 (1884).
41 200 N. Y. 393 (1911).
42 See also Belli's "Modern Trials" Sec. 60 (1), pages 382-389; Secs. 84, 85, page 375 (1954).
The holding of the New York Court of Appeals in the Strohm case, supra, has frequently been misunderstood.

One New York writer\textsuperscript{43} states:

"The Court of Appeals has said that the reasonable certainty rule laid down in that case (Strohm, supra) applies only to the development of diseased conditions apprehended in the future but not present at the time of the inquiry. There is no intimation in the Strohm case that opinion evidence is not properly receivable as to the probable effects or the duration of an existing condition."

The New York Court of Appeals in Griswold v. New York Central and Hudson River Railroad Co.,\textsuperscript{44} said:

"The appellant relies upon Strohm v. New York, Lake Erie & Western R. Co., 96 N. Y. 305, and Tozer v. New York Central & H. R. R. Co., 105 N. Y. 617. We said of these cases in Turner v. City of Newburgh, 109 N. Y. 309, that they 'simply preclude the giving of evidence of future consequences which are contingent, speculative and merely possible as the basis of ascertaining damages,' and we added . . . 'that they in nowise conflict with the rule allowing evidence of physicians as to a plaintiff's present condition of bodily suffering or injuries, of their permanence and as to their cause.' The questions objected to in this case related to the permanence of the injuries, and sought a medical opinion as to their continuance in the future or a recovery from their effects. The inquiry was proper and competent. There is an obvious difference between an opinion as to the permanence of a disease or injury already existing, capable of being examined and studied, and one as to the merely possible outbreak of new diseases or sufferings having their cause in the original injury. In the former case that disease or injury and its symptoms are present and existing, their indications are more or less plain and obvious, and from their severity or slightness a recovery may reasonably be expected or the contrary; while an opinion that some new and different complication will arise is merely a double speculation—one that it may possibly occur, and the other that if it does, it will be a product of the original injury instead of some other new and, perhaps, unknown cause.

"The questions objected to were not inadmissible because they sought the probabilities of a recovery. Certainty was impossible. Medicine is very far from being an exact science. At the best, its diagnosis is little more than a guess enlightened by experience. The chances of recovery in a given case are more or less affected by unknown causes and un-

\textsuperscript{43} 7 Warren, Negligence (in New York), 6 (curr. supp. ed).
\textsuperscript{44} 115 N. Y. 61 (1889).
expected contingencies; and the wisest physician can do no more than form an opinion based upon a reasonable probability. It is argued that the witness must have an opinion as to the permanence of the injury, and then may express that; but necessarily the opinion must rest upon a balance of probabilities, including the medical judgment one way or the other, and the opinion given is none the worse because it expresses, and does not conceal, that it rests upon a reasonable probability strong enough to justify the formation of an opinion.”

Dr. Irving J. Sands of Brooklyn, New York, in an article appearing in the New York State Journal of Medicine entitled “Doctors, Lawyers and Injured Brains” said: 45

“There should be mutual respect of physicians and lawyers for the responsibilities and attitudes of each other. This would prove a positive contributing factor to judicial verdicts.

* * *

Appreciation and respect of each others’ attitudes and responsibilities would contribute to a better relationship between doctors and lawyers.”

III

Conclusion and Suggestions

We have pointed out herein, by reference to some of the reported literature, that there is a serious misunderstanding between the medical and the legal professions, with reference to the terminology used in accident cases in connection with the subject of “causation,” “aggravation” and “precipitation.” Experience indicates that this barrier between the two professions is surmountable; that this controversy and misunderstanding is curable; that actually the “battlefield” is one of semantics. It requires some work, however, on the part of both the lawyers and the doctors.

It is my considered opinion that the pathway for solution lies in more frequent reference to this subject at Medico-Legal Symposia, in articles appearing in the medical and legal journals, and in more frequent joint medicolegal meetings, where this subject can be thoroughly explained and discussed. For more detailed discussion of such suggested methods, see the author’s article “Aids for the Improvement of the Doctor-Lawyer Re-

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I am in complete accord with the views expressed by Dr. Samuel R. Gerber, Coroner of Cuyahoga County (Cleveland), Ohio, in an excellent article entitled "Expert Medical Testimony and the Medical Expert," contained in the book entitled Physician In the Courtroom, in which he says: 46

"Webster's dictionary states '... Experts may be employed in legal proceedings as witnesses on matters to which ordinary observers could not without their aid form just conclusions.' The expert witness does not always fulfill these objectives. Then, wherein does the fault lie? Most of it can be attributed to a lack of understanding on the part of the expert witness concerning the motivating principles of legal procedures and a lack of understanding on the part of the lawyer concerning the duties, capacities and limitations of the field of knowledge of the expert witness. Although this is generally true in respect to all expert witnesses in the field of sciences, it is perhaps more pronounced in regard to expert medical testimony. This is regrettable since justice is dependent to some extent on medical evidence in about one-half of the cases brought to appellate courts in the United States. Certain cities have found that frank discussions leading to mutual understanding of the objectives and limitations of the court and of the problems, philosophies and scope of knowledge of the expert witnesses have aided effectively the administration of justice and fostered reciprocal respect between the medical and legal professions." (Italics ours.)

This problem can be solved at the grass roots level by meetings, symposia, or forums of Medical Societies and Bar Associations, if speakers familiar with the subject are recruited to discuss the views of both professions.

I am also in complete accord with Dr. Gerber's views, with reference to hypothetical questions, when he says very properly: 47

"Physicians who testify as expert medical witnesses need to be indoctrinated in the rules governing hypothetical questions. If they do not understand these rules, they may err in basing an opinion on facts not incorporated in the hypothetical question." (Italics ours.)

46 Pages 67 et seq. (Press of West. Res. Univ.).
47 Ibid., page 74.
In this connection, it is important to let our medical brethren know that the rules governing accident cases hold the defendant responsible for all damages sustained by an individual, regardless of the state of his prior health. Paraphrased in another way, it has been stated that the wrongdoer takes the injured person as he finds him; or as otherwise expressed, the wrongdoer is not entitled to a perfectly healthy individual upon whom to inflict injury.

Dr. Allen R. Moritz, in an article entitled "Trauma and Heart Disease," taken from Physician in the Court Room, very properly has said (page 83):

"Differences of opinion in respect to the part played by trauma or stress in the causation of heart disease or in the causation of the failure of the diseased heart are responsible for an enormous volume of litigation. It is clear from reviewing the evidence presented before workman's compensation boards and trial courts in such cases that many attorneys know too little about the causal relationships that may or may not exist and that many doctors are insufficiently critical in distinguishing between medical possibility and medical probability." (Italics ours.)  

A recent Ohio case that is quite helpful with respect to the form of a hypothetical question as to causal relationship, is Brumage v. Industrial Commission of Ohio.  

Suggestions

1. Be sure to analyze the cases of your own jurisdiction on the "reasonable certainty rule," in order to determine whether or not your courts require reasonable medical certainty as to causation.

2. Never, but never, attempt to prepare your attending physician or expert in an important personal injury case by a telephone conversation. Visit your doctor at his office after his office hours, and put it on a consultation fee basis. Discuss with your doctor-witness the working diagnosis, final diagnosis, and prognosis to which he will testify. Discuss the permanency features with him, and the disability features. Prepare him for the type of questions that you intend to propound in the courtroom. Explain the legal significance of the language you will

48 See Annotation on “could” or “might” at 135 A. L. R. 516-546, entitled “Sufficiency of expert evidence to establish causal relation between accident and physical condition or death,” and cases there cited.

49 129 N. E. 2d 844 (Ohio, 1955). Also see discussion in 1 Negl. and Comp. Serv. (NCS) (9) 71 (Oleck, Editor-in-Chief, 1956).
adopt in the courtroom. Discuss the expected cross examination features, and prepare him for them. If you are relying on the history, be sure to tell the doctor that you will ask him whether or not he obtained a history for the purpose of treatment.

3. Be sure to acquaint the doctor with the client's prior working habits and details of employment, so that he can be prepared to give his opinion as to whether or not the injury had a disabling effect from doing that type of work for a "sustained work-day."

4. Discuss the question of fee for his appearance in court, so that if the doctor is asked on cross examination whether he expects to be paid for his appearance in court, he will be able to promptly answer, instead of being forced to equivocate by a "smart" answer. Many doctors in their appearances before juries are caught flatfooted on this subject, without a ready answer, and their prestige before a jury suffers accordingly.

5. If you are involved in a case in which there is medical controversy, discuss this feature fully with your medical witness. Doctor-made controversies exist today on causation or aggravation of low back injury, disc injury, whiplash injury, brain concussion, traumatic neurosis, and etcetera. It is important to discuss his views on such controversial matters, with particular relation to the instant case. You will find the doctor more at ease in his own office when he discusses the medicolegal features of the case, than if you call him to your office for consultation. You will also find the doctor far more respectful of your preparation of the reception of his testimony, if you make it a practice to consult with him on a fee basis in advance of trial.

6. If you are intending to use a hypothetical question with your doctor, as to causation, precipitation, aggravation or permanency of injury, or whether the same has any disabling effect, I warn you that the hypothetical question should be adequately discussed in advance with your doctor, so that he knows what you are driving at, and is not surprised by hearing it for the first time during the course of the trial.

7. Refer your doctor-witness to the literature on "causation," and the "reasonable certainty rule" referred to herein. I especially recommend your supplying him with a copy of Dr. Theodore J. Curphey's remarks.50

50 See footnote 27.
8. Encourage your local Bar Association to hold joint Medico-Legal meetings or dinners, with the local Medical Society, at which speakers may discuss this serious problem.

9. Encourage Medico-Legal Forums and Symposia, where doctors and lawyers can illustrate, by example, proper court room techniques in accident cases, and especially the use of hypothetical questions.

10. I recommend your reading Harry Gair's article on Medical Legal Trial Techniques, appearing in the Law Science Symposium issue of the Texas Law Review, and also his monograph on the Trial of a Negligence Case published by the Practising Law Institute.

I also commend to you the late Theodore T. Sindell's masterful article entitled "Preparation of the Medical Aspects of a Personal Injury Case." 52

Also recommended is the June 1955 issue of Medical Trial Technique Quarterly, discussing a traumatic epilepsy case that the author tried. The record on appeal in this case is faithfully followed in order to illustrate direct examination of several medical specialists. 54

Also recommended is Charles Kramer's monograph Medical Aspects of Negligence Cases. 55

11. I firmly believe that the doctor-lawyer relation would be greatly improved if, in every county of the nation, there were periodic joint dinner meetings of Bar Associations and Medical Societies, attended by trial lawyers and by doctors having courtroom experience. Such medico-legal symposia, or meetings, have won the unqualified approval of the American Medical Association, as evidenced by an Editorial in their September 24, 1955 Journal. 56 This article praises such meetings, and specifically mentions the Cortland County, New York meeting at which the author had the pleasure of speaking. It discusses this meeting in great detail, and makes the following comment in its concluding paragraph:

51 June, 1953 ed.
52 Law & Medicine Symposium, 3 J. Pub. L. (No. 2).
53 Pages 63 et seq.
55 Published by Practising Law Institute.
56 Page 383.
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"The experience of the physicians and attorneys in Cortland County, New York, is being duplicated in many parts of the country. The snowball is growing larger. Physicians and attorneys will understand each other, they will improve their professional interrelationships, and society and the administration of justice will benefit from their efforts in this regard."

12. "The District of Columbia and twenty five state medical societies have either established liaison with their bar associations or expect to do so in the near future," according to an editorial entitled "Medicine and the Law," in the Journal of the American Medical Association (April 14, 1956). It is urged that such liaison committees should be formed in all of the states, in order to work out programs to eliminate misunderstandings between the professions of law and medicine, and to solve problems such as those outlined herein.

Conclusion

Dr. Daniel Collier Elkin, Professor of Surgery at Emory University School of Medicine, recently said:

"... Medicolegal clinics and seminars have become a vital part of the post-graduate education of the lawyer as well as of the physician... A more intelligent use of medical libraries and research materials by the lawyer and a better understanding by the physician as to the part he is to play in the courtroom result from our joint enterprises of working and studying together.

"Much in the way of opportunity lies ahead for us of the medical and legal professions. Through the continuation of the spirit of good will and cooperation... much can be accomplished leading toward a better life.

"As we strive to develop those technical skills and knowledges peculiar to our respective professions, may we also strive to work together for the attainment of the broader goal of making this a better world—physically, socially, morally, and spiritually. And then, as succinctly stated by Oliver Wendell Holmes, the renowned jurist and son of a physician, we 'may catch an echo of the infinite.'"

A quotation from the Interprofessional Code of North Carolina, enacted by the Bar Association and Medical Societies of North Carolina, offers an apt closing comment. The code properly says:

"It is recognized that both legal and medical professions are essential to society; and their aims are essentially parallel. This necessitates at all times full understanding and cooperation. Each has the duty to develop an enlightened and tolerant understanding of the other in the best interests of the public, as well as the reputations of the two professions."

[Editorial Comment on the foregoing article.

Medicine is not an exact science. It is a biological science, and may not be compared to such studies as physics and chemistry. There, all variables may be controlled, and a particular reaction may be accurately predicted. To be learned in the biological sciences, one must be schooled to think in the basic or exact sciences. However, it is fundamental in the study of medicine that all humans do not react in the same manner to a given stimulus. Medical judgment is the product of a physician's experiences in clinical practice, built upon the basic structure of sound medical education. But when opinions of a physician are requested in court on subjects which are beyond the scope of medical knowledge, they fall into the realm of a guess. Logistics and semantics may be argued forever. Mr. Averbach has stated that "...most doctors concede that anything is possible in medicine." If this is true, then further testimony on the subject is unnecessary.

To correct an almost irreconcilable difference as to basic thinking, a possible solution might be an independent, disinterested Board of medical experts, such as has been advocated by several judges. Such a group could examine the patient, or the facts, and give the court an opinion. Since the proof does not have to be conclusive, this group could decide by a preponderance of the opinion.

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of the Board of the
Cleveland-Marshall Law Review.]