J Forensic Sci, Jan. 1978, Vol. 23, No. 1

J. D. Kogan,[1] *J. D.*

On Being a Good Expert Witness in a Criminal Case

It is essential for the forensic scientist to understand what the criminal justice system expects of the expert witness. By the very nature of the word *forensic* ("belonging to courts of justice" [*1*]) [*2*], the expert must realize that any tests, examinations, observations, or experiments he performs may require testimony in the courtroom regardless of the results. Preparation for this responsibility begins the first day the expert enters the laboratory.

The forensic scientist's daily schedule may include a heavy caseload of evidence to examine, supervision of less experienced colleagues, attendance at training sessions and office meetings, preparation of exhibits for trial, meetings with the attorney prior to trial, and appearances in court (sometimes at a great distance from the laboratory). With all these pertinent duties to perform the forensic scientist may have difficulty recollecting independently the specifics from previous cases assigned to him, especially if the cases do not go to trial for months or even years. Though he will have prepared a report stating his findings in each case, such a report seldom contains sufficient information to be of assistance in the preparation for trial. It is therefore essential for the expert to make detailed notes with respect to any tests, examinations, observations, or experiments conducted in connection with a criminal case.

An expert's notes will be of great value to him in preparing for trial. Indeed, if years have passed between the date of the examination of the evidence and the trial, these notes may be the only means available to help the expert recall exactly which tests or examinations he performed on the evidence. The expert may bring these notes with him into the courtroom when he takes the witness stand. Whether it be on direct or cross-examination, and especially if the expert must testify about many exhibits, the expert suddenly may find he cannot remember what he did in his examination of a piece of evidence. In this instance, the witness should state he has no independent recollection and request permission to refer to these notes. Once the witness refreshes his memory by looking at these notes, he can then turn back to the jury and continue testifying [*3*]. Without the availability of these notes the expert may be unable to answer crucial questions about the tests or examinations done in the case and thereby diminish his value as an expert witness.

Once the witness refers to his notes in court the attorney for the opposing party has the right to see that portion of the notes which the witness used to refresh his memory [*4-6*]. "This, like other aspects of cross-examination, is to enable the opposing party to probe the recollection of a witness, to test his credibility, and even to impeach him" [*7*]. Furthermore, if the witness testifies for the government in a federal court he may be required to deliver these notes or a copy of these notes to the defense attorney upon the completion of the direct examination even

The opinions or assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the Office of the United States Attorney or the Department of Justice. Received for publication 31 March 1977; revised manuscript received 13 May 1977; accepted for publication 19 May 1977.

[1] Assistant United States attorney, U.S. Department of Justice, Washington, D.C. 20001.

though the witness did not use these notes to refresh his memory [8]. In view of the possibility that these notes or a part of these notes may have to be turned over to the attorney representing the opposing party, it is incumbent upon the expert to make certain the notes accurately reflect all procedures followed in the case.

In addition to making notes on individual cases, it may be helpful to the expert to maintain a record of the number of cases of each type he has examined. For example, a forensic chemist who analyzes drugs might keep a record as to how many times he has performed examinations in cases involving heroin, cocaine, and other drugs, or if the chemist examines evidence in arson cases, the number of arson cases should be noted. These figures can be used at trial to enhance the expert's level of experience during the testimony on qualifications. Even if the expert does not mention the number of cases in which he has examined similar evidence during the direct examination on qualifications, such information may be helpful if the cross-examiner questions the expert's prior experience.

After achieving a certain level of experience within the laboratory, the forensic scientist may be in a position to delegate to new members of the staff the responsibility for performing tests on evidence. In these instances the forensic scientist will supervise the associate and later testify in court that some of the tests in the case were conducted under his guidance and supervision. This is acceptable in court if he actually observed the tests being conducted by the associate. However, if the forensic scientist does not observe the testing procedures, he cannot testify in court about them. The associate who conducted the tests will have to testify. The forensic scientist must be certain to keep watch over any person who assists him in the examination of evidence, not only to assure the accuracy of the results of all tests but also to avoid having two people testify in court where only one should be necessary.

The phrase "chain of custody" is a common one to all experts but its importance should not be underestimated. From the moment a piece of evidence is seized in connection with a criminal offense until it is introduced in court all persons having custody of the evidence must account for it. "It is generally recognized that tangible objects become admissible in evidence only when proof of their original acquisition and subsequent custody forges their connection with the accused and the criminal offense" [9]. In addition, the law requires "the possibilities of misidentification and adulteration be eliminated, not absolutely, but as a matter of reasonable probability" [9]. Since the expert forms part of the chain of custody he should do the following:

(1) note the date he receives the evidence (if someone else accepts the evidence on behalf of the laboratory, this should be noted, too),
(2) note the condition of the evidence and its container when received,
(3) note all work done on the evidence,
(4) note how much of the evidence, if any, was consumed during testing,
(5) note how the evidence was stored in the laboratory,
(6) note the condition of the evidence when it leaves the laboratory,
(7) mark each piece of evidence so that each item can be identified in court.

Should two or more experts examine the evidence, each must follow the appropriate procedures. All the forensic scientist's work in the laboratory will be meaningless unless the procedures necessary to establish the chain of custody are maintained.

Pretrial Discovery

The expert who examines evidence for the government will submit a report of his findings to the prosecutor. If the case is in a federal court the defense will be permitted to inspect this report. (Some states also permit the defense to have access to the reports of the government's experts [10].) Rule 16 (a) (1) (D) of the Federal Rules of Criminal Procedure provides:

> Upon request of a defendant the government shall permit the defendant to inspect and copy or

> photograph any results or reports of physical or mental examinations, and of scientific tests of experiments, or copies thereof, which are within the possession, custody, or control of the government, the existence of which is known, or by the exercise of due diligence may become known, to the attorney for the government, and which are material to the preparation of the defense or are intended for use by the government as evidence in chief at the trial.

Knowing that the report will be given to the defense attorney, who can use it on cross-examination, the expert must write the report so that it reflects his opinion accurately. Although the defense attorney may be entitled to a copy of the report, he is not entitled to the pretrial discovery of the expert's laboratory notes [*11*].

On the other hand, only limited discovery of the reports of defense experts is accorded to the prosecutor. Rule 16 (b) (1) (B) provides:

> If the defendant requests disclosure under subdivison (a) (1) (C) or (D) of this rule, upon compliance with such request by the government, the defendant, on request of the government, shall permit the government to inspect and copy or photograph any results or reports of physical or mental examinations and of scientific tests or experiments made in connection with the particular case, or copies thereof, within the possession or control of the defendant, which the defendant intends to introduce as evidence in chief at the trial or which were prepared by a witness whom the defendant intends to call at the trial when the results or reports relate to his testimony.

The prosecution may not be able to obtain the defense expert's report as readily as the defense can obtain the prosecution's expert's report, but the defense expert should not be any less thorough in preparing his report. The prosecutor also can use the report when cross-examining the defense expert.

In the situation where the defense does not intend to call its expert as a witness at trial and the defense does not reveal the identity of its expert to the prosecutor, the defense expert is faced with a dilemma of whether, on his own, he should contact the prosecutor. Once the defense expert contacts the prosecutor, or if the prosecutor otherwise ascertains the identity of the defense expert, and the prosecutor decides the defense expert's results help the government's case, the defense expert may be subpoenaed to testify for the government. If the expert does not contact the prosecutor and the prosecutor does not discover independently the identity of the defense expert, the defense expert may never be called to testify and his findings, which could be crucial in a given case, will not be revealed publicly. The expert who acts in accordance with the latter view may place himself in a precarious position in subsequent cases when being cross-examined as to bias, because a good prosecutor can make it appear to the jury that such expert is interested only in assisting the defense. The defense expert is under no legal obligation to communicate with the prosecutor. However, if a criminal trial is supposed to be a search for the truth, the defense expert may have a personal responsibility to contact the prosecutor, especially if the test results could be a decisive factor in determining the defendant's guilt or innocence.

After the prosecutor or defense attorney ascertains the identity of the other's expert witness, the witness may be contacted for an interview by the opposing attorney. As with any other witness, the expert witness is free to decide whether or not to meet with opposing counsel. If the witness accepts the attorney's invitation, the witness can dictate the terms of the interview, including having another person present. Should the witness refuse to talk with the opposing counsel, the witness cannot be legally required to do so. Of course, it is improper for the prosecutor to advise its expert to refrain from speaking to the defense attorney [*12–16*].

It is advisable for the expert witness to meet with the opposing attorney when requested. At this meeting the expert will review with the attorney his qualifications and how he reached his conclusions. The attorney may question the expert in depth and his replies should be honest. Once the attorney realizes the expert is well qualified and all tests performed were valid, the attorney will have a much better feeling for cross-examining the expert. It is hoped that the result will be eliminating unnecessary and foolish questions on cross-examination. Similarly, the questions asked of the expert by the attorney will alert

the expert to the possible areas of cross-examination at trial. The face-to-face meeting also will provide the expert with an opportunity to observe the attorney's personality, which might prove to be beneficial to the expert during cross-examination. Moreover, should the expert's findings resolve a key fact in the case unfavorably to the opposing attorney, the information may be used by that attorney to dispose of the case without going to trial.

During the meeting between the attorney and the expert, the attorney may take notes. At the conclusion of the meeting, or at a later date, the attorney may request the expert to sign his name to each page of the notes or to sign his name to a statement incorporating the substance of the notes. The expert can accede to this request, but there is no legal requirement to do so. Upon signing anything, the expert should request that he immediately receive a copy of everything signed by him. If the expert does not intend to comply, he should read the notes or statement anyway to be certain there are no inaccuracies. The expert must remember that anything he signs or says can be used against him at trial.

Despite the advantages of meeting with the opposing attorney, the expert may decide he does not wish to speak with the attorney when asked. Before making such a decision the expert should be aware that his refusal to speak with the attorney may easily be turned to the advantage of the attorney on cross-examination.

Pretrial Preparation

A pretrial conference between the expert and the attorney who presents him as a witness is absolutely essential. Failure to prepare for trial with the attorney can lead to embarrassing moments for the expert on the witness stand. Lack of preparation combined with a good cross-examination may make the expert witness appear less than expert. Even one weak performance on the witness stand may return to haunt the expert in a subsequent trial.

If the trial date is approaching and the expert has not heard from the attorney, he should contact the attorney and request a pretrial conference. Should the attorney indicate his schedule does not allow time for a meeting, then the expert should advise the attorney he will not testify in court without a pretrial conference. This approach should be successful. Although the expert can be subpoenaed to court by the attorney, the attorney obviously does not want a hostile witness. Attorneys will make themselves available if experts continually insist on the need for a pretrial conference.

Unless the expert knows the attorney is knowledgeable in the particular field of forensic science, the expert should approach the pretrial conference bearing in mind that attorneys receive almost no training in the forensic sciences in law school. Attorneys usually have few materials on the forensic sciences in their offices or law libraries and often are reluctant to admit voluntarily their lack of any knowledge of the forensic sciences. One of the reasons for having the pretrial conference is to educate the attorney in the particular field of forensic science and thereby help the attorney to better present the forensic evidence in the courtroom. The expert should be prepared to suggest or provide the attorney with books, articles, or other materials that might facilitate the attorney's presentation of the case in court.

At the pretrial conference the attorney and the expert should discuss the expert's qualifications and the questions that will be asked in court to establish those qualifications. The expected demeanor of the expert on the witness stand should be reviewed. The questions to be asked on direct examination and the anticipated cross-examination should be discussed thoroughly. The expert can help the attorney to formulate the appropriate questions on direct examination (the attorney may not even know the questions to be asked during the conference), and the attorney can help prepare the expert to respond to the cross-examination.

All terms used by the expert and the attorney should be mutually clear and understandable. Physical evidence or photographs that the expert will identify in court should be

reviewed, along with the chain of custody for each item. The attorney should inform the expert about all facts in the case because the expert may be able to relate the other facts to what he has done. Any legal issues that may affect the expert's testimony should be discussed. The expert should be advised by counsel about any idiosyncracies of the trial judge or the opposing attorney that may have some bearing on his testimony. If the opposing attorney intends to present a forensic scientist in the same field, the expert can assist the attorney in preparing for the cross-examination of that witness.

It is vital that the expert review with the attorney all the procedures followed in reaching the final opinion. It is at this point that the education of the attorney must be accomplished to the satisfaction of both the expert and the attorney. It will be necesary for the expert to discuss with the attorney any possible weaknesses or errors in the testing procedures that could have an effect on the final conclusion. Although there are experts who are hesitant to admit to possible weaknesses or errors, few areas of forensic science are invulnerable to a good cross-examiner's raising some valid questions, or at least making it appear that there are weaknesses or errors in the testing procedures. Once the expert reviews with the attorney the possible areas of weakness or error, the attorney will have a better understanding as to how he should present the expert's testimony on direct examination and how to rehabilitate the expert, if necessary, on redirect examination. Inviting the attorney to the laboratory to observe tests being performed also might help the attorney fully appreciate the testing procedures.

Before concluding the meeting with the attorney, the expert should not hesitate to ask questions about any uncertainties he may have concerning his testimony at trial. The expert should leave the conference with the feeling both he and the attorney know everything that will happen once they are in the courtroom. If there exist any areas of doubt, the expert would be wise to contact the attorney again to discuss the matter. It behooves the expert to prepare well with the attorney.

Although the expert witness is seldom cross-examined thoroughly, he should be prepared for the most extensive possible cross-examination. The expert's preparation for trial therefore should also include a review of the history of the particular field of forensic science, the pertinent literature, the recent developments, and the current methods in use in the field, since these are possible areas into which the cross-examiner may delve. Anything the expert has written in his area of expertise obviously requires review. All notes and reports prepared by the expert should be studied. Finally, the expert must prepare himself mentally, so that he takes the witness stand with confidence.

Courtroom Demeanor

As is the case with other witnesses, the expert as a witness will be judged by the jury in part by his demeanor on the witness stand. The demeanor of the witness includes [*17*]

> such factors as the tone of voice in which a witness' statement is made, the hesitation or readiness with which his answers are given, the look of the witness, his carriage, his evidences of surprise, his gestures, his zeal, his being, his expression, his yawns, the use of his eyes, his furtive or meaning glances, or his shrugs, the pitch of his voice, his self-possession or embarrassment, his air of candor or seeming levity.

Once the expert is sworn under oath, he must realize that his demeanor on the witness stand may mean the difference between the jury's accepting or rejecting his testimony.

While on the witness stand the expert's attention should be focused on the jurors, as they will decide the facts in the case. Direct eye contact with the jurors during the testimony is important. The attorney doing the direct examination should stand in a position that does not interfere with the relationship between the witness and the jurors. The expert must be careful not to allow the opposing attorney to divert his attention away from the jurors on cross-examination.

Insofar as the expert's manner of testifying is concerned, a good approach is for the expert to testify as if he were having a normal conversation with the jurors, that is, the expert is in court just to share his knowledge and expertise with the jurors to help them decide the facts. The expert should speak clearly, slowly, and in a normal tone of voice, loud enough for the judge, the jurors, and the attorneys to hear his testimony. The expert should appear confident in his opinion without being pedantic or arrogant.

Conservative street attire must be worn in the courtroom. Clothing should not distract the attention of the jurors from the witness's testimony. A neat appearance gives a favorable impression. Good posture also should be maintained.

Having prepared good notes of the tests performed in the case, the expert may be tempted to rely heavily on the notes in the courtroom and to request continually the court's permission to refer to them. All notes should be thoroughly reviewed before trial. If the expert needs to refer constantly to his notes, especially in the case where he examined only a few pieces of evidence, the jurors may become bored or disgusted and be less attentive to the testimony.

Once cross-examination begins the expert must be careful not to change his demeanor. Regardless of the tone of voice and manner of the cross-examiner, or the questions asked by the cross-examiner, the witness should not become defensive, angry, or surly. Nor should the witness raise his voice, lose his temper, or argue with the cross-examiner. The opposing attorney wants to provoke a negative reaction from the witness. The witness should be poised, polite, and courteous to the cross-examiner. The jurors will become angry at the cross-examiner if they see him trying to be unfair to the "nice" expert witness.

Qualifying the Expert in Court

Before the expert is allowed to present his opinion in court, he first must be found qualified by the judge in his particular field of forensic science. The trial judge has a broad discretion in determining whether to accept or reject the qualifications of the expert *[18-20]*. Some of the factors the judge will consider include education, on-the-job training, experience in the field, teaching or lecturing, and writings. The judge will also take into consideration whether the expert has been found qualified previously by other judges. Therefore, once the expert is first qualified as a witness in any court, it is a good idea for the expert to keep a record of each time he has been found qualified and each court in which he has testified. The jury also will be impressed.

Examination of the expert as to his qualifications normally occurs in the presence of the jury. However, at the request of the attorney representing the opposing party the trial judge may cause the expert's qualifications to be determined initially outside the jury's presence. The attorney who requests this procedure does so for two possible reasons. First, the attorney may think he has a chance to prevent the witness from being qualified as an expert, and if in fact that is what occurs, the jury will not hear any testimony from the expert. Second, the attorney may want to try certain questions on the expert to test his responses. If the expert is found qualified and his answers are not to the liking of the opposing attorney, the attorney will know not to repeat these questions in front of the jury. Of course, only the first reason is mentioned by the attorney when requesting a voir dire examination outside the jury's presence. If the trial judge finds the expert qualified, the jury will be returned to the courtroom and the expert will then be asked again to state his qualifications.

The manner in which the attorney seeks to qualify his own witness as an expert will vary from case to case. If the attorney presents an expert who has been qualified in a hundred previous trials, the attorney will ask certain questions that he would not ask if this were the expert's first attempt to be qualified in court. A fingerprint examiner will

be questioned in a different manner than the forensic toxicologist. Whatever questions are asked in an effort to qualify the witness as an expert, sufficient information must be elicited so that the judge and the jury will know he is capable of giving an opinion in that particular field of forensic science.

To keep the jury from hearing how qualified an expert may be, the attorney representing the opposing side may be willing to stipulate to the expert's qualifications. Stipulating to the expert's qualifications may save time but is not usually a good idea. The qualifications testimony is an essential part of the expert's testimony and in some cases may be half the battle. The jury will look at the expert's qualifications in determining the weight to be given to his opinion. The expert with excellent credentials will impress the jury and make it that much easier for the jury to credit his opinion.

Direct Examination

Direct examination provides the expert with the opportunity to use his training, experience, and knowledge to describe to the jury how he reached an opinion based on certain facts. Now care must be exercised. The findings of the greatest forensic scientist in the field will be of no value to anyone in the courtroom if he is unable to relate his findings to the jury.

Most jurors and judges have had little, if any, background in the forensic sciences. The language used by the forensic scientist should be readily understandable to the lay person and not abstruse or incomprehensible. If scientific terms are used, they should be explained for all to understand. Photographs or other exhibits may be used to demonstrate what the expert is trying to explain. Drawing analogies between scientific principles or testing procedures and commonplace events in a juror's life may make it easier for the jurors to understand the basis for the expert's opinion. Above all, the expert witness must always be alert to whether the jurors are paying attention to and comprehending his testimony. If the expert witness senses he is losing the jurors, he must make every effort to regain their attention.

The expert witness can express his opinion in response to the direct question or a hypothetical question. A direct question requires the witness to state his opinion based on his observations and tests or examinations performed by him. Since most laboratory tests are complex, the witness should not mention every detail of every test performed and risk confusing the jury or distracting the jury's attention from the key points of the opinion. Rather, it may be sufficient for the witness to describe generally the tests performed or to testify he performed the standard tests recognized in the field for examining this type of evidence.[2] The witness should wait for the cross-examiner to bore the jury by eliciting all the details of the tests.

A hypothetical question requires the expert to give an opinion based on a number of assumed facts. The expert most likely will not have any personal knowledge of these assumed facts. The attorney asking the expert to express his opinion in response to a hypothetical question will begin the question by stating: "Mr. Expert, assume for the purposes of this question that the following facts are true." Then the attorney will state a number of facts that have been introduced in evidence during the trial and ask the expert to give an opinion based on these facts. The use of the hypothetical question to elicit an opinion has been criticized by the courts. A good example of such criticism appeared in *Rabata v. Dohner* [*21*], wherein the court stated:

[2]Rule 705 of the Federal Rules of Evidence provides that "the expert may testify in terms of opinion or inference and give his reasons therefor without prior disclosure of the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross-examination."

> This court is of the opinion that the use of a hypothetical question frequently has a stultifying, somniferous effect upon a jury and presents to them at one time so great a quantity of assumed facts that it is not reasonable to expect them to have any clear idea of the basis on which the opinion is formed.
>
> Moreover, the members of this court, based on their experience gleaned as practicing lawyers and trial judges, are satisfied that a mechanistic hypothetical question has the effect of boring and confusing a jury. Rather than inducing a clear expression of expert opinion and the basis for it, it inhibits the expert and forecloses him from explaining his reasoning in a manner that in intelligible to a jury.

There may be some cases in which the expert's opinion can be given only by means of a hypothetical question, such as when an opinion is based in part on tests performed by another expert. Whatever approach is used to have the expert express his opinion, the questions asked and the opinions given in response must be clear and understandable to the jury.

Though the expert is presented as a witness on behalf of one side in a criminal trial, he is not an advocate for the position espoused by that side. The expert's responsibility is to give an impartial opinion based on his examination of certain items. It is proper for the expert to support his opinion and to this extent he may appear to be an advocate. But the expert must express his opinion without advocating that opinion on behalf of the side for whom he testifies. Once the jury detects that the expert is partial to the side presenting him, the jury will give less credit to his testimony.

While the expert may have been found qualified by the trial judge to give an opinion, the expert as a witness is afforded no special favors or priorities merely because he is an expert. The jury is free to disregard the expert's testimony even if it is unchallenged [*22–24*]. In other words, the jury decides what weight to give to the expert's testimony and the jury may be so instructed.[3]

Cross-Examination

The prospect of being cross-examined by an attorney is often abhorrent to the expert. An expert may be forced to justify his opinion by the cross-examiner. There exists the feeling among some experts that the cross-examiner is bent only on attacking the expert personally. A feeling of dislike for attorneys may result. None of the dread thoughts of cross-examination need arise if the expert is prepared for it. The well-prepared expert will be a match for any attorney on cross-examination.

There are some basic principles that should be adhered to by the expert during cross-examination. The expert may be asked a question for which he does not know the answer, or for which there is no answer. If this type of question is asked, the expert should state he cannot answer the question or the question cannot be answered and explain. Guessing will only lead to trouble. The expert should not answer a question that he does not understand. If the question is unclear, the expert should tell the attorney he does not understand the question. The cross-examiner may ask a question for which he desires a yes or no answer. If the question cannot be answered with a yes or no, the expert should begin his answer by stating no definitive yes or no answer is possible and proceed to answer the question within the perimeters of his experience. Though all questions must be answered, supplementary information should not be volunteered and the expert should be careful not to talk too much.

A question may be asked by the cross-examiner which includes facts that do not reflect

[3] In all criminal cases in the District of Columbia the jury is given the following instruction [*25*]: "An expert in a particular field is permitted to give his opinion in evidence. You are not bound by the opinion of such expert. You should consider his testimony in connection with other evidence and give it such weight as in your judgment it is fairly entitled to receive."

accurately the witness' testimony on direct examination or earlier testimony on cross-examination. Before answering the question, the witness should correct the misstatement and reiterate the facts previously stated. The witness should not permit the opposing attorney to put words in his mouth.

There may come a time when the expert recognizes before a trial or during a trial that he has made a mistake that could have affected his opinion. In this instance, the forensic expert should be honest and admit it on the witness stand. Though some damage may be done to his reputation, it will be far worse if the expert attempts to cover up the mistake. In fact, admitting to the mistake may have the effect of enhancing the expert's reputation for honesty. After all, experts are human, too! Obviously, the expert should make certain the same mistake does not occur a second time.

An attorney may intentionally or unintentionally cross-examine the expert by using words or terms that mean something different to the attorney than to the expert. In these instances, responding to questions couched in terms put forth by the cross-examiner may result in the expert's testimony being misunderstood or misinterpreted by the jury. The expert should answer questions with words or terms he uses normally and understands. Asking the cross-examiner to define words or terms that may be of uncertain meaning to the expert will enable the expert to maintain some control over the cross-examination as long as he does not do it too often and risk alienating the jury.

Whether the witness testifies in a federal or a state court a court reporter will be in the courtroom to record his testimony. A good attorney will order a transcript of the witness' testimony in a previous trial. If there are any inconsistencies as to the same areas of testing, examination, or results or as to the expert's stated qualifications between the testimony in the prior trial and the testimony in the present trial, the transcript can be used to impeach the expert [*26–28*]. If the witness does not satisfactorily explain the inconsistencies, then the jury may very well give less credit to his testimony. This is why the expert cannot afford to let down his preparation even in one case.

All witnesses, including experts, are subject to cross-examination as to bias, interest, or motive to fabricate testimony. It is in this area of questioning the impartial attitude of the expert also becomes important because the jury will be less likely to believe that an expert who appears to be impartial is actually biased. One who testifies as if he were an advocate for the side presenting him as a witness may be distrusted by a jury. If the expert is employed by and is testifying on behalf of the government, the questioning on bias probably will center around these questions: (1) that the expert is employed by the government in a continuing capacity to testify as an expert, (2) that the expert can expect a steady pay check as long as he does a good job for the government, (3) that the expert probably does not do any testing for defendants, (4) that the expert testifies only for the government or most of the time for the government, and (5) that the expert would not meet with the attorney prior to trial. An independent expert who has testified for the government or the defense probably will be questioned about bias in a similiar manner: (1) that the expert testifies far more for one side than the other, (2) that the expert prefers working on cases for one particular side because of his personal feelings, (3) that money is a prime concern to the expert and he will charge as much as he can, and (4) that he is being paid for his testimony in the case. All these and related questions asked by the attorney to show the expert is biased can readily be answered and explained by the expert who understands the import of the questions and is prepared to respond to them.

Cross-examination of experts by the use of books or articles is underutilized by attorneys but can be very effective because experts generally are not prepared for this type of interrogation. The reason for permitting an expert to be cross-examined by books was stated in the leading case of *Darling* v. *Charleston Community Memorial Hospital* [*29*]:

> The unsatisfactory quality of expert testimony has been the subject of frequent comment, and it has induced judicial action (citations omitted). An individual becomes an expert by studying

> and absorbing a body of knowledge. To prevent cross-examination upon the relevant body of knowledge serves only to protect the ignorant or unscrupulous expert witness. In our opinion expert testimony will be a more effective tool in the attainment of justice if cross-examination is permitted as to the views of recognized authorities, expressed in treatises or periodicals written for professional colleagues (citation omitted). The author's competence is established if the judge takes judicial notice of it, or if it is established by a witness expert on the subject.

There are three methods of establishing whether a book or article is authoritative for purposes of cross-examination. The first and easiest method is for the expert to admit the work is authoritative. If the expert does not recognize the work as authoritative, the cross-examiner can request the trial judge to take judicial notice that the work is authoritative. Should the trial judge refuse to do this, the cross-examiner can present the testimony of another expert to establish the authoritativeness of the work [*29–31*]. Thus, it is possible for the expert to be cross-examined on a book or article he does not recognize as an authority in the field.

Before attempting to use a book or an article on cross-examination, the attorney should be certain the book or article is authoritative and that it contains statements contrary to the testimony of the expert. The attorney then will ask the following questions:

Q. Do you recognize the name John Doe?
Q. Is John Doe considered an authority in the field?
Q. Are you familiar with John Doe's book ...?
Q. Do you recognize John Doe's book ... as an authority in the field?

Assuming the expert responds with a yes to each question, the expert will be read statements from the book and be asked to comment on the statements. Unless the expert is completely familiar with the book and the quote read to him he should ask to see the book before responding to the question because the book may be an outdated edition, the statements may have been taken out of context, or the statements may not be complete. If any of these problems are present, the expert should bring it to the attorney's attention. This will result in the attorney's abandoning this part of the cross-examination or at least force the correction of the error, if possible. However, if the quote is accurate, the expert should be prepared to respond intelligently about the statements in the book and to explain why he may disagree with the author.

If the attorney refuses to allow the expert to examine the book, the expert should indicate he cannot answer the question without seeing the quote in context. This will force the attorney either to provide the expert with the book or to abandon the line of questioning. There also may be an occasion where the attorney asks the expert about a book but does not have the book in court. Again, the expert should advise the cross-examiner he cannot answer the question without seeing the book.

In the situation where the expert does not recognize a book as an authority in the field but the trial judge permits the expert to be cross-examined on the book, the expert should respond by stating why the statements in the book are not valid or not supported by other evidence. It is also essential for the expert to explain why he does not consider the book to be authoritative.

Though the expert may be very familiar with the literature in the field, it is not a good idea for the expert to testify on direct examination that he relied generally on all literature in the field or on specific books unless he is prepared to be cross-examined on a number of books [*32*].

To test the expert's opinion, the cross-examiner may ask the expert a hypothetical question containing only the facts in evidence that are favorable to the side represented by the cross-examiner. This is permissible. The expert must be certain he understands all the assumed facts in the question and what opinion the cross-examiner is attempting to elicit from him before answering the question. If the expert feels he cannot answer the question as posed, then he must indicate that in his response.

Probably the best way to anticipate the questions to be asked on cross-examination is for the expert to think of the questions he would ask if he were the cross-examiner. Combining his own thoughts with the other forms of preparation will enable the expert to emerge unscathed from the cross-examination.

References

[1] *Black's Law Dictionary,* 4th ed., West Publishing Co., St. Paul, Minn., 1968, p. 777.
[2] *Methodist Hospital v. Ball,* 50 Tenn. App. 460, 362 S.W. 2d 475 (1961).
[3] *United States v. Riccardi,* 174 F. 2d 883 (3d Cir. 1949).
[4] *Jackson v. United States,* 250 F.2d 897 (5th Cir. 1958).
[5] *United States v. Goldman,* 118 F.2d 310 (2d Cir. 1941).
[6] *Shell Oil Co. v. Pou,* 204 So. 2d 155 (Miss. Sup. Ct. 1967).
[7] *Hill v. Downs,* D.C. Mun. App., 148 A.2d 715, 717 (1959).
[8] 18 U.S.C. § 3500 (1970).
[9] *Gass v. United States,* 135 U.S. App. D.C. 11, 14 n.8, 416 F.2d 767, 770 n.8 (1969).
[10] *People v. Woodward,* 63 Ill. 2d 382, 349 N.E.2d 57 (1976).
[11] *Waldron v. United States,* D.C. App., 370 A.2d 1372 (1977).
[12] *United States v. Matlock,* 491 F.2d 504 (6th Cir. 1974).
[13] *United States v. White,* 454 F.2d 435 (7th Cir. 1971).
[14] *Gregory v. United States,* 125 U.S. App. D.C. 140, 369 F.2d 185 (1966).
[15] *Byrnes v. United States,* 327 F.2d 825 (9th Cir. 1964).
[16] *United States v. McDougald,* D.C. App., 350 A.2d 375 (1976).
[17] *Rains v. Rains,* 17 N.J. 310, 8 A.2d 715, 717 (1939).
[18] *United States v. Sellaro,* 514 F.2d 114 (8th Cir. 1973).
[19] *Jenkins v. United States,* 113 U.S. App. D.C. 300, 307 F.2d 637 (1962).
[20] *State v. Clark,* 30 N.C. App. 253, 226 S.E.2d 398 (1976).
[21] *Rabata v. Dohner,* 45 Wis. 2d 111, 172 N.W.2d 409, 417 (1969).
[22] *United States v. Coleman,* 501 F.2d 342 (10th Cir. 1974).
[23] *People v. Newby,* 60 Mich. App. 400, 239 N.W.2d 387 (1976).
[24] *State v. Blair,* 531 S.W.2d 755 (Mo. Ct. App. 1975).
[25] *Criminal Jury Instructions for the District of Columbia,* 2nd ed., D.C. Bar Association, Washington, D.C., 1972.
[26] *Reyes v. Wyeth Laboratories,* 498 F.2d 1264 (5th Cir. 1974).
[27] *Walker v. Firestone Tire & Rubber Co.,* 412 F.2d 60 (2d Cir. 1949).
[28] *Madsen v. Obermann,* 237 Iowa 461, 22 N.W.2d 350 (1946).
[29] *Darling v. Charleston Community Memorial Hospital,* 22 Ill. 2d 326, 336, 211 N.E.2d 253, 259 (1965).
[30] *Kansas City v. Dugan,* 524 S.W.2d 194 (Mo. Ct. App. 1975).
[31] Federal Rule of Evidence 803 (18), available from West Publishing Co., St. Paul, Minn.
[32] *Garfield Memorial Hospital v. Marshall,* 92 U.S. App. D.C. 234, 204 F.2d 721 (1953).

Address requests for reprints or additional information to
J. D. Kogan, J.D.
1600 S. Joyce St.
Apt. C313
Arlington, Va. 22202