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Cross-Examining The Expert Witness: Do's and Don'ts and An Occasional Maybe

What factors make people believe one expert witness over another? People ask several questions when deciding if they are going to trust an expert.[1]

Does the expert witness *look* and *sound* smart?

Does the expert not lose her cool when cross-examined?

Does the expert witness talk too much about irrelevant material?

Does the witness answer questions directly?

Does the expert admit when he is wrong?

Rarely does the question relate to whether the expert's opinion or science is sound. Instead, people are inclined to focus on how the expert comes across. Is she smooth? Is she polished? If so, then she *must* be good — or perhaps she is a sociopath. A sociopath, among other things, tends to (1) have a disregard for the truth; (2) lack concern for society's rules (i.e., do not over-bill, do not commit perjury); (3) be manipulative; and (4) be personable, charming, and have an above average IQ. The frightening thing is that the more sociopathic an expert is (glib speech, unflappable, charming), the more successful she may be at convincing a jury.

When defense attorneys question an expert, it is helpful to let the expert know they have done their homework. Bring a notebook filled with research and label it with the expert's name written in 72 point bold font. This keeps bad experts more honest because they have no idea what information the notebook contains. An honest expert will not be as concerned because he is giving his true opinion and does not need to remember when he gave contradictory statements.

The more sociopathic the expert, the less he has familiarized himself with the facts. He does not spend the time or effort to learn the science or the facts in the case because he does not care. He just wants to be paid. When an attorney suspects she is dealing with an expert who is a sociopath, she can expose his callousness to the jury by asking him fact-specific questions he cannot answer.

When the expert is evasive, keep going. Sometimes an attorney becomes frustrated and sits down when a verbose expert avoids answering a question and starts blathering. Counsel should stand her ground. It may not even matter if the expert never answers the question. What is often more important is the fact that the expert failed to answer. The job of the attorney is to make that clear. If an expert fails to answer an attorney's question and the attorney becomes frustrated and sits down, the jury may believe the expert *did*

BY DOROTHY CLAY SIMS

answer the question and the attorney did not like the answer. Therefore, counsel should keep pointing out that the expert failed to answer — until the judge orders the expert to answer or it is clear the jury understands that the expert witness is being evasive.

Weaknesses in Science And the Experts

In a majority of cases in which defendants were ultimately exonerated by post-conviction DNA, experts for the prosecution overstepped their bounds with regard to training and testifying or with regard to misstating empirical data.[2] Research conducted involving 137 cases in which defendants were wrongfully convicted revealed that in 60 percent of the cases, "Forensic analysts called by the prosecution provided invalid testimony at trial. That is testimony with conclusions misstating empirical data or wholly unsupported by empirical data."[3] The invalid testimony came from 72 forensic analysts called by the prosecution and employed by 52 laboratories, practices, or hospitals from 25 states.[4] Misrepresentation, however, is not always intentional. "Invalid testimony could be explained not by intentional or reckless acts, but rather by inexperience, poor training, or inadequate supervision."[5]

In 2005 Congress authorized the National Academy of Sciences (NAS), in existence since 1863,[6] to study forensic science.[7] Four years later, in August 2009, the National Research Council of the National Academies published *Strengthening Forensic Science in the United States: A Path Forward* (NAS Report). The report found that the entire forensic science system had serious problems: "New doubts about the accuracy of some forensic science practices have intensified with the growing number of exonerations resulting from DNA analysis. . . ."[8]

For years criminal defense attorneys lamented the state of forensic science, concerned that some of it was junk science. Proving it, however, was another matter. In order to best represent clients, attorneys should research the expert, research the science and the test employed, and research the expert's conclusion.

Research the Expert

Does the expert operate out of his garage? Some experts have no office and work from home. Use Google Earth to find out if the address on the expert's letterhead is his home.[9]

Verify the degree. If an expert witness touts a degree from a university that the defense team members have never heard of, they should check it out, especially if it is from another country. If one inserts "fake degrees" in the Google search engine, over 1.6 million hits will be returned. Anyone can buy a degree from a diploma mill. In one case, a simple telephone call to a university in Spain revealed that the expert obtained his medical degree in two weeks, with no anatomy courses.[10] Moreover, the defense must verify everything on the expert's curriculum vitae (CV). If the expert claims he has a patent, verify it.[11] If he claims he belongs to an organization, find out if it even exists.

Cross-reference all jury verdicts and case citations in state and federal cases with the expert's case list. Some experts do not list cases in which embarrassing rulings occurred. Cross-referencing the expert's case list with Lexis or Westlaw jury verdicts might uncover instances of fraud.

Verify the expert's memberships in organizations. Most organizations include their membership lists in online databases.

If the doctor claims a fellowship, obtain proof that the fellowship exists. Ask the expert to sign a release to permit the defense to obtain documentation of the alleged fellowship. Most bad experts will not agree to do this because they are not telling the truth.

Investigate an expert's former websites.[12] It might be helpful to find out if there are older articles supporting the defense position.

Was the expert trained and tested in the area in which she claims expertise? If the expert is a scientist, for example, and is testifying about hair comparison, was she given proficiency testing on this subject? Did she pass the first time? How long was the expert actually trained in the particular area in which she is testifying? If she took a class in hair forensics and it lasted a year, what portion of the class only dealt with hair comparison? It may have been as little as a couple of months.

What's *not* in the CV? A forensic expert may leave off important information reflecting bias, such as multiple free speeches to prosecutors or other organizations. Does the expert speak at defense attorney seminars? Is she a member of the Innocence Project?

The expert says she wrote an article. Did the expert really write it? It is not uncommon for a CV to reflect articles when (1) someone else was the lead author; (2) the expert did not write the article; (3) the article was never written; (4) the article was a one-paragraph letter to the editor; and (5) the article helps the defense position. Moreover, in some instances the defense attorney will discover that the article did not appear in a peer-reviewed journal. Instead, it appeared in a "pay" journal. The writer pays the journal, the journal prints the article, and there is no review process to ensure validity.

Buy a used copy of the expert's book from Amazon.com and read it. There is often a wealth of information in such publications that supports the defense position. Nothing is more deadly to an expert than to have a defense attorney reading the expert's own publication to support the defense. It is also helpful to search the Web for free article abstracts[13] or, for a fee, to read entire articles on other websites. For example, use a pay website such as www.mdconsult.com when looking for an entire article. To browse a book authored by the expert, consider conducting a free word search on the expert's book.[14]

Board Certifications

Is the expert really board certified? Some organizations will permit anyone to become board certified — even a child. An individual can simply visit the organization's website, pay the fee, proceed to "checkout," and *voila*! The defense attorney can also join the organization and pay to become board certified. At trial, defense counsel can ask the expert if the organization by which he is board certified is an example of his expertise or separates him from the pack. Make him *special*. Some experts will go on and on about their exclusive club. Then, the defense attorney can point out that she joined, along with her eight-year-old. Show the expert a photo of little Sally. Does this make Sally a forensics superstar?

Does the organization require vetting and real tests? Some organizations claim to test members, but the defense team needs to find out if the test involves more than an oral examination — which may translate into nothing more than a brief conversation. Was there a written test? A score? Documentation of a score? Who has the documentation? How can the defense verify it? Typically, in the medical field, the American Board of Medical Specialties is legitimate and requires proof of competence if dealing with a medical doctor.

Show Me the Money

The expert for the prosecution may claim he does not know how much money he makes in his forensic practice. Ask him if he *denies* making $10,000 per year. Start increasing the amount from that base figure. Many experts will claim they "do not keep track" and will stick to that response even when the defense

lawyer asks if he denies making hundreds of thousands of dollars, or even millions, from his forensic practice. What is important is not that he makes a lot of money from testifying, but that he is not being straightforward. Some jurors simply do not care how much an expert makes. In fact, some jurors think the more an expert makes from testifying, the better his credentials must be. Thus, the defense attorney should place the testimony in context: "You don't know if you make half a million dollars per year? Isn't that the kind of thing a person would remember?"

Code of Ethics

Does the expert belong to an organization with a published code of ethics? If not, then who is monitoring ethical behavior?

Did the expert *withdraw* from an organization that has a code of ethics? There have been instances in which doctors encountered problems involving ethical issues and withdrew from organizations before someone could complain. The complaint could have resulted in the expert being kicked out or sanctioned by the organization. It merits further inquiry.

University Experts

The defense team might be able to find publications on a university's website to support the defense team's position. Keep in mind that experts who claim to teach at a university may only have courtesy privileges, which means they do not get paid, do not teach classes and, perhaps occasionally, allow graduate students to follow them around in exchange for being able to say they are associated with the university. In addition, many publicly funded universities require employees to obtain permission before they do forensic work and some, such as the University of Florida, keep track. Send a Freedom of Information letter to the legal department of the university demanding the expert's entire file and all cases in which he sought permission to become an expert.

Casey Anthony Photographer: ©Orange County Sheriff/ ZUMApress.com

While researching gas chromatographs in the Casey Anthony case — even before she could speak intelligently with the expert — Dorothy Clay Sims needed to research the equipment by viewing photos using Google Images to actually see the instrument. Next, she saw the working apparatus by watching Google videos. She found this to be extremely helpful. "It gave me a frame of reference that put the science into perspective," Sims said. "You don't know what you don't know. Consider taking the jury through this process as well to ensure the decision-makers have a deep understanding of the science. Too often, I've seen lawyers lose an entire jury during the first five minutes of cross-examination."

Experts From Other States

Is the prosecution expert from another state? Many boards of medicine in various states require out-of-state doctors to obtain permission before they can testify. In fact, at least 30 states have adopted some type of regulation or requirement.[15] In an apparent attempt to limit doctors who testify for plaintiffs in medical malpractice cases, it is becoming more difficult to come in from another state and testify for plaintiffs.

It is also a good idea to make sure the *defense* team's out-of-state experts know the applicable rules. Failure to do so might result in the court striking defense experts. Even if an expert is not stricken, he will probably withdraw if made aware he is in violation of local board rules.

Research the Science

Look at the science. If a case involves research equipment, the defense can use Google Images[16] to find pictures of the equipment. See the equipment in action by watching Google videos.[17] Jury members might benefit from this exposure too.

Practice on a Seventh Grader

More than one juror may have the intellect of a seventh grader or less. This is an unfortunate reality. Do not forget that when a witness is testifying, members of the jury might be bored, tired, in pain, or thinking about something else. Defense counsel needs the attention of all the jurors when the defense expert is on the witness stand. If the science is not given in small digestible bites, defense counsel will lose the jury and the case. The defense risks a guilty verdict should that seventh grader not understand the science in the case and defense counsel's questions on cross-examination.

Research, Save, and Share

Start with Wikipedia? Yes. While it may not be considered an official scientific reference, Wikipedia offers a framework upon which to build a database. Consult Wikipedia to understand why a test was created, its weaknesses, and the funding behind it. Save the research. If defense counsel puts in 20 hours researching a topic, he should save the notes so that he can access them later. The issue might come up in a year, and the lawyer will have saved tremendous time. If an attorney starts doing this now, in a few years he might build up a databank of thousands of pages on experts and topics. Save the questions and the research; cut and paste in future cases. Share the research if the issue arises on a listserv. An attorney will receive help in the future on newer topics if he is not seen as someone who hoards data.

The Casey Anthony Case

Research Methodology

Casey Anthony was accused of the death of her two-year-old daughter. Prosecutors said forensic evidence — including the smell and chemical signature of decomposition in her car — linked Anthony to her daughter's death. A jury found Anthony not guilty of first-degree murder.

In Casey Anthony's case, the state introduced air obtained from a trunk that had been opened. The state's expert testified that moving air obtained from a trunk at a later point in time after a child went missing had revealed evidence of decomposition. This claim presented several problems. First, this type of testimony had never been accepted in any criminal case. Second, the methodology for *when* and *how* the air was obtained, stored, and analyzed did not come from a published instruction manual. Third, in the articles on decompositional chemicals, there was no consensus as to which chemicals constituted decomposition. Which one was the right one? Publications differed as to which chemicals exist in decomposition, and the chemicals present could depend on the location of the body and the conditions involved (below ground, above ground, temperature, and time of decomposition process).

One expert testified the amount of chloroform found in the car trunk was very high, and another expert testified the amount in the trunk was "very, very low." Furthermore, investigators found chloroform in an abandoned car in a junkyard. This posed a problem because this was an abandoned car with no evidence of a decomposing body in it. Perhaps car trunks simply have chloroform in them for reasons other than decomposition. Finally, a publication by one of the experts

listed chemicals that are allegedly present when human decomposition occurs. However, most of the chemicals listed were not found in the Anthony trunk.

If there is a break in the link that connects the science to the conclusion, then the conclusion may be invalid. How does a lawyer deal with science and experts when the experts are far more able to understand and even potentially misrepresent the science? The answer is quite simple. Defense counsel must believe what he tells the jury. The government has the burden of proof, not the defense. Approach cross-examination the same way. If the state in which defense counsel practices permits depositions, subpoena the relevant items. If the state does not permit depositions, subpoena the expert to bring published administration and interpretation manuals to trial outlining her methodology. They may not exist. In 2000, the Federal Judicial Center published the *Reference Manual on Scientific Evidence* and discussed how judges must explore the opinions of underlying experts:

1. Was an appropriate universe or population identified?
2. Did the sampling frame approximate the population?
3. How was the sample selected to approximate the relevant characteristics of the population?
4. Was the level of nonresponse sufficient to raise questions about the representativeness of the sample?
5. What procedures did researchers use to reduce the likelihood of a biased sample?
6. What precautions did researchers take to ensure that only qualified respondents were included in the survey?[18]

Lawyers should also consider asking for proof of blind independent verification. If the second scientist knew the opinions of the first scientist, then the verification was not blind. Blind means "fresh eyes" not tainted by a supervisor's opinion. Was the opinion of the first expert verified by a second expert? This type of verification has been recommended for DNA testing by the American Academy of Sciences.[19] Therefore, in any case involving a scientific test, logic would dictate a blind review would be appropriate. If the validation study exists, did the expert turn over the results? One of the best examples of this arose in the Gregory Taylor case in North Carolina.[20] The expert in that case failed to disclose he had performed confirmatory tests that revealed negative results for blood versus the positive result he received from a phenolphthalein test. This is a lesson for every member of the defense bar. Ask under oath whether someone conducted confirmatory tests and ask for the results. Selective reporting has been a tool of the trade for certain experts. This is cause for concern, especially if the expert is on the defense team. Make sure defense experts have not omitted any information.

Botanical Evidence

The state produced an expert in the Casey Anthony case who testified in deposition about how long he believed the child's remains existed at the scene where they were found. However, he candidly admitted his methods of measuring a few root diameters from digital photographs of unknown plants and then determining their age had not been published in any journal. The expert also admitted that he had no empirical evidence to support his methodology and that neither he nor anyone else he knew taught this methodology. In fact, a book this expert wrote suggested how to evaluate botanical evidence. Through no fault of his own, the author's method was not utilized in the Anthony case (the evidence was destroyed before he could see it firsthand). The state elected not to call him as an expert at trial.

Lawyers may wish to expose documentation of false positive rates. Note the question: Where is the *documentation*? An expert may claim she knows a false positive rate, but the defense attorney should demand proof. If the attorney asks for documentation in his question, it precludes the expert from postulating without backup.

As mentioned earlier, defense counsel should ask whether validation studies were performed. The National Academy of Sciences suggests this when dealing with DNA. The same requirements should apply to other areas of science.[21] The NAS Report stated that "human judgment is subject to many different types of bias, because we unconsciously pick up cues from our environment. …"[22] In fact, the report mentioned an experiment wherein contextual bias was introduced. As part of the experiment, researchers asked fingerprint examiners to analyze fingerprints that, unknown to the examiners, they had analyzed previously. Researchers told the examiners that a suspect had confessed to a crime, and in six out of the 24 examinations, the results were different from the prior time when the same examiner ana-

Codes of Ethics on the Web

American College of Epidemiology
http://www.acepidemiology.org/policystmts/EthicsGuide.pdf

American Board of Electrodiagnostic Medicine
http://www.aanem.org/getmedia/470fb367-ee3b-473b-8575-2af659695691/ed_gl_for_edx_tp.PDF.aspx

American Medical Association
http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics.shtml

American Academy of Neurology
http://www.aan.com/go/about/ethics

American Academy of Family Physicians
http://www.aafp.org/online/etc/medialib/aafp_org/documents/about/rap/curriculum/medical_ethics.Par.0001.File.dat/Reprint279.pdf

American Board of Independent Medical Examiners
http://www.abime.org/node/21

Congress of Neurological Surgeons
http://www.cns.org/about/pdf/cnsbylaws.pdf

American College of Emergency Physicians
http://www.acep.org/content.aspx?id=29144

American Neurological Association
http://www.aneuroa.org/i4a/pages/index.cfm?pageid=3301

American College of Surgeons
http://www.facs.org/fellows_info/statements/stonprin.html#anchor116209

American Association of Neurological Surgeons
http://www.aans.org/Media/Article.aspx?ArticleId=9842

American Psychiatric Association
http://www.psych.org/MainMenu/PsychiatricPractice/Ethics/ResourcesStandards.aspx

American Board of Vocational Experts
http://www.abve.net/certethics.htm

American College of Cardiology
http://www.cardiosource.org/acc/~/media/files/acc/leadership/acc%20code%20of%20ethics.ashx

American Optometric Association
http://www.aoa.org/x4878.xml

American Osteopathic Board of Surgery
http://www.aobs.org/pdf/AOA%20Code%20of%20Ethics2.pdf

American Psychological Association
http://www.apa.org/ethics/code/index.aspx

American Sociological Association
http://www2.asanet.org/members/coe.pdf

American Registry of Radiological Technologists
https://www.arrt.org/ethics/standardethic.pdf

Commission on Rehabilitation Counselor Certification
http://www.crccertification.com/pages/crc_ccrc_code_of_ethics/10.php

American Board of Forensic Psychology
http://www.abfp.com/bylaws.asp

American College of Forensic Examiners
http://ethics.iit.edu/indexOfCodes-2.php?key=23_39_1106

American Board of Forensic Toxicology
http://www.abft.org/index.php?option=com_content&view=article&id=56&Itemid=65

American Academy of Forensic Sciences
http://www.aafs.org/aafs-bylaws

National Academy of Neuropsychology
http://www.nanonline.org/NAN/AboutNAN/Bylaws.aspx

The Society of Thoracic Surgeons
http://www.sts.org/about-sts/policies/code-ethics

Ethics in Epidemiology: International Guidelines by WHO
http://whqlibdoc.who.int/publications/1991/9290360488_(part1).pdf

Society of Interventional Radiologists
http://www.sirweb.org/about-us/CodeOfEthics.shtml

American Academy of Physical Medicine & Rehabilitation
http://www.aapmr.org/academy/codec.htm

The Endocrine Society
http://www.endo-society.org/about/ethics/upload/ee20018398.pdf

lyzed the same print without the bias introduced. Therefore, the need for blind verification was clear. "Independent (blind) verification"[23] is necessary to reduce the impact of bias.

The goal is to make scientific investigations as objective as possible so that results do not depend on the investigator.[24] What happens if investigation into bias, or rigorous and deep investigation into the science, does not occur? Erroneous convictions or expensive second trials will be the result. A report on CNN revealed that "the FBI believed that lead in bullets had unique chemical signatures"[25] and at least 200 people were wrongfully convicted. In 2002 the FBI asked NAS to conduct an independent review. Two years later, the National Research Council issued a report finding that the process of bullet lead analysis was overstated, misleading, and deeply flawed.[26] Bullet lead analysis had been used to support convictions across the country — for decades.

An expert may not be aware of the documented error rate. This is extremely important. No science is perfect. If the expert cannot show how often the technique is wrong, then she has a problem. What if the testing technique is wrong 90 percent of the time? If new science is provided and the forensic expert cannot tell the defense attorney how often the technique or machine is inaccurate, then it is, by definition, unreliable. NAS also discussed determining the error rate when engaging in hair comparison.[27] Again, if it applies to the science of hair, the same logic dictates it applies to all other disciplines.

Negative Control

Lawyers need to know how experts obtain a *negative control*. Consider this example. The prosecution says the defendant committed murder. The police find his wife dead in the bedroom, and an autopsy reveals exposure to high levels of lead in the room. What is the expected level, if any, of lead in a bedroom where *no one died* (the negative control) such that a comparison can be drawn? The expert for the prosecution tests the air in the client's bedroom and concludes the levels are so high that they are toxic. If the expert sampled three random bedrooms where no one died (the negative controls) and found the *same* level of lead (which exists in drinking water and even air), then what is the *real* significance of the lead level?

- Where is the documentation showing that the machines involved are current, accurate, and reliable?
- Where is the documentation that the expert was appropriately trained on the use of the machine?
- Did the expert document problems that may have existed in running a sample? Did the machine fail to find a substance that should have been identified? Did the machine break down during testing? Did the expert document all potential failures?
- Where is the documentation that the lab is a forensic lab versus a research lab? Did anyone provide the defense with accreditation requirements for the lab and proof they were met?
- Did the expert adhere to the manuals supplied by the machine manufacturer?
- Do published lab standards exist? Were they followed?
- What are the quality control measures? Where is the proof they were followed?
- Was the chain of custody for the sample documented?

Research the Conclusion

Is there a conclusion? Some reports are so vague they never reach a conclusion. What exactly is the expert saying? If the state permits a deposition, use it to pin down the expert regarding the conclusion.

What is the expert leaving out? Sometimes a report may omit important conclusions, which may mean the expert does not have an opinion or the opinion is hurtful to the prosecution. Look very carefully for what is *not* in the report.

Does the expert have the training to make the conclusion? How, when, by whom, and where is the documentation? Did she merely attend a course? If the defense attorney attended the same

course, would that make him an expert?

Does the conclusion consider all pertinent facts, or did the expert reach her conclusion by relying only on the other prosecution experts? If she relied only on prosecution experts, does she have personal knowledge about the training and education of the defense witnesses? If not, where in her code of ethics does it suggest she reach a conclusion by ignoring other data and opinions from experts? This puts her on the defensive — which is exactly where she should stay. After all, the defense does not have the burden of proof, the government does (at least in theory).

If another fact is injected, or removed, does it change the conclusion? Does the conclusion make sense? Does defense counsel understand how the expert reached her conclusion? Will the jury understand how the expert reached the conclusion?

Is the conclusion legitimate, but essentially *irrelevant*? Consider a situation in which the police charge the client with assault. The prosecution produces a witness who conducted a psychological evaluation of the client. The doctor states in her report the fact that the client had an abortion. Some expert witnesses try very hard to get negative facts into a report and say something absurd to try and claim its relevancy. Convince the judge to limit this type of testimony, and then share the order limiting the expert. If possible, make sure the judge includes language in the order about the expert receiving a copy of the order. Then suggest that the next lawyer who examines the expert ask if his opinion has ever been stricken. Invariably, certain experts will lie.

Dealing With the Psychiatric/ Psychological Expert

Psychological and psychiatric witnesses are different from other witnesses. People in the mental health field are more likely to say, for example, symptoms "are consistent with" something. This is virtually meaningless. Alternative causes are equally or *more* consistent. How did the expert determine this? The use of this term is not only extremely prejudicial, but potentially misleading. "To say that two items are 'consistent,' without being able to tell the jury that consistency is rare or common, renders the evidence potentially misleading, and hence raises questions whether it is inadmissible as both irrelevant and unduly prejudicial."[28]

Consider reframing the conclusion when a doctor says the defendant is malingering. If the psychiatrist writes a report accusing the client of malingering (intentional misrepresentation), then prepare a document and ask the psychiatrist to sign it. "I, Dr. John Doe, MD, am stating under oath that the defendant, James Smith, is a *liar.* Date _____ Name _____" Malingering is *lying.* If the expert will not sign the document, her opinion must not be solid.

Research the Test

Defense counsel must remember to research the test. For example, the Fake Bad Scale in the MMPI-2 has been the recipient of criticism and multiple court orders throwing it out.[29] The test contains items that give points towards a conclusion of malingering if the client endorses symptoms of confusion, health issues, or mental illness. In essence the client is sick, mentally ill, and answers "true" to items that make up some of those symptoms — and he gets points for being a malingerer.

Verify the actual score. There have been cases in which a doctor's report indicated the defendant was faking. The report, however, was based on a test score which, in fact, was a passing score.

Consider ethno-cultural issues. People from different cultures respond differently to some scales. This must be taken into consideration when interpreting a scale.

Find out if the client has a low IQ. Some tests are biased and should not be given in the first place. Moreover, a client may perform poorly on some tests if he has visual or motor problems. In addition, a client with brain damage may perform poorly on tests experts claim support malingering.

A psychiatrist, and even a psychologist, may have no clue how to score a test she administered. For example, the MMPI-2 permits the doctor to have the answers the client gave scored by a computer. However, when the defense attorney asks questions about how to score the test manually or how many items in a scale must be endorsed before it is considered elevated, the expert has no clue. In fact, sometimes the expert does not even have the interpretation manual. A psychiatrist may ignore the defense expert's psychological testing, claiming it is irrelevant. How can the test be irrelevant if the psychiatrist does not *understand* it? Where in an expert's code of ethics does it suggest that the expert *ignore* evidence?

A psychologist may ignore effects of medication on testing and call it malingering. A good (free) website where one can review possible synergistic side effects is www.epocrates.com. List all of the defendant's medications; the website advises if the combination of medications causes additional impairment. In a DUI case, the defendant was taking a combination of medications that caused narcotics to stop breaking down in her system. She ran into a tree when her narcotic levels continued to increase. The prosecution dismissed the case after being given this information. One medication (Concerta) stopped the narcotics from breaking down in her system, and thus, while she had a toxic level of narcotics, it was not her fault.

If the psychologist tested the client, subpoena her to bring the instruction and interpretation manual to the deposition or trial. Why? Because a bad expert may misrepresent what the findings mean. Defense counsel needs to see the client's answers and verify the manual's interpretation. Defense counsel can ask the witness to do it in a single request. "Show me in the manual where it suggests one give the interpretation you gave in this case." If the expert cannot find it, it means it is not there. It is not unusual to read a psychological report, compare it to the raw data, and find key test results that were left out or misstated. Why do experts do this? Because they can. Most lawyers do not have hours and hours to spend

understanding a single psychological measure, so the expert gets away with it.

In the alternative, ask a psychologist to have his psychometrician (the person who does the testing and is paid at a much cheaper rate) to verify the scoring. Choose the key tests that are the most harmful and ask the psychologist to address the interpretation of those scales or tests. Ask her to verify it independently. Many psychologists simply trust the other side's interpretation of a certain scale instead of going back and reviewing the manual. There is a certain naiveté to treating psychologists that can be deadly in a courtroom. Misrepresenting the test is one of the most typical abuses. "Your client did well on the TOMMS. It's a memory test and your client has no brain damage and is competent." Translation: The TOMMS is the Test of Memory *Malingering*. Your client is not a faker.

Another ploy to watch out for is the use of old tests. Based upon what is known as the "Flynn Effect,"[30] the population is getting smarter from generation to generation. Therefore, if a doctor administers an older version of a test — which means comparing the client to a population that was normed 30 years ago — the client could test out with an artificially higher IQ. Furthermore, some experts do not administer tests in their entirety. Many manuals strongly suggest following the test instructions, including the instruction to give the entire test, not just give a portion and stop when the defendant does poorly.

Some experts will not admit when the defendant passes malingering scales. When dealing with IQ tests, watch out for experts who help with the answers. If possible, a lawyer should record the examination and psychological testing to make sure the defendant was not coached. If the opposition objects and claims raw data is not discoverable,[31] file a Motion to Compel.

Defense attorneys should take the tests. This is the best way to learn. The most common psychological battery is the MMPI-2. An attorney will understand how to conduct a better cross-examination of a doctor after taking the MMPI-2.

Meet with doctors and ask them how the results of a test can be manipulated. For example, in one case involving an IQ test, the administrator told the client to turn blocks over to create a pattern. The task was similar to putting a puzzle together. It was a timed test. The instructions indicated only two pieces should be in the correct position. The test administrator practically put the whole thing together, which put the client's score in the top 90 percent. In addition, an attorney should look for erasure marks when he examines the doctor's file. Finally, counsel should make sure the handwriting on the test matches the client's handwriting.

Conclusion

If attorneys train members of the defense team to conduct deep research on an expert, and if attorneys put effort into understanding the science, they will be able to stand their ground and expose bad experts and false science. This is a professional and ethical obligation. A client's life may depend on it.

Notes

1. The author conducted an informal poll in 2011 to determine the factors people consider when assessing whether an expert is believable.

2. B.L. Garret & P.J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1 (2009).

3. *Id.* at 1.

4. *Id.* at 2.

5. *Id.* at 24.

6. http://www.nationalacademies.org/about/history.html (last viewed April 3, 2011).

7. NATIONAL ACADEMY OF SCIENCES, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD (hereinafter NAS Report) (2009). Download the report at http://www.nap.edu/catalog.php?record_id=12589.

8. NAS Report at 37.

9. http://maps.google.com/maps?hl=en&tab=wl (use satellite view).

10. The author served as a consultant on the case.

11. http://www.google.com/patents.

12. www.archive.org/web/web.php.

13. Visit this excellent site (http://scholar.google.com/schhp?hl=en&tab=ws) to look for abstracts of articles, which also provide other articles that cite the article in question.

14. Go to http://books.google.com/bkshp?hl=en&tab=wp.

15. http://www.ama-assn.org/amednews/2011/08/01/prsa0801.htm.

16. http://www.google.com/imghp?hl=en&tab=wi.

17. http://video.google.com/?hl=en&tab=iv.

18. REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 46 (2d ed. 2000).

19. NAS REPORT at 37.

20. Mike Klinkosum, *State v. Taylor and the North Carolina State Bureau of Investigation Lab Scandal*, THE CHAMPION, May 2011 at 10.

21. "Methods to reduce errors are part of the study design so that, for example, the size of the study is chosen to provide sufficient statistical power to draw conclusions with a high level of confidence or to understand factors that might confound results." NAS Report at 112. "To confirm the validity of a method or process for a particular purpose … validation studies must be performed." NAS Report at 113. Regarding the specifications required by the FBI's Quality Assurance Standards for DNA testing laboratories, a laboratory "shall have and follow written general guidelines for the interpretation of data." NAS Report at 114-115. Finally, a laboratory "shall verify that all control results are within the established tolerance limits." NAS Report at 115.

22. *Id.* at 122.

23. *Id.* at 124.

24. *Id.*

25. http://www.cbsnews.com/stories/2007/11/16/60minutes/main3512453.shtml (last viewed Aug. 6, 2011).

26. NAS Report at 1, 2.

27. "Error rates are defined as proportions of cases in which the analysis led to a false conclusion." *Id.* at 120. "As in the case of all analyses leading to classification conclusions … the microscopic hair analysis process must be subjected to performance and validation studies in which appropriate error rates can be defined and estimated." *Id.* at 118.

28. B.L. Garret & P.J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 48 n.46 (2009).

29. Court orders are on file with the author.

30. http://en.wikipedia.org/wiki/Flynn_effect (last viewed Aug. 8, 2011).

31. Motions to compel (and multiple orders granting the same) are on file with the author. ■

About the Author

Dorothy Clay Sims was a member of the Casey Anthony defense team and consults with lawyers in cases involving expert witnesses. Her book, *Exposing the Deceptive Defense Doctor* (referring to insurance defense experts), is available through James Publishing. Sims gives private seminars to lawyers on research, the use of technology, and how to cross-examine expert witnesses.

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