National Commission on Forensic Science

Meeting Summary

May 12–13, 2014

Office of Justice Programs
810 7th Street NW, Washington, DC

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

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Monday, May 12

1:00 p.m.: Meeting was called to order by Brette Steele, the Designated Federal Official (DFO).

Welcoming Remarks and Meeting Objectives

Vice-Chair Nelson Santos, Department of Justice (DOJ) welcomed the group. He articulated objectives for the second meeting including setting priorities for Subcommittee work products and receiving an update from NIST on the progress of developing the Organization for Scientific Areas Committees (OSACs).

Vice-Chair John Butler (NIST) also welcomed the group and announced that the report *Strengthening the Forensic Science*s was released by the White House on May 2, 2014. He outlined the meeting agenda, and announced the Commission's website: http://justice.gov/ncfs/. He also announced the next two meetings of the Commission would be August 26 and 27 and October 28 and 29. Commissioner Mark Weiss discussed the National Science Foundation (NSF) initiative with Industry/University Cooperative Research Centers (I/UCRCs) in areas related to the forensic sciences, which NSF announced on May 7, 2014.

Co-Chair Patrick Gallagher discussed the role of the Commission in the long term. He emphasized the importance of aligning the efforts of NIST and DOJ so that they would effectively work toward a common goal. While OSAC work products would be available to the Commission, it will be some time before work products begin flowing from the OSAC. Therefore, it is important for the Commission to prioritize the work of its Subcommittees in the short term.

Discussion

Question: How would the Commission interact with the AFIS Interoperability issue and what would the Commission's role be?

Response: Dr. Gallagher indicated that an important role would be to assess and identify what it will take to achieve National AFIS Interoperability. The Commission could make recommendations supporting the adoption of standards or implementation of grant programs.

Question: How do we bring in scientists that haven't focused on forensic sciences in the past?

Response: NSF has asked for proposals for research projects that might lead to downstream use in forensics. These open the possibility of enhancing dialogue between the various scientific and forensic practitioner communities. Dr. Gallagher said a shortcoming is a lack of knowledge of possibilities for science that could have results that are useful in forensic sciences.

Human Factors and Cognitive Bias in Forensic Science

Panel Discussion

Facilitator: David Kaye
Distinguished Professor of Law and Weiss Family Faculty Scholar, Penn State University, Dickinson School of Law

Can You Control Bias? Subliminal Actions of the Brain That Can Affect Case Work

Deborah Boehm-Davis
Dean, College of Humanities and Social Sciences and University Professor, Department of Psychology, George Mason University

Dr. Boehm-Davis discussed how context allows the brain to process and interpret information. There are a number of factors that may cause a person to overlook information, such as during focused work, where information outside of the focus could be overlooked. She pointed out this selective focus helps the brain interpret information, but it can also prevent information from being recognized. Therefore, bias is a normal part of brain function and the process by which humans gather and interpret information.

Dr. Boehm-Davis described four types of bias that might affect forensic work: Fixation/Anchoring Biasing; Confirmation Bias; Saliency/Availability Bias; and Overconfidence Bias. When examining ways to mitigate bias that might have negative consequences on the practice of forensic science, we must understand all of the factors that influence bias and human decision-making.

On Bias in Forensic Science

John Collins
President, Forensic Foundation Group

Mr. Collins presented on the issue of bias from a practitioner perspective, beginning with two examples in which bias influenced conduct during an investigation.

Mr. Collins emphasized the importance of how investigative findings are defined to ensure the significance of the results is not overstated. He identified the following areas that could be vulnerable to the effects of bias: technical reviews conducted by subordinate employees; "customer - client" relationships; the probative value of results and the impact of legal proceedings; the manner in which results and conclusions are reported. Mr. Collins indicated that the community should identify ways to identify vulnerabilities and develop mitigation strategies to address bias.

The Need for Sequential Unmasking

Michael Risinger
John J. Gibbons Professor of Law, Seton Hall University School of Law

Professor Risinger began by making the following points:

1) Biasing information can distort results.
2) The more ambiguous the signal, the larger the distorting effect.
3) The more information engages emotion and desire, the stronger the distortion will be.

Professor Risinger indicated that there is a need to determine what information could be biasing to an investigation and that the community should define "domain-relevant" and "domain-irrelevant" information. Domain-irrelevant information must be filtered out so that the examiner doing the

procedure is "blind" to it and the order in which information is revealed is deliberately sequential. In essence, sequential unmasking would present domain-relevant information in a useful order.

Resistance to Sequential Unmasking may result from:

1) Masking protocols may be viewed as disparaging to the practitioner.
2) Forensic practitioners want access to all information that might be relevant to the analysis and conclusion drawn.
3) Ethics and professional integrity surmount bias.

Professor Risinger imparted the importance of initiating the effort of defining "domain relevant" information so that mitigation strategies can be developed and deployed into the practice.

Expert Systems and Cognitive Bias

David H. Kaye
Distinguished Professor of Law and Weiss Family Faculty Scholar, Penn State University, Dickinson School of Law

Professor Kaye discussed automated systems as a potential means to mitigate bias, including several examples from forensic science: Toxicology; Accelerants; Firearms; Fingerprints; and DNA.

He indicated that this commission could be involved in determining if there are enough validating studies to support the use of automated systems and to identify areas where research is needed that may assist in the validation of automated systems.

Questions from Commission Members for All Panelists

Question: How do we devise a program that develops a sequence of unmasking evidence?

Answer: There has been research to demonstrate that the phenomenon of bias exists (or perhaps more appropriately, the conditions that enhance bias). Research is needed to test the efficacy of various strategies related to unmasking.

Human factors can take into the account the design of tools and procedures that would minimize bias. For example, research on use of checklists in airline cockpits and operating rooms shows these are helpful. Research would find the ones that are most likely to pay off in forensic fields.

It was suggested that more research on observational bias isn't needed, since it has been shown that this phenomenon occurs. Rather, research into developing "domain-relevant" information should be conducted. This would need validation by research that investigates the processes that could be put into place.

Question: Is there research that shows that training mitigates cognitive bias?

Answer: The challenge is in determining which information is needed and which is not.

Question: Is there research to show sequential unmasking mitigates bias?

Answer: The question is in distinguishing between "domain-relevant" information and "domain-irrelevant" information. The point is to determine what falls into each category. That knowledge will inform the order in which the information is presented.

Question: There are grey areas where research is needed. Is there information that would help an investigator analyze the evidence but may potentially bias the researcher?

Comment: It was pointed out that for forensic pathologists, their medical training emphasizes history. Many won't do an autopsy without being given a great deal of information. How might this bias the pathologist? Other domains face similar issues.

Ethics and Forensic Science

Ethics and Forensics: Ideals and Realities

J.C. Upshaw Downs, M.D.
Coastal Regional Medical Examiner, Georgia Bureau of Investigation [though addressing the Commission as a public citizen]

"How can we make a difference when everyone is taking a shortcut?" he asked. "How do you demonstrate that ethics are important?"

Dr. Downs discussed individual and systems failures in ethical situations and how these may overlap and intersect. A bad system may perpetuate unethical behavior and unethical individuals may contaminate the system. He pointed out that scientists are human, and they do make mistakes. Everyone is vulnerable to bias.

Ethics focuses on the individual and the culture within the broader system. What do we consider the values that are sacrosanct? Process is important; we have to find the right answer the right way. There are scientific facts, but data can be open to different interpretations.

Dr. Downs discussed process when the question of ethics violations arises such as conducting investigations and enforcement mechanisms. He brought the idea of licensing individuals as one enforcement mechanism. He argued there is a need for a system that includes accountability and acceptance from all who would be impacted.

Rob Lesnivich, Director, Forensic Science Laboratory, U.S. Treasury Inspector General for Tax Administration

Mr. Lesnivich's presentation addressed his work with the Education, Ethics, and Terminology Interagency Working Group (EETIWG). He discussed the option of establishing a national code of ethics for all forensic scientists, having all the professional organizations integrate the code, as well as putting an enforcement mechanism in place (e.g., through a certification or licensing process). He pointed out that currently, there is no all-compassing or uniform mechanism of enforcement for forensic scientists. Ethics codes have been incorporated into accreditation procedures in some organizations. Mr. Lesnivich suggested that there needs to be a single organization to enforce a code for all forensic science service providers, acknowledging that challenges include the wide range of forensic specialties and practices, and the difficulty of developing enforcement methods.

The EETIWG identified common elements of existing codes of ethics, including professionalism and competence; clear and competent testimony; and avoidance of conflict of interest. Mr. Lesnivich pointed out that the ASCLD/LAB accreditation program has a code of ethics that includes the common elements and is enforced through accreditation.

Comment: The Commission should look at the things that are missing from ethics codes. For example, ethical situations may arise post-conviction. What do you do when science changes? It was also pointed out that there is very little about documentation in ethics codes.

Comment: The suggestion was made to lay out the highest ideals of the profession in an attempt to change the culture rather than focusing on the outliers. Having a robust code of ethics would be

useful to give guidance in egregious but rare situations. Sanctions aren't needed for the large majority of people.

Comment: You can have a code of ethics, but it's important to have an atmosphere in a lab where the organization is reinforcing its value, through accreditation, for example.

Questions: How do you become the purveyor of ethics in a system?

Answer: It's structure that's important. It's not the outliers that we should be concerned about. What kind of organization structure do we need to avoid mistakes, to avoid the possibility of cheating? What are the ways to design a system and move labs to different structures? Don't blame the individuals. Simply signing a code may not do much.

Comment: The culture within a laboratory should include determining root causes for when problems arise and corrective action for how to address them.

Comment: Ethics is not about policing and demonizing, but rather about giving people guidelines, particularly for difficult situations about how they should proceed. It was noted that this group could come up with suggestions on how to do this.

Comment: The organization has to be the driver.

Nelson Santos, DOJ

Mr. Santos suggested that three themes that the Commission could move forward on:

1) Developing a National code of ethics.
2) Training to the code to include situational examples.
3) Enforceability models.

Public Comment

Facilitated by **Brette Steele,** Designated Federal Official

Thomas L. Bohan
Vice-President, Forensic Specialties Accreditation Board, Vice-President, International Board of Forensic Engineering Sciences

Mr. Bohan discussed the narrowness of the National Academy of Science *Strengthening Forensic Science* study of 2009. He mentioned forensics evidence that was left out of that study that needs to be addressed by the Commission—for example, "shaken baby syndrome." He suggested there is a need for an organization to develop guidelines for addressing these types of areas and accurately assess the guidelines, by having staff who can design and interpret validation experiments. He suggested the OSAC structure might be the entity that could do this. He also suggested that at least one subcommittee directly addressing forensic engineering should be added to the 23 now planned for OSAC.

Wrap-up

Nelson Santos discussed the goals of tomorrow's meetings and the presentations by the Commission subcommittees.

The meeting adjourned at 4:40 p.m.

Tuesday, May 13

The meeting was called to order at 9:00 a.m. by Brette Steele, Designated Federal Official.

Nelson Santos announced that the new website was live and could be found at www.justice.gov/ncfs.

Mr. Santos indicated that the ultimate objective of hearing from each of the subcommittee co-chairs was for the Commission to identify one or two priorities for each subcommittee. There was an announcement that anyone who is interested in participating on a subcommittee should contact NCFS Program Manager Robin Jones. Mr. Santos pointed out that as priorities change, subcommittees may be established or dissolved giving the greatest opportunity for stakeholder input.

Mr. Santos indicated that a template was being developed that would be applied to all subcommittee work products. Work products will be developed in the form of:

1) Policy proposals
2) Directive recommendations
3) Views documents

Subcommittee Reports and Discussion

Accreditation and Proficiency Testing Subcommittee

Linda Jackson and Patricia Manzolillo, Co-Chairs

The subcommittee held one teleconference. There are currently 4 members of the Commission on this subcommittee, and they are looking for more.

The subcommittee recommended universal accreditation as the overarching goal, but this might be a longer term recommendation. Some questions need to be considered:

1) What is a reasonable time period to achieve universal accreditation?
2) What other industries can be referenced?
3) Is there a role for a regulatory body?
3) Are the accreditation programs themselves meeting minimum standards?
4) Who is included in professional universe when we refer to universal accreditation?
5) As part of a quality system, what preliminary steps can be taken by forensic science service providers before achieving accreditation?

In the shorter term, a views document on proficiency tests would likely be developed to define the landscape, terminology, and value of participating in a proficiency test program, even in the absence of accreditation.

Question: Have you considered examples from universities where accreditation can be withdrawn?

Answer: Not universities per se, but withdrawing accreditation is something that has been done by some accreditation bodies.

Question: Under what conditions might accreditation be withdrawn?

Answer: We will look at industries with long experience when we consider this—for example, the clinical laboratory industries, and what steps are involved.

Comment: There is a distinct difference between industry labs and forensic labs not only in what they do, but in how they interact with the legal system. The subcommittee should consider more than just standard operating procedures. For example, testifying or presenting evidence is very different from a pharmaceutical lab's work.

Comment: We need to look at this as a tiered approach. We suspect there are thousands of agencies that do not even have written policies or standard operating procedures.

Comment: It's time to nail this thing down and set some sort of deadline—for example, 5 years from now. Anyone who does analysis, writes a report, and can be qualified as an expert witness to testify in court has to be accredited.

Comment: How, realistically, do we get there? Some operations may not even know what they need to do to implement a quality system.

Comment: The state legislature can pass a law that anything used in a criminal court case has to come from an accredited lab. Otherwise the results cannot be introduced. This was done in Texas.

Comment: As a Federal commission, much of this may be beyond what we can reach. The direction can be for Federal labs. We're talking about too much. The accreditation we can deal with is through the Federal criminal justice system. I'm thrilled about the suggestions; it's important to discuss the issue and the model. But I don't know that we have to get into the weeds of the two- or three-person shop. I thought we'd lead by example. Not sure it benefits us to talk about the small labs. There are also complexities in the legal system—for example, in the calling for evidence by the defense in a legal setting.

Comment: Most of the Federal labs are already accredited. The issue is in the smaller labs. Any of the accredited labs would be willing to give guidance. It is possible to document procedures.

Comment: The subcommittee is looking at how the AG could affect where most of the work is done, which is in the smaller labs. It is the influence we're trying to get across, so we can, as a Commission, look at a stepwise approach.

Comment: We don't all understand what the current state is. It's something we all can work together to improve. If something isn't up to standard, we can work together to improve things. I hope we don't study this too much. Our intent should be to move the Commission forward.

Comment: I think it's time for action. There is a public confidence issue—what happens in the unaccredited labs influences what people think about the whole process.

Comment: I am a supporter of accreditation, but I do want to caution that accreditation is not a panacea for admissibility. With respect to aspects about access for the defense to forensic analysis, that is an incredibly challenging situation. Attorneys are not going to want to use unaccredited labs. Often they are just reviewing reports from evidence analyzed in other labs.

Comment: There is a distinction between reviewing and doing testing. If they're doing testing, that would fall under accreditation, but not if they're only reviewing results of analysis. This is relevant to defense access.

Comment: When 2 experts disagree, let's make sure they are using the same standards and testing. That variable should be eliminated.

Mr. Santos suggested universal accreditation for publically/government funded forensic labs may be a place to start. This was followed by discussion among Commission members about a variety of issues, including constitutional concerns, and the need to find ways to protect findings of importance

to the accused. There was concern about taking a vote, and a need to hear the rest of the committees. After this discussion, the Commission decided against a vote, but they did provide direction to the subcommittee, suggesting that they look at ways to move forward on accreditation.

Reporting and Testimony Subcommittee

Judge Jed Rakoff and Matt Redle, Co-Chairs

The subcommittee had one conference call. This is one of the largest subcommittees, largely made up of people with legal backgrounds, but they added a few members with laboratory backgrounds.

The focus of the call was to identify report content. They selected 3 categories of disciplines:

1) Strong science base (e.g. DNA, drug chemistry, and toxicology).
2) Pattern recognition areas, (e.g., tool marks, firearms, and fingerprints).
3) Areas where the basis in science is controversial (e.g. handwriting analysis).

The group's idea was to determine if there are reporting requirements that are widely recognized in each category and if any are consistent across categories.

The subcommittee discussed uniformity of reports, not just in terms of content, but for consistent terminology to reduce ambiguity and to have a uniform way of conveying information to the consumer of the report. They then looked at what information should be included in the report; what information should be documented. They addressed whether the distinction between the report content and bench notes and case file are an important distinction to make, as long as the data are available through the discovery process.

Focus also turned to some suggested models we might want to follow, such as Federal Rule 26 (Duty to Disclose). Would this be a good model?

The subcommittee also looked at other requirements for reports, such as timing, and adding to reports. It may also help eliminate overstatement by a witness on the stand, tying his or her testimony more closely to a written report. The need to train analysts in ethical issues related to the preparation of reports (e.g., *United States v. Brady*) was identified as an important point.

Comment: I heard nothing about how reporting of data, statistics, and probabilistic statements would be captured in the requirements or fit within the structure.

Comment: Because there were time constraints on the call, we didn't get into the substance of these areas. We tried to identify broad issues. That is an area that can't be avoided, since it is an area where there have been substantial difficulties. Mr. Redle said they did consider creating subgroups within the subcommittee.

Comment: Standard 5 for ISO/IEC 17025 should probably be the starting point and be the basis of a standard.

Comment: This idea was discussed by the subcommittee.

Question: Why the three categories?

Comment: To see what commonalities there are and to help identify shortcomings in each. It was a place to start discussion, looking for aspects that may apply to all, but recognizing that one size doesn't fit all and some types of forensic science may need particular reporting contents. For example, statistical analysis may not play much of a role in handwriting, where it is very important in DNA work.

Comment: The OSACs can play a role in looking at specific reporting requirements and content and providing that to the subcommittee.

Medicolegal Death Investigation Subcommittee

Vincent DiMaio and John Fudenberg, Co-Chairs

The first conclusion by the subcommittee was the need to have situational awareness: How many medicolegal officers are there? What type of offices are they in? What are their duties? Who do they report to? Are they accredited? He suggested an electronic network would be valuable. It could also be used for continuing education.

Dr. DiMaio described four levels of operations in the field that could be used as a basis for analysis:

1) Level 1 includes all 3 sections: an investigative section, a medical section, and a toxicological lab. All participants are board certified.
2) Level 2 has two of these 3 sections.
3) Level 3 only has a medical section (only conducts autopsies).
4) Level 4 has a coroner and some investigators.

Mr. Fudenberg discussed accreditation for the medicolegal profession. This area is 10 to 15 years behind other professions. There is only one national and one international organization, and neither is accredited itself. There are over 2,000 systems in the United States, and fewer than 100 are accredited. So that is something that needs attention.

Certification: There are 3 groups of personnel: forensic pathologists, coroners, and medicolegal death investigators. Mr. Fudenberg discussed the certification of each of these groups. Most medicolegal death investigators are certified. He suggested coroners should be certified.

Mr. Fudenberg pointed out there is a shortage of board-certified forensic pathologists. There are approximately 500 to 600 practicing in the United States, but the estimated need is 1,100 to 1,200, based on the population to be served. He discussed measures to increase the number of investigators, such as lobbying medical schools and residency programs to include this area in their training, and increasing salaries. Because of the shortage, the caseload is very heavy, so very few have an opportunity to do research.

Dr. DiMaio noted that budget is a major factor in medical examiner offices, and a medical office's budget often determines how many autopsies are done each year. Other problems without an adequate budget include facilities, training, equipment, and personnel. He pointed out that lack of research means there are no good studies on probability of different circumstances. There is no interaction with medical schools and statistical research is lacking.

The National Association of Medical Examiners has developed standards for autopsies, but there is a problem in presenting the standards back to the examiners. Acceptance may be a problem. How do you enforce them?

Comment: A higher-level recommendation is being considered by the subcommittee related to certification and determination of cause of death. Cause of death should only be determined by a board-certified pathologist.

Question: Recognizing the dearth of research might it make sense to come up with a recommendation to get NIH and CDC more committed to doing research in the area?

Comment: Mr. Fudenberg has reached out to the CDC. There is interest in working with the subcommittee, and there may be research funding available.

Training on Science and Law Subcommittee

Judge Barbara Hervey and Jim Gates, Co-Chairs [Gates not present]

Judge Hervey reported that the subcommittee advises an emphasis on training the judges first (though there was not 100% consensus).

We've got the tools that can be used, and materials are available. Funding is an issue, and it may be difficult to get judges and other individuals to commit to training.

There was agreement by the subcommittee that gathering educational materials that are already available is a simple task that we should begin. The subcommittee recommendation would be to focus on judges first.

The subcommittee suggested developing a standard of learning needs based on the following:

1) General rules of gate keeping (admissibility of evidence).
2) Science 101—what is the scientific method?
3) Education on the NAS report (not as an advocate for the report itself, but the issues that it raises).
4) Education on the various disciplines.
5) Information delivery (need for funding for preparation of educational materials and their delivery).

The subcommittee also discussed creative funding sources, possible involvement of law schools, and availability of online resources. The subcommittee discussed the possibility of doing a survey among judges to help determine what training might be needed. They pointed out that this was something that could be started right away. They recognized that different training might be needed for different groups besides judges.

Question: If we could identify the components of the training, what are the essential topic areas? What might be something that could be moved forward by the Commission? Can we identify the areas in which we can develop something that the AG can recommend? Content that would be important for everyone to know about?

Comment: The American Bar Association (ABA) is going to make forensic sciences a priority. The ABA has been informed about the Commission and its work. The ABA is going to do a panel on what has happened since the NAS report and what they should do about it. One consideration is that prosecutors and defense lawyers might want to be trained separately. Dr. Gates, another subcommittee member, referenced a common-core curriculum on forensic science education, starting first with judges.

Comment: The value of online training and webinars is that they would be available to all, and they are inexpensive.

Comment: The recommendations will be to define a common core list of subject areas for training legal professionals. There needs to be funding for the development and delivery of the training material.

Scientific Inquiry and Research Subcommittee

Susanne Bell and Jeff Salyards, Co-Chairs

The Subcommittee has had one in-person meeting. A priority issue that was discussed is to address what to do with the annotated bibliographies that resulted from the work of the SoFS. It was also recognized that there will be interaction with the OSACs. Given the discipline-specific nature of the OSACs, it was suggested that they define and prioritize research agendas.

The Technical Assistance Program (TAP) as a means for training.

Conducting research in a forensic laboratory can be challenging given the demands of completing casework. Likewise, training can be a significant challenge, but innovative programs such as the Marshall University Technical Assistance program. Dr. Crouse mentioned the difficulty of doing research in some forensic laboratory settings. She described what the Technical Assistance Program was. It was first started in the DNA area, working with Marshall University, where an intern from the TAP program would come to the lab to work. The intern brought resources, such as familiarity with kits, software, and so forth. She feels this could be a great program for any specialty area. There may be funding difficulties, but it has been very useful.

Sharing and Disseminating Results
The subcommittee discussed these questions: How should we work with the funding agencies? How can we build this into the system? What are the ways to make it possible for people from labs to go to other programs for training? Much of this may be a communication issue, letting people know about the work that has gone on already.

Comment: The Scientific Working Groups (SWGs) came up with an annotated bibliography from the various forensic science areas. Much of these had to do with standardization. We would like to see NIST take this over, evaluate these studies, and move them forward. What can be done, and what are the priorities? NSF would be pleased in entertaining a workshop on the basis of fundamental scientific analysis—for example, how to analyze fundamental research and determine if it is good science.

Comment: The NSF event might generate guidelines for the OSACs on how to evaluate the quality of the research and its data.

Question: You thought the OSACs would be the best focal point. My question is, is this right? Would they be privy with the controversies surrounding certain fields? Are these groups too insular?

Answer: One suggestion may be to have NIST personnel on each OSAC to bring expertise.

Comment: It is in our mandate to ask broader questions about research. When a group starts work on a task, they may tend not to look outside their domain. We're talking about a breadth of scientific input. We need to advise more broadly.

Comment: Who should do the data-mining of information that is already out there? With 23 OSACs, we'd need a template in place on how to interpret and present the data. So that is the importance of the NSF seminar to help in creating the guidelines.

Comment: Another concern about using the OSACs is that their primary responsibility is developing technical standards. I think it would make more sense to complement those groups by creating a group to set the direction.

Question: How will cognitive bias be addressed and research looking into this area developed?

Comment: The National Science Foundation (NSF) is interested in receiving proposals about cognitive bias where there are potential applications to forensic science. NSF would like to see those projects being proposed. We need to bring the ideas in current cognitive bias research to all the areas of forensic research.

Comment: Researchers may need access to materials. Forensic labs will have to participate in providing these materials to support the research efforts.

Interim Solutions Subcommittee

Dean Gialamas and Peter Neufeld, Co-Chairs

Gialamas: The way we see this committee is in the light of urgency. What can be done quickly? What can we do now to improve standards? The intent is not to step on the toes of other subcommittees, leaving longer-term work to them. The subcommittee divided the areas into two tiers:

1) Primary tier—might be able to resolve something today or by the next meeting.
2) Secondary tier—may take 2 or more Commission meetings to resolve an approach.

Primary Tier

Neufeld: Today the subcommittee recommends to the body that they establish a new subcommittee to deal with cognitive bias. The aim of the subcommittee would be to determine what procedural actions can be taken to mitigate the effects of cognitive bias and come up with recommendations the AG can propose fairly quickly, to be implemented first in Federal laboratories.

Next, the subcommittee is concerned with the need for NIST full-time staff to support the OSACs committees to relieve the burden on members of the OSACs. The subcommittee suggested a directive for the AG and NIST to come up with 6 staff members to work with the 5 OSACs committees and the executive group. He suggested the Intergovernmental Personnel Act (IPA) might be a mechanism to do that.

Another primary-tier item would be the problems of sharing fingerprint data among systems across the United States. We need the systems to talk to each other. We should recommend a definite date by when that should be achieved.

Secondary Tier

1) Are there areas in the OSAC structure that should be added to?
2) Are there limitations in some disciplines where data are currently lacking? There needs to be some way of offering a limiting expression of the probative value of that evidence. The idea is to avoid overstating the science. Come up with language that addresses that. What's important is that this is short term until the work of a subcommittee is over.
3) Develop a quality management documentation system. Push for root cause analysis and when that should take place.
4) Address the problem of potentially misleading use of words. What does "inconclusive" mean? "Match," "similar to," "consistent with": These terms mean different things to different people. These words need to be defined or eliminated.
5) Reporting requirements: There should be at least a minimum level of information provided with a report.

6) National Code of Ethics: put forward a recommendation to make this happen.

7) Suggest that Federal Lab directors have their labs submit to blind testing to provide data and information. This sets the example. It would also inform this group. What is the range of information coming out of different labs? Are there disparity gaps?

Priorities—The subcommittee suggested a vote today on the following:

1) Establishment of a subcommittee on cognitive bias.

2) Recommendation that NIST hire full-time people to help the OSACs.

Gialamas: Proposed motion: Recommendation to create a subcommittee on cognitive bias. Vote by a show of hands. These were counted.

The vote for: 14. The vote against: 9. Motion carries.
(*Note:* There was discussion later in the meeting about the bylaws regarding voting and the number of votes required to pass a motion.)

Next vote:

Recommendation that the AG work with NIST to find funding and hire full-time employees to assist in working with the OSACs.

Unanimous vote in favor.

Co-Chair Remarks and Next Steps

James M. Cole, DOJ Co-Chair
Patrick Gallagher, NIST Co-Chair

Subcommittees were asked for a 2-minute synopsis of the discussions and directions given to them by the Commission.

Accreditation Subcommittee
This revolved around possible recommendations for universal accreditation. That generated discussion to consider who it would cover, to look to a tiered system, to implement items such as proficiency testing, and to examine other industries and their accreditation and certification procedures.

Testimony Subcommittee
The subcommittee discussed report content, models that provide guidance in what is appropriate report content, uniformity of wording, and access to information that is of benefit to parties aside from those in the report.

Medicolegal Death Investigation Subcommittee
The subcommittee suggests personnel in all types of systems should be accredited. There is a need to increase the number of personnel. We would like to formally recommend to the AG that they do a directed recommendation to the CDC to reintroduce programs for medical examiners.

Training Subcommittee
Should it be just judges, or judges and lawyers together? The number one goal is to try to develop a common core curriculum.

Scientific Enquiry Subcommittee
Focus on research and development with an emphasis on human capital.

Overcome barriers to getting research already out there to practitioners.
Develop a mechanism to evaluate the quality of the literature currently available.

Interim Subcommittee
Create core definitions.
Address limitation in opinions for testimony.
Look at a recommendation for nationwide fingerprint data sharing.
Define events that need root-cause investigations.
Determine how certain terms can be used.
Create a national code of ethics.
Initiate a study on proficiency testing in federally funded labs.

The Chairs summarized the votes that were conducted: 1) A recommendation to create a new subcommittee on cognitive bias; and 2) A recommendation to the AG to help NIST identify more full-time staff to assist in the OSAC structure.

Wrap–Up

James M. Cole, DOJ

DAG Cole opened by extending his thanks to Pat Gallagher, who is moving on to be the Chancellor of the University of Pittsburgh.

DAG Cole said he appreciated hearing from everyone and wants to hear more. He expressed his gratitude for the work of the Commissioners. He directed a number of questions to the Commission in areas where DOJ and NIST look to the Commission for its input. How do we produce the kinds of ideas to determine what we need to be looking at? We have a range of people with different backgrounds. The science needs to be the science. What are the standards? What are the measurements? How does that translate into a court of law? Does it help the system of justice move forward accurately? We are looking for truth, for accuracy. We need science and the ability to translate science into practice. What are the issues we should be looking into? What are the areas where we don't have the science, or we don't have the science right? It is helpful to throw them out for discussion and refinement. He indicated he had heard very good discussions about places to focus our energies.

We need to make sure we staff this properly. Give assistance to the members, (e.g., in writing drafts), but they will need input from the Commission on the development of those drafts.

He asked Commission members to let him know what else is needed to accomplish the goals. He pointed out it may take time to do some things, but others can be done more quickly. "Let's identify what those are," he said. "We can make recommendations on a rolling basis throughout the Commission. Let's try to prioritize."

He closed by thanking the Commission again for their work.

Patrick Gallagher, NIST
Dr. Gallagher thanked Jim Cole for his remarks, but also for his work to come up with a structure that is so potentially beneficial. He thanked Mr. Cole for his leadership and thanked the whole DOJ team for their work.

Dr. Gallagher said he agreed with Mr. Cole's comments on looking forward and developing next steps. "We are putting together mechanisms that haven't existed before. Two very separate agencies with quite different goals have to come together and to figure out ways to do this." He said DOJ and

NIST are looking to the Commission to help come up with recommendations to help these two agencies work together.

The second half of this new endeavor is that this will draw on the entire communities beyond just the two agencies you are advising. "We need to serve you well so you can carry out your function. What resources, what staffing resources are needed? We want to give you support that is as strong as possible."

The early recommendations produced during this meeting look extremely promising, said Gallagher. He pointed out there has been a real transition in NIST as an agency that forensics is now a core role. Understanding pure measurement without purpose doesn't serve the public interest. There has been a remarkable transition to looking at new ways to interact with other groups. "We are in a building-up phase and look for you for advice."

He discussed the vehicle of the OSACs as an integration mechanism allowing NIST to interact with a range of other groups and to figure out how to put things into practice. "We are very open to your input in getting up the OSACs set up correctly. I do want to make sure we understand exactly what resources and staffing you need."

Gallagher concluded by announcing that Dr. Willie May, currently Associate Director for Laboratory Programs and Principal Deputy, NIST, would be taking over his position.

Comment: Staffing has constrained how the subcommittees and the commission have thought about its work to date. We're not simply marshaling existing scientific evidence and moving that forward. There are real gaps and ways of thinking about the science and the topics we choose to address that require a systematic approach. It was suggested that both departments could help in moving that forward. We need to figure out an operational way for the Commission to interact with that enterprise.

Comment: We feel it's important for NIST to have full-time staff involved in the OSACs. How will they be put together? Will there be a NIST staff member on each OSAC subcommittee? Our Commission subcommittee would want to work with the OSACs.

Comment: Thanks for putting together a complex and ambitious structure. My concern is about process. Unless there is integrity in the process, we won't have the buy-in of the stakeholders. "My concern is we are trying to build a plane while it is in the air." We need to think carefully about how the committees are structured and deliver their information. We need information about how decisions are being made - not only what we want to accomplish, but also what the structure is. We need to know who the members of the subcommittees are, and what the structure and updates of their work would be along the way.

Comment: Transparency is important. We are going to get into the "dirty laundry" of laboratories to find out the problems. We need to have a mechanism to make this happen and address issues that are potential stumbling blocks.

Comment: Underscored earlier comment about process. It's not just identifying issues and how to prioritize there. We need to figure out how to avoid talking about "stuff" that is way down in the weeds. We need to stay at a higher altitude, where we would find common ground more easily.

Proposals from subcommittee should be written and available to the commission before the vote. There needs to be due process and appropriate notice, so members know what they are voting on.

Coming up with ideas is easy; application is the hard part. Urged NIST and DOJ to listen to the professionals and look for ways to move things forward.

Update on the Organization of Scientific Area Committees (OSAC)

Mark Stolorow
Director of OSAC Affairs, Office of Special Programs, NIST

Dr. Willie May introduced himself before Mr. Stolorow's presentation. He outlined NIST's role in forensics and NIST's support of forensic science. "We heard you [about staffing issues] and will come back in August and tell you how we are going to address that."

Since the presentation on February 4 when the Commission gave feedback and comments, NIST has taken that input on the OSACs and applied it to the framework.

Mr. Stolorow explained NIST's role and work in forensic science, including 13 research areas at NIST. He mentioned NIST's outreach to discuss OSAC structure. NIST has heard from a dozen or so stakeholders, including the Commission.

He summarized the situation with regard to membership of various OSAC committees and working groups. An online membership application process was held open for 30 days. Over 1,300 applications were received.

Stolorow reviewed the structure of the OSACs system:

1) Governing board of OSAC—sets policies and standards, and creates a registry.
2) Human factor committees—system analysis, cognitive bias.
3) Scientific area committees—open process to manage work in a scientific area.
4) Working groups—where the real work is accomplished. Developing standards and best practices.

Mr. Stolorow highlighted changes since input from stakeholders had been received. The Human Factors Committee is a new addition, based on the input of the Commission.

Based on recommendations from the American Society of Crime Laboratory Directors (ASCLD), the quality infrastructure was expanded, as was the quality assurance committee. Blood stain analysis was moved into another group, a physics category rather than crime scene investigation. An odontology subcommittee was added in the crime scene and death investigation areas. It will include disaster victim identification and bite marks.

Mr. Stolorow said applications for the OSACs came from all 50 states and 21 countries. State- and local-level participants were the largest groups, making up about half of the total. Among applicants, 65% are practitioners. He presented a chart showing the number of statisticians who applied for each area in the organizational tree. There was also representation from a broad number of professional organizations.

Dr. May, then discussed the NIST Centers of Excellence Program and how NIST is working with the universities that can help develop capabilities quickly.

The first NIST Centers of Excellence Program was in the area of advanced materials centered at Northwestern University, the University of Chicago, and Argonne National Laboratory Labs. Funding is $5 million for 5 years, renewable for 5 more.

The next Center of Excellence will be in the area of forensics. Funding will be $2.5 million to $3 million a year for 5 years. May asked the Commission for its input on what the emphasis of that Center should be.

Question: How many applicants are there for OSACs positions? Do they cover all the areas?

Answer: Dr. Butler indicated that was generally the case and said the next step is to identify the particular individuals to offer balance and ensure that all areas are covered adequately. We do need more statisticians and more academics in some areas.

Question: A question was asked about the limit in the application of being able to choose two preferences when applying for an OSACs position.

Answer: Where there are gaps, if there are surpluses in other areas, we'd see if people are willing to be shifted to other areas. We can also recruit beyond the 1,300.

Comment: Sequential unmasking might be something that is appropriate for a NIST Center of Excellence.

Question: What is the role of task groups when specific topics arise?

Answer: Could be task or working groups that deal with a specific topic—for example, writing a white paper. The subcommittee could look outside to bring in subject matter experts as guests. Could be short term or longer as needed. The idea is to have some flexibility.

Comment: Concern was expressed about explosives and fire analysis and where the OSAC subcommittee is in the overall structure.

Answer: This is a framework that is fluid, designed to be dynamic and to make changes as needed. Going forward, the top board in the organization chart will start to look at how things should be organized.

Comment: Another idea for a Center of Excellence would be in the area of cognitive bias and the application of forensics.

Comment: Pattern matching disciplines are very important. These disciplines would have the most impact.

Public Comment

Facilitated by **Brette Steele**, Designated Federal Official
Peter Marone, Consortium of Forensic Science Organizations (CFSO)

Mr. Marone pointed out a need to look at the implications of Commission recommendations and the possible need to limit them to publically funded laboratories. He said private individuals and companies might be challenging areas to influence and may be a trickle-down issue.

On the issue of accreditation: "Many of the members don't understand what is involved," said Marone. He urged the Commission to come up to speed on what is already out there in this area. There is a very robust program in place. The Commission needs all the information before making decision.

Regarding ethics, all these fixes have to be comprehensive, not just affecting the individual experts. The responsibility has to go outside that. "Don't just put it on the examiners."

"Whose responsibility is it to keep track of cases when new technology comes up?" he asked. He pointed out the practical issues of workload. No one is going to be able to track these cases and give input in these situations.

The last issue he addressed was the personnel gap, saying that there aren't enough people to do the work, especially in the medicolegal investigation area.

Pam Bornder, Program Manager with ASCLD

Ms. Bordner commented on the topic of withdrawing lab accreditation. She addressed the consequences of withdrawing accreditation and why it may not be appropriate for individual performances to affect that process. She noted that once accreditation is gone, laboratories can still continue to do casework. She said ASCLD tries instead to keep working with the labs to gain continual improvement, rather than having the laboratories isolated by withdrawing accreditation.

Peter Stoud, RTI International

He pointed out a concern in the area of toxicology, where there is a human capital issue relating to senior leadership. Loss of senior leadership due to retirement is creating a serious gap going forward, due to a lack of people to fill these senior positions. These senior leaders are the ones who will implement advances and improvements to systems. Fostering, developing, and maintaining these leaders is important. How do we fill the senior positions that are open now? He called for more resources for recruitment and the need to acknowledge the looming experience gap.

Conclusion

Dr. Butler, reiterated the next Commission meeting dates: August 26 and 27, and October 28 and 29, 2014. He asked the Commission for potential agenda items for those meetings.

Comments and suggestions included "Accreditation 101" for members of the Commission, adding a discussion of the certification of individuals and how some other areas handle this situation.

Mr. Santos asked for Commission members to make suggestions for speakers.

There were several comments on voting procedures and the bylaws, including pointing out there needs to be a two-thirds majority of Commissioners present and that there are no specific requirements for written material. There were also concerns about notice requirements, a written component, and finding an alternative to vote by show of hands.

Mr. Santos closed his remarks by thanking the group for its participation in the discussion, as well as for the efforts of staff supporting the Commission.

The meeting adjourned at 5:02 p.m.

List of Attendees

First Name	Last Name	Type	Title	Organization
Suzanne	Bell	Commissioner	Professor	West Virginia University
Frederick	Bieber	Commissioner	Professor	Harvard Medical School
Cecelia	Crouse	Commissioner	Crime Lab Director	Palm Beach County Sheriffs Office
Gregory	Czarnopys	Commissioner	Deputy Assistant Director	ATF
M. Bonner	Denton	Commissioner	Professor	University of Arizona
Vincent	DiMaio	Commissioner	Retired Medical Examiner	
Troy	Duster	Commissioner	Professor	University of California

Jules	Epstein	Commissioner	Professor	Widener University School of Law
Andrea	Ferreira-Gonzalez	Commissioner	Professor and Chair	Virginia Commonwealth University
Stephen	Fienberg	Commissioner	Maurice Falk University Professor of Statistics and Social Science	Carnegie Mellon University
John	Fudenberg	Commissioner	Assistant Coroner	Clark County Office of the Coroner/Medical Examiner
Dean	Gialamas	Commissioner	Assistant Division Director, Technical Services	Los Angeles County Sheriff's Department
Barbara	Hervey	Commissioner	Judge	Texas Court of Criminal Appeals
David	Honey	Commissioner	Director, S&T	Office of the Director of National Intelligence
Susan	Howley	Commissioner	Public Policy Director	National Center for Victims of Crime
Marilyn	Huestis	Commissioner	Chief, Chemistry and Drug Metabolism	National Institute on Drug Abuse, National Institute of Health
Ted	Hunt	Commissioner	Chief Trial Attorney	Jackson County Prosecuting Attorney's Office
Linda	Jackson	Commissioner	Director	Virginia Department of Forensic Science
John	Kacavas	Commissioner	United States Attorney-District of New Hampshire	United States Department of Justice
Pam	King	Commissioner	Assistant State Public Defender	State of Minnesota Public Defender Office
Gerry	LaPorte	Commissioner	Acting Director, Office of Investigative and Forensic Sciences	National Institute of Justice
Marc	LeBeau	Commissioner	Senior Forensic Scientist	Federal Bureau of Investigation
Julia	Leighton	Commissioner	General Counsel	Public Defender Service (PDS)
Patricia	Manzolillo	Commissioner	Laboratory Director	US Postal Inspection Service
Bridget	McCormack	Commissioner	Justice	Michigan Supreme Court
Peter	Neufeld	Commissioner	Co-Director	The Innocence Project
Phil	Pulaski	Commissioner	Retired Chief of Detectives NYPD	Retired NYPD
Jed	Rakoff	Commissioner	U.S. District Judge	U.S. Courts
Matthew	Redle	Commissioner	Sheridan County & Prosecuting	Sheridan County & Prosecuting Attorney's Office
Michael (Jeff)	Salyards	Commissioner	Executive Director	Defense Forensic Science Center

Frances	Schrotter	Commissioner	Senior Vice President & Chief Operating Officer	American National Standards Institute
Kathryn	Turman	Commissioner	Assistant Director, Office of Victim Assistance	Federal Bureau of Investigation
Mark	Weiss	Commissioner	Division Director	National Science Foundation
James	Cole	Co-Chair	Deputy Attorney General	US Department of Justice
Patrick	Gallagher	Co-Chair	Director	NIST
John	Butler	Vice-Chair	NIST Fellow & Special Assistant to the Director for Forensic Science	NIST
Nelson	Santos	Vice-Chair	Deputy Assistant Administrator	Drug Enforcement Administration
Brette	Steele	Designated Federal Official	Designated Federal Official	US Department of Justice
Robin	Jones	NCFS Program Manager	NCFS Program Manager	US Department of Justice
Deborah	Boehm-Davis	Presenter	Dean	George Mason University
John	Collins	Presenter	President/CEO	Forensic Foundations Group
J.C. Upshaw	Downs	Presenter	Medical Examiner	forensX, LLC
David	Kaye	Presenter	Professor	Penn State University
Rob	Lesnevitch	Presenter	Director	US Treasury Inspector General for Tax Administration
D. Michael	Risinger	Presenter	John J. Gibbons Professor of Law	Seton Hall University School of Law
Mark	Stolorow	Presenter	Director of OSAC Affairs, Office of Special Programs.	National Institute of Standards and Technology
Edwin	McCleskey	Proxy	Senior Scientific Officer	Howard Hughes Medical Institute
Thomas	Bohan	Public	Vice-President	Forensic Specialties Accreditation Board
Pamela	Bordner	Public	Senior Accreditation Program Manager	ASCLD/LAB
Ted	Burkes	Public	Forensic Document Examiner	FBI Laboratory
Julie	Burrill	Public		Public Defender Service
Sarah	Chu	Public	Forensic Policy Advocate	Innocence Project
Meredith	Drosback	Public		White House Office of Science and Technology Policy
Anita	Eisenstodt	Public		

M. Chris	Fabricant	Public	Director, Strategic Litigation	The Innocence Project
Lynn	Garcia	Public		
Shimica	Gaskins	Public	General Counsel	U.S. Department of Justice
Melissa	Gische	Public	Senior Counsel	FBI
Mark	Greene	Public		National Institute of Justice
Jo	Handelsman	Public	Consultant	White House Office of Science and Technology Policy
Diana	Harrison	Public	Supervisory Document Analyst	FBI
Lindsay	Herf	Public	Post-Conviction Counsel	National Association of Criminal Defense Lawyers
Susana	Howieson	Public		
Katharine	Huffman	Public	Principal	The Raben Group LLC
Alice	Isenberg	Public	Section Chief, Biometrics Analysis Section	FBI
John	Jones	Public	Associate Director of OSAC Affairs	National Institute of Standards and Technology
Beth	Lavach	Public		
Deborah	Leben	Public	Laboratory Director	US Secret Service
Alun	Mackrill	Public	Director	Bluestar Software Limited
Peter	Marone	Public	Chair	CFSO
Kenneth	Martin	Public		International Association for Identification, Consortium of Forensic Science Organizations - Representative
Willie	May	Public	Acting Director	National Institute for Standards and Technology
Mark	Mayes	Public	Lieutenant	Kentucky State Police
Josh	McCrain	Public		COSSA
Randi	Moore	Public	Senior Associate	The Raben Group
John	Morgan	Public	Director	Coptech LLC
Cary	Oien	Public	Forensic Sciences Manager	Federal Bureau of Investigation
Daniel	Penchina	Public		The Raben Group

Michael	Pettry	Public	Supervisory Special Agent	FBI
Steve	Pierson	Public		
Karen	Reczek	Public	Sr. Standards Information Specialist	NIST
Deborah	Runkle	Public	Senior Program Associate	AAAS
Sherry	Sabol	Public	Section Chief	FBI
Tina	Safavi	Public	Intern	White House Office of Science and Technology Policy
Barry	Scheck	Public	Co-Director	The Innocence Project
Dawn Elizabeth	Schwarting	Public	Forensic Analyst	Booz Allen Hamilton
Tania	Simoncelli	Public	Assistant Director of Forensic Sciences	White Office House of Science and Technology Policy
Peter	Stout	Public	Director of Operations	RTI International
Melissa	Taylor	Public	Program Manager	National Institute of Standards and Technology
Jeremy	Triplett	Public	Laboratory Supervisor	Kentucky State Police Forensic Laboratories
Victor	Weedn	Public	Professor & Chair	George Washington University
Danielle	Weiss	Public	Contractor	Booz Allen Hamilton/National Institute of Justice
Andrea	Widener	Public	Associate Editor	Chemical & Engineering News
Shannan	Williams	Public	Associate	National Institute of Standards and Technology
Justin	Wilson	Public	Policy Assistant	The Raben Group
Charlotte	Word	Public		Charlotte Word Consulting
Paula	Wulff	Public	Attorney	FBI
Caroline	Zervos	Public	Supervisory Biologist (Forensic Examiner)	FBI

*Present for a portion of the meeting via teleconference.