

## Testimony offered before the National Forensic Science Commission at its Second Meeting, May 12-13, 2014

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Given the breadth of the forensic sciences, the narrowness of the discussions stimulated by the February 2009 National Academy of Sciences report *Forensic Science in the United States: A Path Forward*, indeed, the narrowness of the report itself, is striking. That report and the discussions concentrated almost entirely on forensic science as practiced in government crime labs. They ignored the tremendous amount of forensic work done in both the criminal and civil arenas by private practitioners. This is not surprising, given that underlying the NAS study was the realization that US citizens had been imprisoned for crimes of which they were innocent, with faulty crime-lab evidence underlying the wrongful convictions.

However, even limiting the investigation to forensic practices used to convict criminal defendants, some very important types of forensic testimony got left out, very important because they are implicated in sentences of up to life in prison. For example, consider the “shaken baby syndrome” theory. Subject to acrimonious professional debate for more than 15 years while continually used by the prosecution in child murder cases, the “shaken baby syndrome” was not even alluded to in the NAS report. Theories like this, not resolvable within the adversarial system, cry out for a “go-to” body for validity evaluation. I note in passing that there is not a single physicist or engineer who supports the SBS theory. The National Academy of Sciences, which has evaluated many disputed forensic practices (DNA, voiceprints, bullet tracing, polygraphs, etc.), is, because of its nature, impractical in the role of a responsive go-to body of the type needed. On the other hand, the new OSAC structure being created and staffed by NIST seems ready-made to fill this gap in our jurisprudence—provided that the 23 substantive subcommittees being created are broadly configured.

Every one of the OSAC subcommittees should include persons skilled in the design and interpretation of validation experiments. As a rule, these will not be subject-matter specialists in the practices being evaluated. (See for example the members of the NAS committee evaluating polygraphs.) They *will* be able to assess proffered work in any field with respect to the limited question as to whether that work demonstrates what is claimed for it. Such people tend to be engineers and physical scientists (aka specialists in the engineering sciences). The present absence of “engineer” or “engineering” in the OSAC is disheartening and makes me worry about the breadth intended for the subcommittees.

At least one subcommittee directly addressing forensic engineering should be added to the 23 now planned. Forensic engineering theories and techniques are

involved in innumerable legal conflicts, both in criminal and civil litigation. It is important to the fair operation of our justice system that disputes regarding such things be decided outside of the adversarial system. The courtroom is no place to present opposing expert testimony regarding the fundamental theories used, for example, in analyzing civil or criminal liability for building collapses, such as that of the World Trade Center towers. In comparison to the resolution of such questions, that of determining the precise quantity of contraband found in the possession of a defendant pales to insignificance.

Although my suggestions today are not intended to be limited in application, I make them with the awareness that NIST's OSAC structure may be the perfect place to give them life. I address the Commission today with my ideas because of its inherent powers of persuasion. I wish you well in directing that persuasion the entities in this country with power to strengthen the fairness in our systems of justice, civil and criminal. Thank you.