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### **B39 The Making of the Criminalistics Maestro — On the Skills, Knowledge, and Abilities to Work Proficiently on Non-Routine and Complex Cases**

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After attending this presentation, attendees will better understand which skills, knowledge, and abilities a criminalist should acquire to work proficiently on non-routine and complex cases as opposed to routine-based laboratory tasks.

This presentation will impact the forensic science community by stimulating discussions about the education and training of forensic science practitioners and on how one becomes an effective generalist in defining the problems to be investigated and in coordinating criminalistic investigations.

In this age of increasing scientific specialization, some have argued that time and scientific advances have passed the generalist scientist by. They argue that one cannot be a generalist or that the generalist is an outdated concept with no value in this day and age. Conversely, others have argued for the need for generalists as well as specialists. The debate has been especially apparent in criminalistics. A committed proponent of one side or the other typically has little understanding of the other's position. Each may be attracted to absurdist descriptions of the other's position. The generalist may be described as someone who knows less and less about more and more until ultimately he/she knows virtually nothing about everything. On the other hand, the specialist is characterized as learning more and more about an increasingly narrow area until he/she knows everything about nothing. Clearly, the truth lies between these two extremes. A useful analogy is that of the symphony conductor or maestro and the musicians who make up the orchestra. The maestro may be unable to master a particular musical instrument to the world-class level expected of a musician in the orchestra but is a master of understanding how the contributions of all of the instruments and musicians contribute to the success of the orchestra. Of course, there is nothing to prevent a conductor from being a virtuoso on one or a limited number of instruments but such an individual cannot be a master of all. The maestro would not be expected to be. The strength and purpose of the maestro lies elsewhere.

Previous discussions advanced the concept that criminalists should be involved at the outset of the investigation of non-routine and complex cases. Further, the criminalists will be the ones to define and circumscribe the scope of the scientific investigation of the physical evidence record. Unfortunately, in most jurisdictions, criminalists are limited to examining some preselected portion of this record. They are constrained by established customs and practices. They are prevented from seeing the "big picture" and having a major role in defining the physical evidence problem to be investigated. To some extent, this issue is starting to be addressed through efforts to provide quality assurance in the form of International Organization for Standardization (ISO) accreditation of crime scene work as well as the (re)discovery of possible generalist criminalist functions such as forensic case managers or case assessors/evaluators; however, care needs to be taken to ensure that the people chosen, educated, and trained for this key role possess the necessary skills, knowledge, and abilities to tackle their responsibilities, especially in non-routine and complex cases. It is imperative that these individuals are scientists/criminalists rather than technicians.

It is not banal to reiterate that every case and crime scene is different. Each presents challenging scientific problems. What scientific and non-scientific skills would, or should, a criminalist bring to this task? How can these skills, knowledge, and abilities be developed? Can they be taught?

This presentation is not going to take up the generalist/specialist debate. It is going to attempt to deal with the question of how one becomes an effective generalist in defining the problems to be investigated and in coordinating investigations involving physical evidence. How can this be done? This presentation will pose as many questions as solutions offered.

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#### **Generalist Development, Complex Cases, Case Management Skills**