

Presentation to the National Academies
Committee on Identifying the Needs of the Forensic
Sciences Community

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Paul Kirk said many years ago...

- Forensic Science as a profession must be defined by:
 - *Established competence*
 - *Education*
 - *Codes of Ethics*

Can established competence in
Forensic Science be separated
from Forensic Science education?

Is Forensic Science Education Necessary?

- Fact:
 - Majority of forensic science practitioners have never academically studied forensic science
- Perception:
 - Forensic Science is an applied science
 - Forensic Science has no theoretical framework

Practitioners

- Would the forensic science profession benefit if more practitioners were academically trained in forensic science?
- Can the case be made that individuals with forensic science education have a greater stake in the profession when they become practitioners?

Problem with Profession

- Many practitioners are disengaged from the profession.
 - Students “discover” forensic science
 - Not limited to the “rank and file”
- Disengagement hinders progress.
 - No stake in the profession

Having a Stake in Profession

- Implications in individual certification (American Board of Criminalistics), professional development and professional participation including research.
 - More likely to develop individuals who will acknowledge that forensic science is a profession.

Forensic Science Education

- Student will better understand:
- *The societal obligation of forensic scientists*
- *Standards of competency*
- *Codes of ethics*

Perceptual Issues

- Forensic Science is an unique science.
 - Individualization
 - Linkage

Locard Exchange Principle

- Developed by Edmund Locard, a French forensic microscopist in the early part of the 20th Century, it posits that when two items come into contact, information is exchanged.
 - this exchange of information occurs, even if the results are not identifiable or are too small to be found.
 - The results of such a transfer would be **proxy data**: Not the transfer itself, but the remnants of that transaction



A Historical Science

- Forensic Science is analogous to archeology, astronomy and geology.

Individualization

- The primary goal of Forensic Science is to determine the origin of various kinds of physical evidence.
 - “unique” or “common source” individualization
- No other science has “individualization” as a primary goal.
- Forensic Science is not simply an “applied” discipline.

Improving Forensic Science Education

- Consensus of curriculum
 - FEPAC accreditation
- Research funding for forensic science academicians
- Development of Professional Doctoral Programs in Forensic Science

Who Should Teach Forensic Science?

- Forensic Scientists
- Most academicians who teach forensic science have no academic or practitioner training in Forensic Science.
 - Many practitioners lack terminal science degree
 - Those with terminal degrees are often dissuaded.
 - Often no recognition from academic institution for professional experience.

Professional Doctorate

- Would give practitioners who wish to enter academia a vehicle by which to do so.
- Support should be made available for universities to develop programs.
 - Currently, one forensic science Ph.D. program in US
- Support for laboratories should be available for candidates to perform research in their own laboratory or other forensic science laboratory.

Professional Doctorate

- Make eligible very qualified individuals for upper management positions in crime laboratories that require doctoral level degrees.

Students

- The “boom” in interest in forensic science among undergraduate and graduate students is well documented.

High School Curriculum

courtTV.com

Forensics in the Classroom

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- NEW!**  **The Cafeteria Caper**
The cafeteria at Park Haven H.S. was trashed, and the evidence left behind bears a suspicious similarity to the initiation rights of an underground club. Students conduct an enzymes test, as well as hair, blood and DNA analysis to find out who's responsible.
- NEW!**  **It's Magic!**
Who snatched Magic, the award winning pooch, from his master's home? To find out, students perform handwriting analysis, a pH test and paper chromatography.
-  **The Celebration**
A big football victory prompts a rowdy celebration, and police are called to the scene. Students use a gunshot residue test to determine who may have fired a weapon.
-  **The Car that Swims**
How did a car get to the bottom of a river -- and who's the owner? Students use footprint casting to see through a young girl's shaky explanation and learn the solution.
-  **Renters Beware**
A makeshift chem lab, strange vials of liquid, and a greedy landlord combine to create this puzzle. To solve it, students use a flame test, a Kastle-Meyer test and fingerprint matching.

Popular Culture



Mass Media



Forensic Science can be applied to nearly every type of criminal investigation



JED KRISO-BAUM/STAFF PHOTO

Kirk N. Bloodsworth fights back tears while speaking briefly to the news media yesterday after his release from prison after nine years. New evidence from a genetic test led to his release.

Nine-year prison 'nightmare' ends as former convicted killer is released



■ CRIME

A Serial Bomber Strikes Again

An ad executive's death rekindles the Unabom investigation—without adding many clues

