

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

Max M. Houck



Director, Forensic Science Initiative, Research Office

Manager, Forensic Business Research and Development, College of Business and Economics

West Virginia University

Overview of Forensic Training and Education

1. Current situation and environment
2. Education and accreditation
3. Thoughts on needs

1. Current situation and environment

- The discipline lives at the nexus between **science, law, and law enforcement**
 - This means serving many masters
- ~80% of labs are administratively part of law enforcement agencies
 - Managing police in para-military organization is different than managing scientists in a laboratory
 - Neither are particularly prepared for this

1. Current situation and environment

- Law enforcement and science have **different mandates**
 - This necessitates **different education and training**
- Forensic science is a **separate** scientific discipline
 - Requires:
 - Fundamental curriculum
 - Philosophy and principles
- **Barriers to efficiency and success are cultural**
 - Law enforcement
 - Forensic laboratories
 - Academia

1. Current situation and environment

- Law Enforcement Barriers
 - “Do you know how many squad cars I could buy for that?”
 - FS Lab Directors (with **science degrees**) should report to head of agency, not through non-scientific officer
 - **Science requires objectivity and autonomy to be neutral**
- Forensic Barriers
 - “You can’t understand the subtleties of what I do”
 - If it’s science, then you can communicate it and others can do it
 - **Publish, develop curricula, teach, research, professional development**
- Academic Barriers
 - “It’s only an applied science”
 - Like medicine, engineering, chemistry, etc. it is **basic and applied**
 - **Work against the “applied vs. basic” dichotomy**

"Forensic methods attract a growing interest from professional circles. Unsurprisingly, many young people focus on this career from the start of their study [....]. It becomes absolutely necessary for them to obtain a specialized grade at the end of their specialized study."

Rodolphe Archibald Reiss, 1909

2. Education and accreditation

- 1999: NIJ *Status and Needs* report
 - **Accreditation/certification** of forensic academic training programs/institutions.
 - Setting **national consensus standards of education** in the forensic sciences.
 - Establishing independent, community-wide, consensus standard-setting bodies, such as Technical Working Groups.
 - **Funding by NIJ of forensic academic research** and development programs.
 - Ensuring that all forensic scientists have **professional orientations to the field**, formal quality-assurance training, and expert-witness training.
- 2002-2003: NIJ/WVU Technical Working Group on Education and Training in Forensic Science (TWGED)
 - *NIJ Special Report: Education and Training in Forensic Sciences*

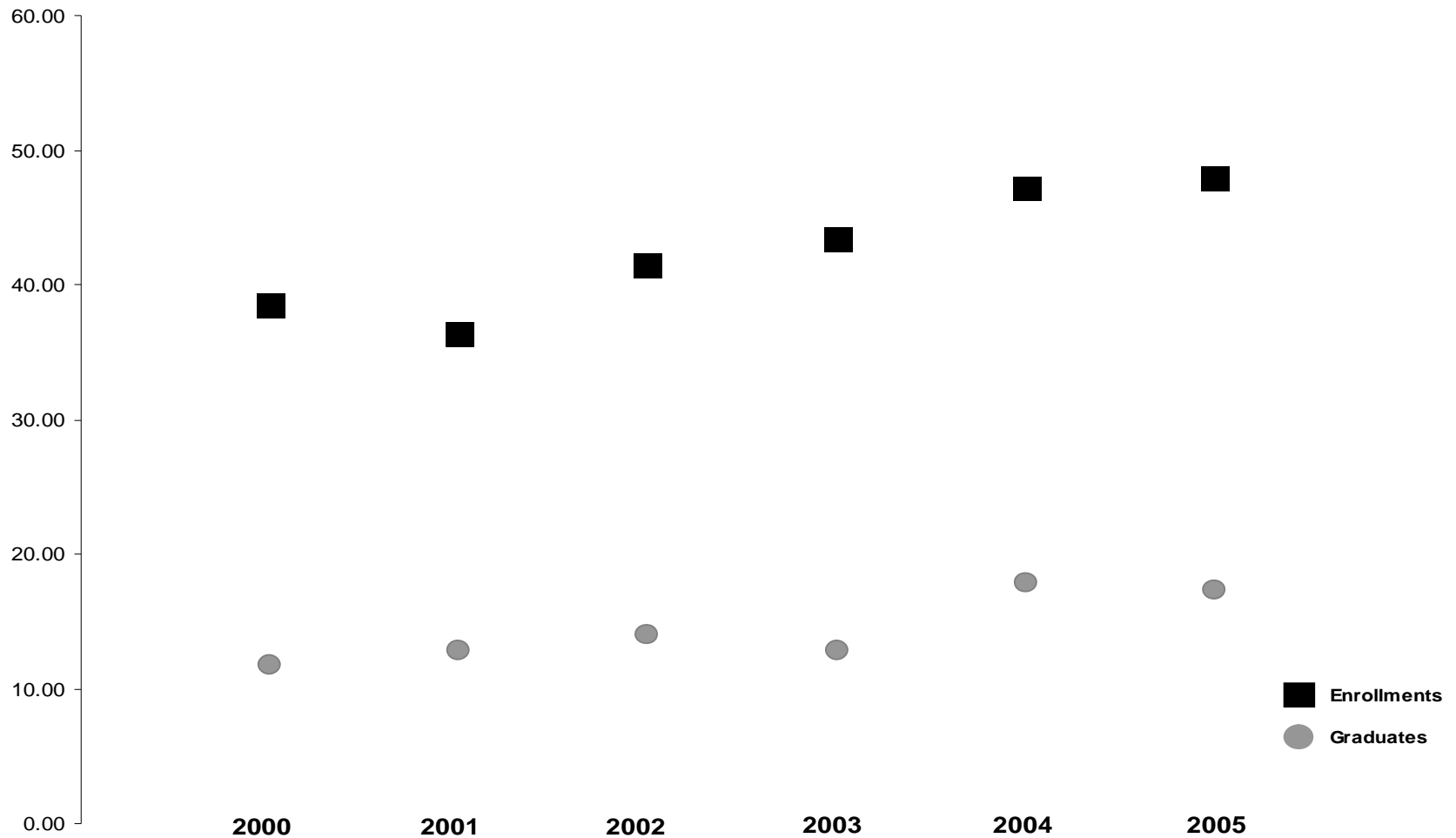
2. Education and accreditation

- 2003: AAFS: creates the Forensic Science Educational Program Accreditation Commission (FEPAC) as an ad hoc committee
 - Pilot program accredits 5 programs
- 2004: AAFS establishes FEPAC as a standing committee

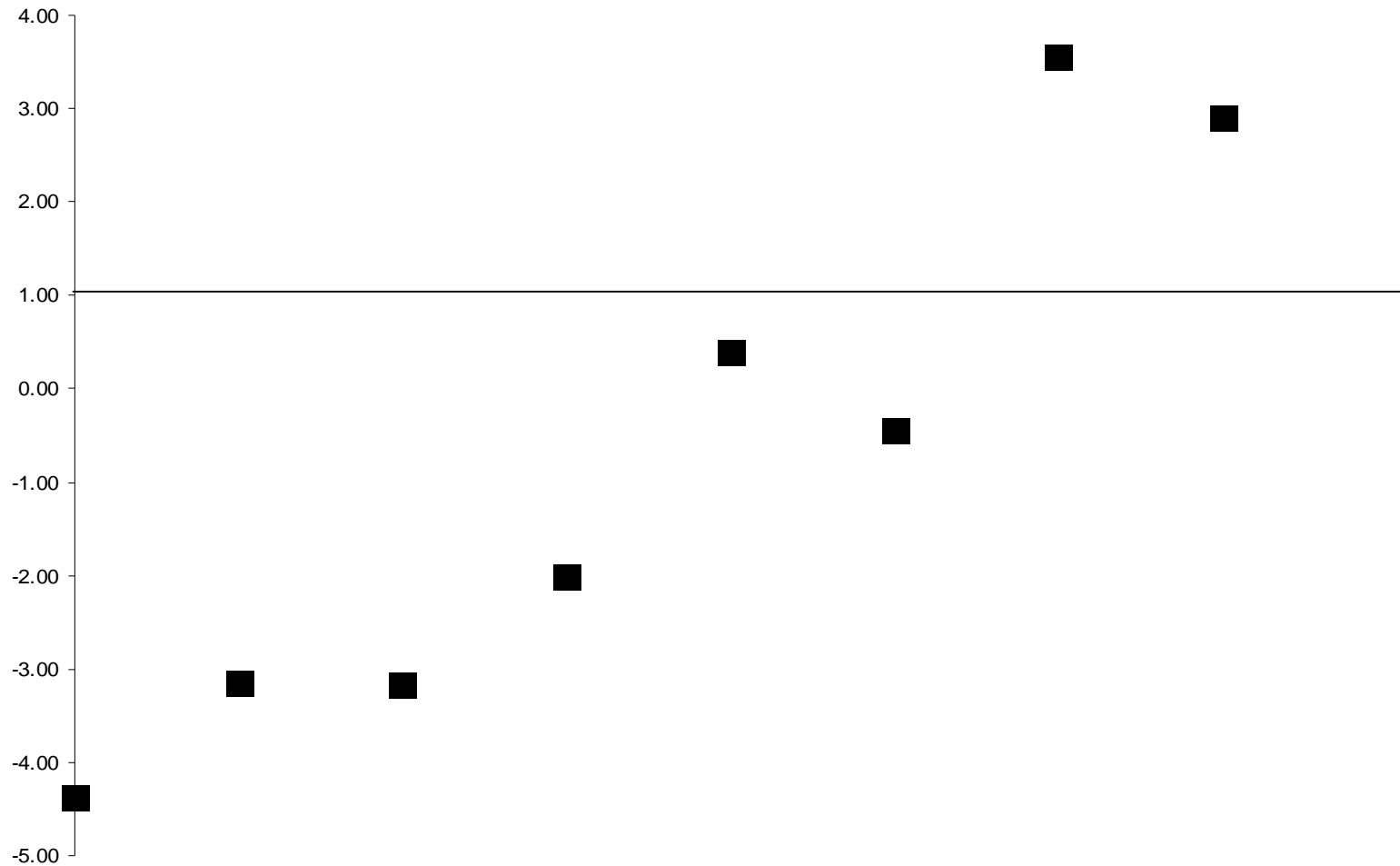
2. Education and accreditation

- 13 programs accredited by FEPAC
 - 3 in Conditional status
 - Routinely 4-6 programs apply each year
- Commission made up of:
 - 4 Academicians
 - 4 Practitioners
 - 1 Public member
- Director of Accreditation (AAFS employee)

FEPAC Enrollments & Graduates



FEPAC Enrollment/Graduate Ratio



How many new FS jobs? One answer: **33,000**

TABLE 1—*Forensic Scientists in the North Eastern United States.*

State	Population (millions)	# Forensic Scientists
Connecticut	3.5	65
Maine	1.2	17
Massachusetts	6.1	66
New Hampshire	1.2	20
New Jersey	8.1	95
New York	18	400
Pennsylvania	12	150
Rhode Island	1	21
Vermont	0.6	12
Total	51	846
Present FS per capita Supply Ratio	846 FS/51 m	1 FS/61,000
900 scientists needed for a 1/33,333 ratio		1800 FS/60 m = 1 FS/33,333

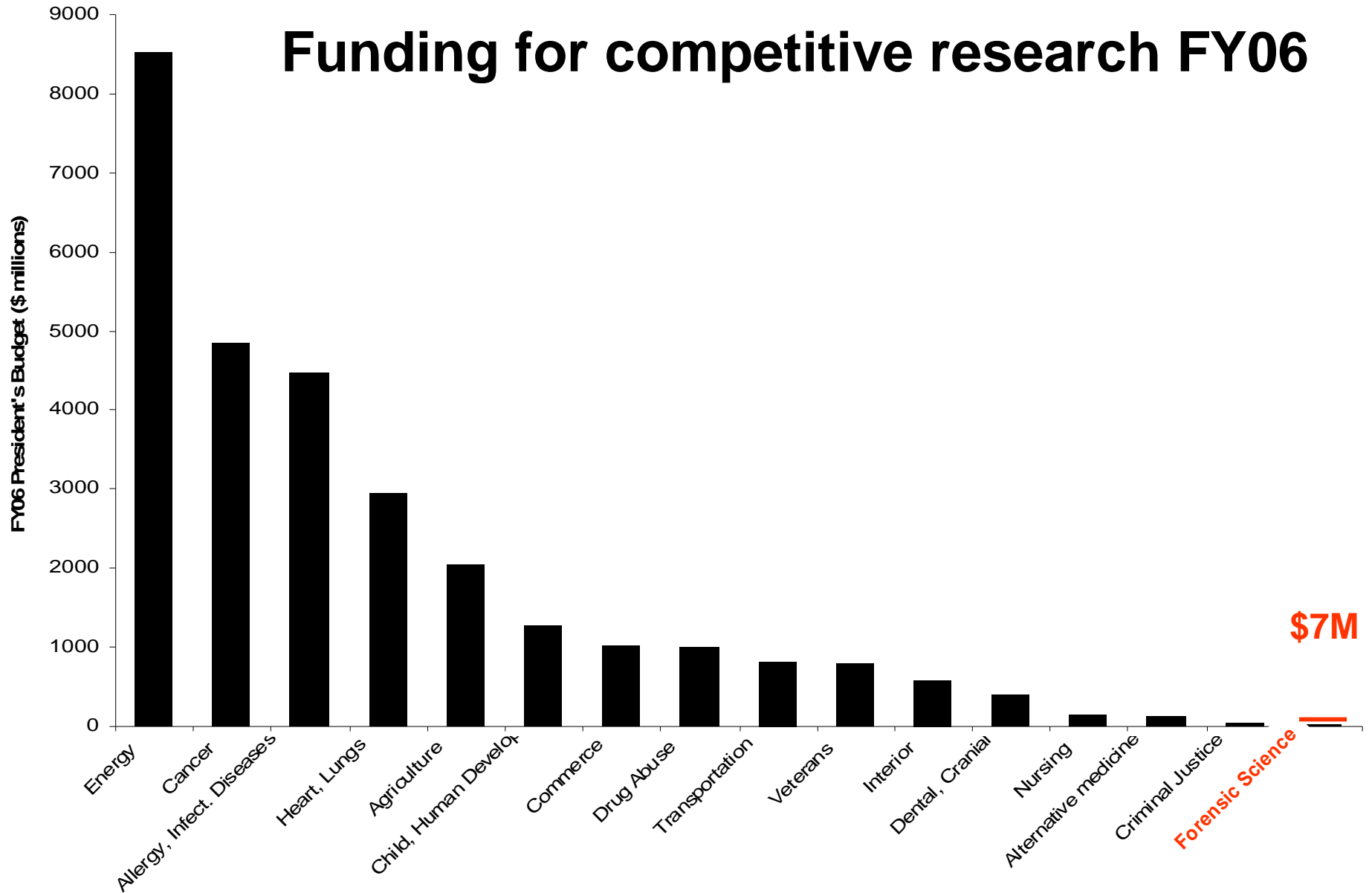
Estimates taken from New York State Police Forensic Investigation Straw Pole of New England States Forensic Scientists (2001).

Dale WM and Becker WS, “Strategy for staffing forensic scientists”, *Journal of Forensic Sciences* (letter to the editor), 48(2) 2003, 465-466.

3. Thoughts on needs

- If FS is not funded at levels of other sciences, how can it progress?
 - Not routinely funded by NSF/NIH because it is not “legitimate”
 - Not “legitimate” because it has not been funded
- FS may have neglected its professional mandate
 - Non-academic disciplines now in question
 - Those that don’t cleanly map to academia
 - “patterned evidence”
 - No university curriculum *per se* as a basis
 - Police and science have different mandates, so little to no interest in internal funding

Funding for competitive research FY06



3. Thoughts on needs

- Percent of FS labs putting resources in:
 - Research = 12%
 - Training/Education = 52%
- Educational/training session sponsored by WVU/NIJ (no cost to attendees)
 - Over 900 “slots” that could be filled in 20 classes
 - Announced at ASCLD
 - *Filled to capacity in 7 working days*
 - 400 attendees from 35 states

3. Thoughts on needs

- We are in a transitional stage of the development of our discipline
 - some variance is to be expected
- Promote growth of discipline as a distinct science and profession
 - Avoid incursions from sibling professions with their own agendas but different mandates (“police-ification” and “lawyer-ification”)
 - Accreditation is a step in the right direction
 - Find mechanisms for graduate education of working professionals
- Fund competitive research
- Promote continuing professional development

**Thank you for the opportunity to make
this presentation.**

Max M. Houck



Director, Forensic Science Initiative, Research Office

Manager, Forensic Business Research and Development, College of Business and Economics

West Virginia University