



Article Title: Commentary on “The Need for a Research Culture in the Forensic Sciences”

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Article’s Subject Matter:

- Pierre Margot is the Vice Dean, Faculty of Law and Criminal Services, Director, School of Criminal Sciences, School of Forensic Science, University of Lausanne, Switzerland. He was asked to comment on a collective discussion paper by Jennifer Mnookin et al. He identifies the difficulties encountered in defining or agreeing on the subject matter “forensic science” and its perceived deficiencies.

Key Points in Article

- Margot agrees that the authors have reached a good deal of agreement despite the fact that they represent opposite stances in the ways that they perceive the value and failures of forensic science.
- Margot takes “some distance” regarding what research orientations are most needed currently .
- He also states, “... whether the NAS Report is well founded and the watershed the authors claim it to be is questionable.”
- At the end of his introduction, he states, “...but proffered solutions may reflect the self-interest of a particular subsector of forensic science, rather than true advancements that will improve the field as a whole”.
- Margot feels that scientists often take the role of providing evaluative opinions or statements for the prosecution or defense as if they were a party to the matter, becoming advocates for the side they represent.
- Evidence can be presented as an argument in favour of a cause, whereas forensic science measures the likelihood of the observation if the cause is rightly identified.
- Scientists should be comfortable with being humble about what they can offer to the justice system, even if such information provides high added value.
- Margot feels that the authors view analytical sciences as much more robust than pattern sciences. This may be true in academia but analysts in chemistry or physics use tools to extend their detection capabilities of their own senses and then transform this data into patterns because our minds are better at distinguishing closeness or distance. He feels that this is one area where pattern analysts have not learned their lesson and may see nonexistent features in a bad quality pattern (example: Mayfield).
- Specificity is the ultimate value of selectivity and just another way of claiming individualization. This ultimate value can never be reached philosophically
- Margot states that most practitioners involved in the analysis of fingerprints, toolmarks and firearm marks are not scientists and have little or no training in science.
- There is no magic solution.



- Margot contends that this is a solution that will create substantial and rapid improvement; forensic science education built on a forensic science culture. The authors identified this gap between practice and research.
- Before we introduce structural controls like standards (often a poor replacement for competence) and ethics, forensic science needs a sound scientific structure
- Margot believes that forensic science has developed around practitioners with little science training and education in combination with highly specialized scientists in their own discipline.
- Concluding, Margot does agree with the authors of the article, that research is needed. Study of forensic science can identify shortcomings, such as problems like bias, but it may not identify solutions so rapidly.
- Research should address primary science questions, not questions relating to the application of chemistry, biology, statistics or psychology. Margot believes that this is how a discipline is built and progresses and this is where academics should focus their questions.
- It is time that forensic science grows as a fully recognized discipline in its own territory

Fallacies and or Issues

- In reading the original article and then Margot's commentary, I agree with his caution as to taking some distance regarding what research orientations are most needed currently.
- In the original article there are references to "increased funding" being required, "not just a drop in the bucket, more funding - and stable and consistent forms of funding - is critical for a research culture to take root and flourish."
- I heard these same remarks at the Impression Symposium in Clearwater Florida, July of 2010 from Jennifer Mnookin. It seemed at the time that the remarks were self-serving and it is interesting that Margot makes a similar statement at the end of his commentary: "but proffered solutions may reflect the self-interest of a particular subsector of forensic science, rather than true advancements that will improve the field as a whole".
- The education of our "practitioners" is becoming an issue that is being spoken of more often these days. The Ontario Police College is actively looking at partnerships with various universities in Ontario to assess the current education of our members and provide avenues to continue their education and achieve university degrees in the science and forensic science fields. Also, our doors are being knocked upon by graduating students with forensic degrees in hand, who are looking to join our ranks.
- Our "Applied Science" is evolving with all of these issues surrounding us. Be prepared for change.
- Hopefully, those who are pushing for research will acquire those grants and funds and will apply their skills to assist us in the impression evidence field.
- I also agree with Della Wilkinson's comments in her review of Joseph Bono's commentary of this same article – "how to perform research for specific problems



without having a negative impact on our casework”. And possibly a “role for graduate programs within universities as well as secondment of practitioners to research positions”.