

The role of professional councils in knowledge generation and the quality control of qualifications of professional scientists

Dr Marise Heyns

Senior Lecturer

Convenor: Masters in Biomedical Forensic Science

University of Cape Town



Dr. Marise Heyns



- M.Sc. *cum laude*
- Ph.D.
 - FAS / *Gallus*
- MBA *cum laude*
 - Project management
 - Strategic management
- UP, UWC, NI
- UCT
- Forensic Science
Research and
Education

AMBA, ANZFSS, ASSA, CSFS, EAFE, ESSA, SA WISE

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in knowledge generation and the
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professional scientists**

Professionalism defined

- “Professus” – “to declare publicly”
- Hippocratic oath – voluntarily professing a commitment / adherence to a set of ideals or values
- Definition of term elusive

Professionalism defined

❑ Cruess et al. (2004):

- ❑ Mastery of complex body of knowledge
- ❑ Used in service of others
- ❑ Member committed to competence, integrity, morality, altruism, public good
- ❑ Commitment forms basis of social contract with society
- ❑ Granted the right to autonomy and self-regulation

- ❑ Should be explicitly taught

❑ HEYNS, M. (2007) "A Strategy towards Professionalism in the Dissecting Room"
European Journal of Anatomy, Vol. 11, supplement1. pp 85-89.

Professional Councils

- A professional council is a group of people who belong to a certain profession, and come together to consult, deliberate, or to make decisions
- Councils may function as a legislature, or a governing body, or a committee, where people belonging to a particular profession are affiliated with
- Must provide for the interests of its scientists in maintaining their credibility and standing in their professions

Professional councils , cont.

- Professional councils have the responsibility to ensure the quality of the professionals in the field, by preparation and practice.
- To provide continuing professional education, and to recognise those practitioners who make the effort to improve their knowledge and practice.

(Janosik *et al.*, 2006)

Professional councils , cont.

- Setting and maintaining standards of training and practice for healthcare professionals, and disciplining those who fall short of those standards, if necessary
- Setting and monitoring mandatory requirements for the continuing professional development of all registered practitioners and ensuring that training institutions adhere to the Council's standards
- Setting professional and ethical standards and publishing guidelines for practitioners to follow

Professional councils

It is the responsibility of the professional councils to ensure that the standard of the profession is upheld ethically, professionally, accurately etc., as well as to make sure that all the requirements of a competent scientist are met.

Professional councils - SACNASP

- It is important to monitor whether the said standards are maintained, and to ensure that indeed institutions are doing what they said they would do. To monitor knowledge generation through the various years, as well as the quality of the professions offered.
- The importance of continuing professional development needs to be addressed. The employment sector, represented by government and industry, also needs to outline their views of a competent scientist.

Quality control of Qualifications

- Educational Accreditation covers full degree courses for Undergraduates and Postgraduates.
- For less than the full degrees such as certificates and diplomas then Recognition may be appropriate or Endorsement

Quality control of Qualifications - HEI

- Standards aim to provide institutions with a benchmark for qualifications that may be used for internal quality assurance and external comparism. The means are varied they range from requirements for admission into a qualification, to the maintenance of staff-student ratios that are appropriate for effective teaching and assessment, to valorising a hierarchy for the measure of student success. Probably the most relied-on means of assuring parity of standards is the system of external examination, in which peers from other institutions validate the assessment instruments and the grading of student achievement in their disciplines (although rarely across qualifications as a whole).

Quality control of qualifications

What is CPD?

- CPD can be defined as the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout a person's professional natural scientific career.
- The aim of CPD is to enable you to stay current and develop within your current roles and where appropriate, develop new skills required to gain promotion. Everyone should reflect on their ongoing learning to ensure they gain full advantage.

Quality control of CPD

- Responsibility to provide CPD activities according to specific criteria and guidelines is outsourced to recognised voluntary associations and accredited tertiary educational institutions and other recognized providers.
- SACNASP ensures that the responsibilities outsourced are carried out in a fair, equitable and responsible manner. SACNASP therefore retains the right to review or withdraw any outsourced responsibilities from providers, should the circumstances so require.

Professional Scientists

- Challenges are multi-levelled and complex
- Forensic Science
 - scientific instrument
 - used by law enforcement service to make findings
 - findings assist the courts of law
 - successfully exonerate the innocent and prosecute the guilty

Council Reach

- **TRAINING:**
 - Universities
 - Generation of Knowledge through Research
- **PRACTICE**
 - Re-train / Expand / Update
 - Technology development in practice
 - Standard Setting – Ethics & Code of Conduct
 - Governance and Policy Makers
- **IMPROVED products, services, processes**

Council

- **Registrar**
- **Regulator**
- **Advisors**
- **Accreditor**

Forensic Science in South Africa

- National strategy
- Create a Forensic Association / Academy / Society
- Create an accredited journal that will publish peer reviewed forensic science research articles
- Professional registration
- Code of Ethics
- Identify research needs



Forensic Science (FS) in RSA

- Highly skilled and knowledgeable persons
- Extensive knowledge of BiomedSci as used in forensic investigations
- Theoretical knowledge
 - Apply in Practical field
 - Apply in Research
 - Apply to RSA situation

1st National Forensic Services Conference

RESOLUTION 2/2013:

“Encourage and create forums for criminal investigators, detectives, forensic examiners, academia and service providers of forensic products to engage and interface on forensic science and related issues in order improve the standards applied in the forensic value chain and to make a positive impact in the investigation of crime”

2nd National Forensic Services Conference

RESOLUTION 1/2014:

Create synergy and opportunities between Institutions & Academia focusing on research and development in areas which are relevant and will positively contribute in improving forensic examinations

3rd National Forensic Services Conference

Suggested Resolution:

ACT

on

RESOLUTION 2/2013

and

RESOLUTION 1/2014

“Staan op en doen iets”

4th National Forensic Services Conference

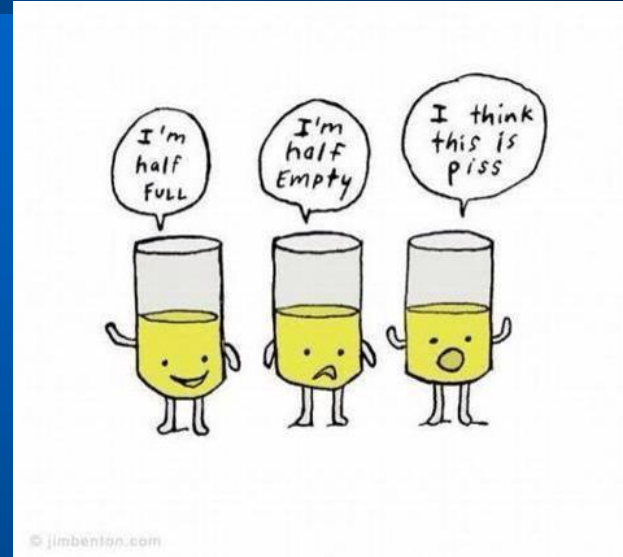
Resolution???

Watch this spot



Scientist Approach

- FACTS!!
- Share knowledge
- Peer review
- Public eye
- Unbiased
- assist, engage, support...



BIAS?....What bias??.....



Stormers 37 - 24 Bulle

Cases where FSR contributed

Smeddle case:

- Deceased was in a car with two accused
- Killed with stab, cut and strangulation wounds
- 1 accused had knife, other had garrote
- Pathologist report stated cause of death: multiple sharp trauma injuries
- Fauxrensic expert used pigs to “prove” the garrote could not cause this
- Pathologist recalled to respond to this

Cases where FSR contributed

Smeddle case:

- Pig Pathologist
- Bloodless neck dissection

Although there may be certain similarities between the skin of a pig and a human, the anatomy of each is different in a number of fundamental respects. In this regard, Dr. [REDACTED] had performed a layer-by-layer dissection of a pig's neck and had concluded that although the epidermis did not feel much different to that of a human, there was a great deal more subcutaneous shielding in the neck of a pig than in that of a human. The Adam's apple of a pig is also much flatter than that of a human, and the cartilage of a pig is more tubular and sturdy. Dr.

Fauxrensic expert

The evidence of the Forensic Scientist called by the defence, [REDACTED] is worth mentioning in the context of the Court's findings regarding the use of the garrote in the assault on the deceased. In summary, [REDACTED] testified that he had performed an

experiment on a dead pig, which he indicated justified the conclusion that a garrote could not have been responsible for any of the injuries sustained to the neck of the deceased. He had attempted to replicate the injuries sustained by the deceased in this regard using the pig as a substitute. He testified that despite the fact that he had used all his strength in trying to recreate the injuries suffered by the deceased on the pig in a laboratory environment with an assistant holding the pig and providing the necessary resistance, this evidence was ultimately found to be of little, if any, value, inasmuch as –

Fauxrensic expert

The same would apply to the experiment performed on the clothing. Given these significant differences, very little, if any, weight could be attached to the evidence of [REDACTED], taking into account the remarkably unscientific conditions under which the experiment had been performed and its resultant lack of probative value.

In the circumstances, the Court has no hesitation whatsoever in dismissing the version of the two accused as being entirely devoid of truth, and finds beyond reasonable doubt that both accused knowingly and intentionally participated in a sustained, savage, unilateral and deliberate physical attack on the deceased, which ultimately led to the death of the deceased.

Accordingly, the Court finds both accused guilty as charged.

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Council

- **NSI**
 - Institutions
 - Interaction
 - Technological learning
- **Guide the VA and registered individuals towards a National System of Innovation**
- **Imperative that we monitor and evaluate the professionalism of our natural scientists**
- **Open the register for additional scientists**

So much to do!!



Thank you

