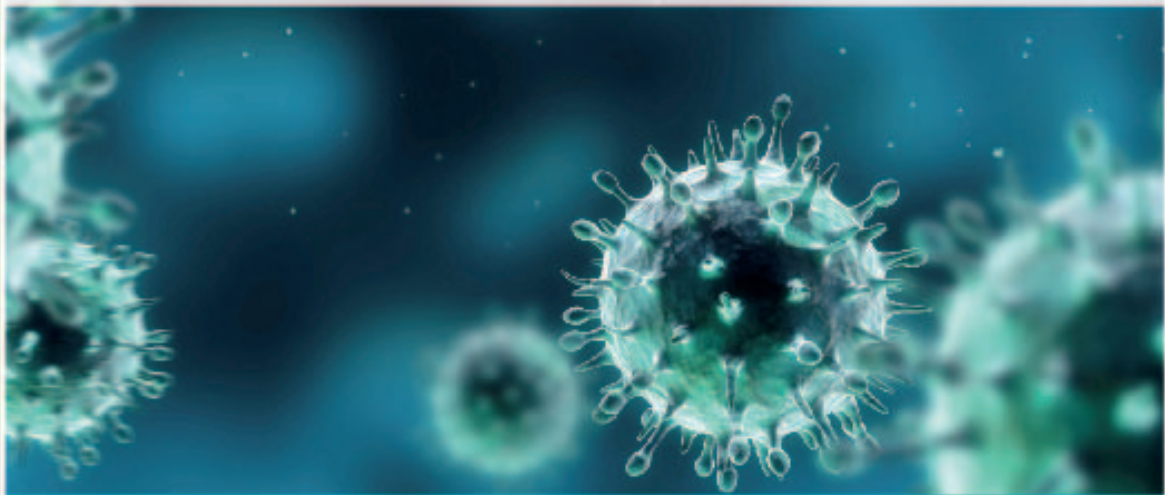


Contextuality in Life Science Ethics:

DUAL-USE AS A CASE STUDY

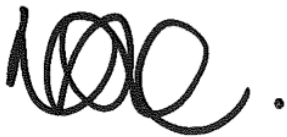


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i. Author's Declaration

Submitted by *Louise Martha Bezuidenhout*, to the University of Exeter as a thesis for the degree of *Doctor of Philosophy* in Sociology, April 2013.

This thesis is available for Library use on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement. I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

A handwritten signature in black ink, consisting of several overlapping loops and a final flourish ending in a period.

Louise Martha Bezuidenhout

06/04/2013. Signed at Pretoria, South Africa.

ii. Abstract

In the rapidly advancing field of the life sciences, issues relating to responsibility for research are becoming a key area of discussion. Attempting to conceptualise how individual and collective responsibilities may be attributed to scientists for their research is proving both difficult and complex. Issues relating to responsibility for research may be loosely divided into two different areas. *Internal responsibilities* refer to those that scientists hold to their research and their colleagues to ensure that high quality data is produced with integrity. *Broad social responsibilities*, in contrast, reflect the social contract that scientists hold with society and refer to the commitment of scientific research to enhance and promote humanity in a manner that takes into consideration social priorities and norms.

By far, research on internal responsibilities has formed the bulk of current discussions on responsibility in life science ethics. These responsibilities have come to be represented by the field of research ethics, which focuses on the prevention of misconduct and the promotion of globally harmonised approaches to daily conduct. Research ethics has been widely endorsed, and a high level of international agreement has resulted in country-specific approaches to awareness raising and pedagogy – such as the Responsible Conduct of Research approach developed in the USA – being applicable for use in divergent social contexts.

In contrast, however, broad social issues have received comparatively less attention from the life science ethics community. Indeed, these topics often do not have a place in ethics curricula, or form “add-on” topics to ethics modules. This thesis suggests that presenting broad social issues as a progression of research ethics topics may cause considerable difficulties for pedagogy. In particular, this thesis suggests that these problems arise through the promotion of an internationally harmonised approach to research ethics, the focus on

avoiding misconduct, and the reliance on informal teaching within laboratories as a fundamental aspect of perpetuating research ethics.

This thesis suggests that the crucial issue of contextual variations within ethics discussions is often marginalised. I argue such variations may have considerable implications for how scientists engage with notions of professional responsibility. Such points are particularly salient when noting that many scientists in developing countries are introduced to these topics through Western-centric ethics modules that do not take into account social, regulatory and physical variations in research environments in these countries.

In order to critically interrogate contextual variations and social responsibility, the thesis makes use of an interdisciplinary approach, using a variety of methods of investigation. The topic of dual-use – the potential for beneficial research to be misused by third parties for nefarious means – was taken as a focalising example of a broad social issue and formed the basis of comparative investigations with scientists in sub-Saharan Africa and the UK.

The fieldwork results showed significant variations between how scientists in developing countries and developed countries interacted with the topic of dual-use. It became clear that the Western-centric approach promoted by most current dual-use awareness raising initiatives, and the implicit research ethics teaching approaches in these models, caused considerable difficulties for African scientists attempting to access these discussions.

Using the theoretical framework outlined at the beginning of the thesis and the fieldwork, the thesis concludes by proposing a number of changes that could be made to the way that broad social issues are presented to scientists within ethics pedagogy.

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