

Science, research and ethics

Anton A van Niekerk

Distnguished Professor of Philosophy

Director:

Centre for Applied Ethics

University of Stellenbosch

Outline

1. Science and values
2. Values at/of Stellenbosch University
3. The current emphasis on ethics
4. Ethical review by committees
5. Values in the practice of science and research
6. Where/when/how much ethics?

Science and values

- **Science**: the process and outcome of the striving to attain coherent, rationally justified, universally valid and morally justifiable insights about reality
- **Values**: our most important beliefs - those beliefs that govern our actions with an enduring force. Values are those beliefs which we hold with the strongest conviction and which fundamentally influence our view of life and our strategy for living a meaningful life (including the effort to attain true and valid knowledge).

- Currently there is an almost universal consensus that science is not value free, in spite of tenacity with which the Enlightenment tradition tried to split them
- Science is not a “neutral registration” of “objective facts”
- “Science is not an intellectual computing machine, but a slice of life” (Toulmin, 1961)
- Established by most important developments in 20th century’s image of science

The values at/of the US

- In our vision statement the US identifies a range of values.
- It is expected that all academic work will respect these values and try to embody them
- They are not the last word on the topic; the discussion about the most appropriate values for the university continues; new task team to investigate them at the moment.

These values are/used to be (not in order of preference):

- Equity
- Participation
- Transparency
- Readiness to serve
- Tolerance
- Mutual respect
- Dedication
- Scholarship
- Responsibility
- Academic freedom

Why all the current emphasis on ethics?

- Growing insight into the value-ladenness of science
- Acknowledgement of the destructive potential of irresponsible (immoral) science: Hiroshima, Chernobyl, Auschwitz
- Realization that there are, unfortunately, researchers who act immorally: Tuskegee, Bezwoda, Hwang Woo Suk, etc.

- Advent of the human rights culture since WW2
- Need to protect vulnerable human subjects against immoral practices of researchers, e.g. tests on Aids medications in Africa where safety measures of mother countries are not enforced, and where benefits of research are not made available to subjects
- Another example: Cartex case (to be read), pp. 237-8 of Harris et al.

- Emphasis on ethics is not limited to SA; in fact, we are fairly late on the scene! (Reason why SA has been regarded as “researcher’s paradise”!)

Ethical review by committees

Underlying assumptions motivating the creation of ethics committees:

1. The moral evaluation of research cannot abide by an individual and/or his/her immediate superior
2. Best moral judgment can only be made by peers/experts with ethics knowledge and sensitivity

3. The idea is that all proposals that entail research on humans, animals, or in which harmful substances containing an environmental risk are implicated, should first be scrutinized for scientific status by peers, and thereafter submitted to ethics committee
4. Assumption: *Good science requires/implies good ethics!* (Agree?)
5. The extent to which *scientific scrutiny ought to be part of ethical evaluation* remains controversial. Recently comprehensively discussed by SREC. VR(R+I) is about to issue a statement along the following lines:

- “Poorly designed research that yields inaccurate and misleading conclusions (viewed as benefits) is not only scientifically unsound but also unethical. It is unethical because it exposes participants to the costs and risks inherent in research without the benefit of accurate and scientifically sound conclusions. Misleading conclusions distort the academic record which results in an erosion of trust in the integrity of the academic project. It can also lead to the wasting of resources including the time demanded of participants and expose the institution to reputational and financial risk.”

Composition of ethics (not “ethical”!) committees

- Scientific experts with ethics knowledge and sensitivity
- Senior, experienced researchers
- Person(s) with specialist ethics expertise
- Community representative
- Institutional representative
- Sometimes representative(s) of religious grouping(s)

Question: Ought ethics committees, besides for real costs, be paid for their work?

[What about more support for pre-review screening and admin?]

- A red flag: Ethics committees are fast becoming over-stretched, particularly in the medical context
- *Yet, there is a special moral duty on academics to serve in committees, on par with duty to act as reviewers/external examiners. Without ethical review, most research will grind to a halt!*

Values in the practice of science/research

(I draw on DB Resnik 1998)

1. **Honesty**: Researchers ought not to fabricate, falsify or misrepresent results. Be as objective, unbiased and truthful as possible (Avoid “trimming”, “fudging” or “cooking”!). Sometimes no/unexpected results.
2. **Carefulness**: There is a difference between lies and mistakes, but try to minimise mistakes. **Avoid conflicts of interest** (e.g. owning shares in company for whom you do research)

- **Openness**: Importance of transparency and willingness to have results checked by peers. Openness to criticism and new ideas
- **Freedom**: Scientists ought to be free to investigate any new problem or hypothesis, to explore new ideas and criticize old ideas. (Reconcilable with “focus areas” at university? Relevance of media freedom debate?)
- **Credit**: Sources must be acknowledged as far as possible (i.e. avoid plagiarism), but undue credit is also not right (e.g. “honorary authorship”)

- **Education**: New scientists ought to see to it that they are properly trained for their work, and senior researchers ought to take special care and time to train novices. The public ought also to be educated about science and scientific issues.
- **Social responsibility**: Harm to society or the environment must as far as possible be avoided, and the benefits of science for society/environment must be pursued. Scientists are responsible for their work (cf. Einstein!)

- **Legality**: Do not break the law in research!
(Cf. new Health Care Act)
- **Mutual respect**: To treat colleagues with due respect and not to undermine them in a questionable and self-seeking way
- **Respect for research subjects**: The rights and dignity of human subjects on whom research is done, must under all circumstances be respected (also animals!). NB Take special care with *informed consent*. (*Always possible?; cf. Milgram!*)

Where/when/how much ethics?

- Answer: Everywhere, always and as much as possible!
- The point: Do not relegate ethics to some “add-on” at the end of course or research training
- Ethics training and sensitizing ought to be an integral part of the research process and ought to accompany all (also training in) research at all times.