A Reformational Framework for Research Engagement

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Samevatting

Hierdie artikel stel elemente van 'n christelike raamwerk vir navorsingsbetrokkenheid voor. Die konteks waarbinne dit beredeneer word, is die mediese wetenskap. Die artikel verduidelik dat hoewel 'n raamwerk vir navorsingsbetrokkenheid nie nuut is nie, word die deurlopende hersiening van so 'n raamwerk genoodsaak deur tegnologiese ontwikkelings, die postmodernisme en die feit dat navorsing 'n winsonderneming geword het. Die raamwerk berus op drie fundamentele sake. Eerstens kan menslike lewe nie gekompromitteer word nie. Tweedens kan wins/geld nooit ten koste van die pasiënt/ kliënt gemaak word nie. Derdens mag die mens nooit die slagoffer van mediese ingrepe/navorsing word nie.

1. The changing research environment

The essence of research has changed, and it can no longer be seen *only* as the generation of new knowledge.

To substantiate this remark, the following three observations:

Firstly, research has become *big business.* Research institutes and universities earn substantial amounts of money through patents and contract work [see for example Brainard's (2004) paper on the growing number of American universities participating in stem-cell research and the growth in biotechnology networks in Brazil (Mariscano Guedes 2004)]. The possibility exists that research could lose its cutting edge position in academia to a business-driven approach directed only towards increased revenue. Research which is primarily business-driven may be classified as an ideology. The issue of an ideology originates in remarks by Visagie (1990:17), Goudzwaard (1981:22-24) and Schuurman

(1997:141-142) that whenever a premise is taken from reality and dominates the understanding of man's reality, then an ideology is at stake. As an ideology, business-driven research is an economic power rather than an academic power.

Secondly, research is challenged by the emerging *knowledge society* and its networks. No research society can go without networks. Castells (2001:218) correctly remarks that research must be connected both to the world's scientific networks as well as to the specific needs and productive structures of the country. This view is supported by what is called a *triple helix* approach. This approach embodies the intimate relationship of *university – government – business/industry* (see Etzkowitz & De Mello, 2004). As a result, networking activities will influence the scientists at universities. Castells (2001:9) warns timeously that "Science and technology are not embedded in machines, they are embedded in people, in minds, and minds are usually connected to bodies".

Thirdly, researchers have the ability to manipulate man and his environment. Take for example research into cloning. Cloning is an illustration of man's technological abilities. Through cloning many possibilities exist: a boy could be his father's identical twin brother; a boy could have only the genetic characteristics of the one parent; or all individuals could be alike. *In theory it would be possible to make people according to one's personal taste*. Cloning creates the *possibility* of a Frankenstein monster that could be aborted only with difficulty. This urge for cloning coincides with the human ideal of a *super* human being – super intelligent, super-powerful and super-healthy. This leads to an own jargon for the practice of cloning such as *perfect, super, manipulate, and so on.*

These and other research developments call for an ethical code for research. An ethical code exists not only to set guidelines for research to avoid ethical distortions but also to place research activities in perspective. Mouton (2001) says that the ethics of science concerns what is right and wrong in the conduct of research. He remarks that since research is a form of human conduct such conduct has to conform to generally accepted norms and values. Scientists have an obligation to the practice of science, society, the subjects of science and to the environment (Mouton, 2001: 238-239).

2. What's new about an ethical research code?

The call for an ethical research code is not new at all. What is new however, is the ever-changing context of research which impacts on that research code. Currently, the research context is influenced by two powerful dynamics.

The first dynamic is the economic value of research. University education is regarded as a commodity earning revenue for the institution (Goedgebuure & Van Vught, 2000:13). Higher education is regarded more and more as an economic generator and creator of wealth. Universities have moved away from being institutions "seeking the truth" to institutions "packing knowledge for sale". With this move, knowledge has become a commodity – knowledge has become a trademark. You can now "buy" or "sell" the knowledge needed to accomplish a task.

The second dynamic is the influence of technology on research. The best-known example is the debate on whether everything that can be done, should be done. Human abilities through technologies create new ethical problems. The belief exists that technology can accomplish anything (the "*Machbarkeit aller Dinge"*). De Villiers (2002:43) justly states that medical technology has expanded the scope of our moral responsibility immensely. Through its capabilities, technology has become a modern idol. The impact of this perception on an ethical code cannot be denied.

To direct one's decision a normative framework is needed. Ethics is the science of values and principles. Ethics in research focuses on the moral values and principles operating in the practice of research. Ethics is no add-on to research but a fundamental part of education as a science. An ethical research code has to do with rationalizing values and principles for doing research.

Unfortunately the ethical aspect of science receives little or no attention in research. In official higher education policy documents, for instance, there is no direct reference to an ethical research code. A comprehensive social-ethical policy for the university is therefore essential, mainly due to the increasing relevance that should be enjoyed by the ethical dimension of science in a modern society, and secondly because the university can never stand apart from its community (see the Melbourne Agenda – 2001; Stumpf, 2002; Heyns, 1986: 301).

These and other dynamics call for a new value system for research. The value system needed should encompass the economic value of research as well as the way in which knowledge is now produced.

3. Aim and objective of this article

A Christian world and life-view are at odds with the positivistic claim that any research is value neutral. This originates from the conviction that each person does have a specific ideological perspective on reality which influences his/her value system. A Christian research code will have specific values guiding the research code.

The focus of this article is to promote Christian values in science. This will be evident in the framework advocated for research engagement.

The **objective** of the article is to identify Christian-driven values for research affected by the above-mentioned dynamics (technology and economy). The **aim** of this article is to propose a Christian-driven ethical framework for research.

4. Christian values in research

4.1 Science paradigms

The philosophy of science questions the *objectivity of knowledge* (Objective Knowledge à la Karl Popper). Every scientist is influenced by a particular scientific tradition such as rationality, irrationality, positivism, pragmatism, modernity, post-modernity, etc. This is evident from a variety of scientific traditions. As examples I can refer, amongst others, to Descartes (*cogito ergo sum*), Kuhn (paradigms), Popper (objective knowledge), Chomsky (innate idea) and Dooyeweerd (ground motives). One cannot but conclude that there is **no such thing** as objectivity in science. Each researcher will have his/her own paradigm[1]. The paradigm of the researcher is an *a priori*. The way in which the paradigm influences the "objective look" at facts is an *a pistiori* and should be kept in mind when a researcher's analysis of a particular problem is analysed. Based on this argument, one may derive the conclusion that one's science view, for example, will influence the paradigmatic point of departure regarding research into cloning or the kind of ethical decisions taken.

Objectivity in science should not be confused with assumptions which are part of the philosophy of science. Assumptions are best described as the foundation/building blocks of an argument/viewpoint. Assumptions influence the way in which we see things/appreciate a viewpoint/understand reality. Assumptions are structure conditions that make scientific thought as such possible. Examples of assumptions are the autonomy of reason, religious beliefs, value commitments, technological safeguarding, social position, and so on. Assumptions are not similar to prejudices, and examples include race, language, sentiments and nationalism.

1 The concept "paradigm" originates from Thomas Kuhn's "The Structure of Scientific Revolutions" (1962). With this concept, Kuhn has in mind a scientific framework, characterised by a particular scientific tradition. In a follow-up edition of his book (1970) and in "The Essential Tension" (1977) he uses the concept "disciplinary matrix." This concept refers to those factors which should account for the relative agreement in a scientific group.

4.2 Meta science

Mouton (2001:138-140) identifies the "Three Worlds Framework" in science. These frameworks and their characteristics are:

World Framework	Characteristic
The world of lay knowledge	Common sense, wisdom, know-how.
World of science	Truthful knowledge/epistemic interest of science
World of meta-science	Reflections on the nature of science

The value of the third framework is the continuous assessment of the scientific practice. Meta-science involves reflection on the nature of science. In this sense science is a "self-correcting enterprise". Decisions are subjected to quality checks in order to attain truthful and valid results (epistemic interest of science). Exponents of meta-science are the philosophy of science, research methodology, research ethics and the sociology and history of science (Mouton, 2002:138-139). These exponents can be helpful for various reasons. One prominent reason is that the philosophy of science looks into the paradigm from which a scientist is arguing a particular viewpoint. The philosophy of science outlines the dominating paradigm at a given time.

4.3 A Christian paradigm for ethics in research

No ethics should be without a philosophical framework – something which is very often neglected and as a consequence, results in a post-modern or post-structural framework. The latter is based on the philosophy that everything goes – there are no right or wrong answers. The current post-modern belief is that there are no absolute truths. Truth lies within oneself. A person has become the reference of his/her own truths. No form of education deals only with the gathering of knowledge, but also incorporates the application of this knowledge. The sharing and production of knowledge do not exist in abstraction. It is always contained within a certain context and must always be judged normatively on the basis of the context. A philosophical discourse is fundamental to the design of an ethical framework to reflect on values and principles in research.

I, personally, hold the view of cosmonomic concepts in reality, that are distinct but related to each other. According to this view various activities

can be identified that are unique in themselves. This framework acknowledges the universal and individual existence of entities within reality; that there is a structure to entities and that these entities can be known by their structure. By means of conceptual knowledge, it is possible to refer to these entities. Reality unfolds in various societal structures (such as the university) undertaking activities such as teaching, research and community engagement. Each of these activities has its own individual and universal character. "Individual" means that, for example, teaching is not preaching, while "universal" refers to the way in which teaching styles might influence learning styles (see Strauss, 1980, 1989, 1991). This scientific tradition, to which I ascribe, upholds the opinion that philosophy is becoming an indispensable discipline for any scientist and his/her activities. Philosophical ethics provides the framework for all subject-specific ethics.

The paradigm followed in this article is an analytical approach based on identification and distinction. I therefore propose that a Christian-driven research code should be understood against this paradigm. The value of this paradigm is that it does not only identify and distinguish between related and different activities within the research process itself but it will also assist in distinguishing between various kinds of research.

4.4 Christian values for a research code

A research code has a Christian character when it is endorsed in a Christian view of life. A Christian view of life is also recovered in the universum of science. Here it is confessed that God, the Holy Trinity, is Creator and Provider of everything and everybody. A Christian life-view does not at all imply an apologetic perspective, and even less does it mean that all students have to be practising Christians. A Christian life-view also by no means implies that students will be confronted with the Bible. Rather it means that the research activities are primarily at the service of God. This is not achieved through moralising research but through research conducive to the values of a Christian world and life-view. Opting for a particular confession does not of necessity mean discrimination against other views of life. If the existence of other views of life is denied, however, then an accusation of discrimination would be justified. Du Plessis (2003:41) rightly says that faith and religion should not be separated. One's intellect and faith should be interwoven in science. The impression is often created that if a research code takes on a religious position then it must be subjective.

A Christian view of life demands the following characteristics for a Christian-orientated research code:

- The preservation of life.
- Respect for man as a unique creature.
- Recognition of the uniqueness of man, his personal values, faith and traditions.
- Preservation of dignity.
- Freedom of choice for a person who is competent to take independent decisions.
- Protection and promotion of the welfare of the individual.
- Treatment of all personal information with confidentiality.
- Every person has a right to privacy.
- The right to privacy is not transferable, not hereditary and not liable to seizure or renunciation.
- Research findings should be presented in such a way that the anonymity of the patient is protected.
- Researchers will at all times take reasonable precautions to ensure that patients will be disadvantaged as little as possible.
- Researchers will keep strictly to the approved and responsible methods of the experimental procedure.
- All research programmes should ask whether the programme/project is really necessary, whether the research has been correctly planned from both a scientific and economic viewpoint and whether there is a balance between the risks and the potential value.

The application of this code can be illustrated by an example taken from the subject of human cloning and the manufacturing of medical equipment:

5. Application: human cloning and medical product development

5.1 Human cloning

5.1.1 Conceptualisation

A clone can be defined as a group of cells derived from a single parent cell by mitotic division (Van de Gaaf & Fox, 1995). Cloning implies the organisation by mitosis of a group of genetically identical cells or organisms from a single cell or organism. Cloning is part of the broader techniques of reproductive medicine (Diedericks & Lategan, 1994:128)

5.1.2 A Christian synopsis on human life and its meaning for the debate on cloning

Exodus 20:13 in the *Biblia Hebraica Stuttgartensia* text reads that no man has the right to take a life unlawfully. This command deals exclusively with the sanctity of life (Velema 1996:32, 33, Van der Walt, *et al.* 2003:100ff. Smit 2003, Psalm 8, Psalm 139.) A valuable application of the sixth commandment to human life entails (see Lategan, 1999:1133):

- God is the Giver of all life.
- No man has the right to take any person's life.
- All human life has the qualification of human life and cannot be reduced to something less than this.
- All life is sacred.

Christian medical ethics doesn't budget for human cloning if cloning is infringing on human life. Values for human life include (see Goosen & Louw, 2000:271-274):

1. the preservation of life
2. the recognition of the uniqueness of people and their personal values, faith and traditions
3. the preservation of dignity and the welfare of the individual
4. freedom of choice
5. the right to basic medical care
6. that suffering should be relieved
7. that every person has a need for justice, affection and esteem.

Christian medical ethics can never allow people to be fabricated according to one's personal taste. Man is not a product of industry. Man is no "laboratory man."

5.1.3 Ethical guidelines for human cloning

The following ethical guidelines for human cloning may thus be formulated:

- Clone research is well-known in plant and animal studies. Ethics says man can manipulate plants and animals to create new species. A human being, however, is not a plant or an animal. The "art of selling your body" is something totally different in the context of humanity.
- All religions view man as "belonging" to God. Christian religion deals with the *imagio Deo* – this prohibits man from manipulating human life. In the context of the sixth commandment nobody has the right to take any person's life.

- A society characterised by people who were all alike, would impact negatively on the sociology of society.
- Cloning for therapeutic reasons may be acceptable but the production of "spare parts" is not.

On the basis of these remarks, the following important guidelines may be formulated for the debate on cloning:

- Every situation is unique. Try to understand the situation.
- Diversity of religions, values and beliefs should be respected.
- Ethical decisions require a multi-dimensional approach, which involves a network of disciplines and considerations.
- Finance and available human resources will play a role in the decisions made.

5.2 Case study

5.2.1 Background

In the case of "A brush with Aids", by Joseph L. Badaracco (1998) the business ethical attitude of a senior marketing manager in the health care industry is highlighted. A sales person was confronted with the dilemma that a product he/ she was selling could potentially have serious risks to health care workers using it. Halsey, a medical care company, was selling a container which could be used for the disposal of used needles. The used needle container was important in the prevention of the transmission of the Aids disease. Although sales were going well, complaints about product failures were reported:

> It seems that the sharp containers, made from plastic, were shattering in cold temperatures and that the used needles were able to penetrate the plastic casing. Given the dangerous and potentially lethal nature of a used needle, the malfunctioning of the sharp products represented a serious risk to all health care workers (Badaracco, 1998:297).

The situation could be resolved to some extent. Hospitals in cold-weather climates were simply asked to store the sharp containers at room temperature to prevent them from cracking. Although this seemed to address the problem, the issue of protruding needles was more difficult to resolve. At the same time, however, the sharp containers did meet quality and standards requirements. In addition, it was selling well, and other companies with similar products were not withdrawing their products from the market. The management of Halsey was satisfied with the

product, and Phil, a middle manager who supervised the work performance of the sales managers, felt no need to stop selling the product.

Initially, the sales manager thought that he/she should do nothing. A more active possibility would be to engage in damage control by providing excuses to the sales force and customers, finish the year with a profit plan "blow-out", get promoted, and leave the mess behind. Yet another solution might be to talk to Phil, but Phil would simply consider the situation against profit performance. Neither would bypassing Phil do any good. Such a move would not be appreciated in the company and it would harm a comfortable working relationship.

The sales manager was thus confronted by various issues. *Firstly*, there was the company's mission to provide "the best product and services for our customers around the world". *Secondly*, the sales manager was wondering about the role that the health care industries played in the high cost of health care. *Thirdly*, it was an issue of meeting sales targets – your own and that of your superiors. Finally, it was an issue of making money – at all costs:

> Thinking through all of these issues, I found myself focusing not on how to solve the customer's problem, but, instead, actively engaging in the risk management of my gross profit dollar plan (Badaracco, 1998:297).

5.2.1 Directives for an ethical code

Businesses exist to make money. In addressing this issue, it must be realized that this is a special case since it addresses the obligation of making money versus the safety of health care staff. Ethics will teach us that human life cannot be measured in terms of money. Yet, one should understand the pressure placed on salespeople to meet their targets (personal situation versus community interest).

The solution to this case study will require the consideration of two perspectives. The one is raised by the salesperson, and concerns the cost of health care, which has certainly become a profitable industry. Technical abilities and sophistication have increased the cost of health treatment and care – something that is not always necessary, and this case highlights the dilemma faced by the health care industries: make money or deliver a service. The second perspective in this case is thus the urge to make money – sometimes regardless of the consequences.

The sensible thing would be to inform one's clients that one is improving one's product as it holds risks in certain climatic conditions, and that similar products will be available on the market for the time being.

Employees should also not allow themselves to be flattered by comments that they are doing good work, and they should not be intimidated into believing that a difference of opinion regarding ethical responsibilities should not be aired in the presence of their line manager. What should be avoided at all costs is to ignore a risk just because the company's competitors are doing so.

6. Cornerstones for ethical decision-making

The arguments in this article identified the following cornerstones for a Christian ethical research code:

- The preservation of life
- Recognition of the uniqueness of people and their personal values, faith and traditions
- The preservation of dignity and the welfare of the individual
- Freedom of choice
- The right to basic medical care
- Suffering should be relieved
- Every person has a need for justice, affection and esteem
- Profit should not be made at the expense of the patient/client

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