A Contribution from Theological Ethics to the Search for a Professional Ethic in Research[1]

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Samevatting

In hierdie artikel word aangetoon hoedat teologiese etiek 'n bydrae kan lewer tot die vaslegging van 'n professionele etiek wat deur navorsers gebruik kan word. Twee besigheidsgevallestudies en 'n oorsig oor die uitdagings en gevare van blinde kommersialisering van navorsing word gebruik om riglyne vir 'n professionele etiek aan te toon. Hoewel teologiese literatuur gebrekkig is as dit by onderwerpe soos professionele etiek en gedrag kom, bestaan daar tog (teologiese) bronne wat gebruik kan word om die debat te stimuleer of vanuit die teologiese etiek te beoordeel en toepaslik gemaak kan word. Die artikel lê deurgaans klem op die belangrike bydrae wat teologiese etiek as die beoordeling van etiese dilemmas vanuit 'n Bybelse perspektief tot die debat oor professionele etiek in navorsing kan lewer.

1. Focus of the study

In this article the focus is on the important role of research ethics for researchers. The growing importance of research ethics is due to the many challenges the research environment is facing (such as commercialisation, third stream income, protection of the environment, stem cell research) and how research ethics can safeguard the integrity of the research profession. Research integrity is believed to secure issues such as intellectual property, integrity of data and information, informed consent, etc. Next to the call for research ethics there is also a call for a professional ethic for re-

1. This article is based on an inaugural address as extraordinary professor in the Faculty of Theology, University of the Free State, read on 22 May 2008.

searchers. This study aims to contribute to the debate for a professional ethic for researchers.

The point of departure is the significant role that theological ethics can play in setting up a professional ethic for research. It is quite evident that the creation and sustainability of such a culture entails much more than a "tell me" culture – it warrants a "show me" culture. Theological ethics can do well to sensitise researchers towards a "show me" culture and can – as science in own right – do much to demonstrate integrity in the research environment. In employing theological ethics in the discussion on a professional ethic for research, the epistemological truth must be emphasised that theological ethics can never ignore developments in the world and can only comment on these developments from a *Biblical perspective*. It is for this reason that issues such as the authority of Scripture, man as being created in the image of God, holiness of life, human suffering, disposition, conviction, consequences, providence and responsibility as understood in Biblical terms are important directives for a theological ethic.

The application of professional ethics goes well beyond the professional codes for various professions. The demonstration of a university's commitment to professional ethical behaviour in research can be via a code of ethics in which the university pronounces its standards for research. This might be useful as orientation tool. Far more important is to create an environment in which a professional ethic is not regarded as a personal achievement but rather as a life orientation.

This article's debate on professional ethics reflects on the frameworks designed by J.A. Heyns (1982, 1986, 1989), G. Spykman (1988), J.H. Smit (1985) and M. Valenkamp (2006). From this perspective, ethics is presented as dealing with principles defined by Scripture and the application of a principle (norm) to a given situation (context). For purposes of the discussion ethics is defined as the study of principles (identification of desired behaviour – for example, one shall not steal) and norms/values (application of principles to a given situation – for example, one should respect other people's intellectual property by avoiding plagiarism). Theological ethics is the identification of the principles as derived from Scripture (for example, the sixth commandment – you shall not kill (Exodus 20:13)) in a given situation (for example, only aborted embryos may be used in stem sell research). Research ethics is the application of ethical principles to research (for example, do not tamper with data through the fabrication and/or falsification of information). Professional ethics is the application of ethical principles (loyalty, commitment, integrity, etc.) to professional behaviour (for example,

medical doctors must protect human life). Ethical codes in particular are evident of professional ethics.

2. Identifying guidelines for a professional ethic

The three cases that follow may be presented as directives for a professional ethical culture. Although the selection of the cases was random, the particular cases were selected to identify principles and applications for professional ethics.

2.1 The parable of the Sadhu

The case study: *The parable of the Sadhu* is probably one of the most read cases in management and business. Bowen McCoy, a Wall Street investment banker, had one big dream: to climb the Himalayas. He traveled with a group to these mountains. On the last morning of the journey, just before they would reach the top of the mountain, the guide discovered a dying Sadhu – an Indian holy man. Conflict arose amongst the hiking group: if they continued their journey the Sadhu would be left unattended and would die. If they returned to seek help, then the hike would be called off. McCoy used this incident to tackle the problems of individual versus group commitment; personal ambition and corporate loyalty.

In every business, the leadership role is crucial. A profession influences a value system. Senior management has to be engaged in forming its view of right and wrong in a business. McCoy (1997:7) states that in a complex corporate situation, the individual requires and deserves the support of the group:

> When people cannot find such support in their organisations, they don't know how to act. If such support is forthcoming, a person has a stake in the success of the group and can add much to the process of establishing and maintaining a corporate culture.

For ethics to be part of a company's management philosophy, it is imperative that the company also be ethically fit for this challenge. This begins with the mutual value between employers and employees. Amongst other things, mutual value is reflected in the business organisation's realising that no organisation can operate without people and that meaningful work should be part of people's working lives. Jaschik (1997:4) remarks that

> No one person was willing to assume ultimate responsibility … Each was willing to do his bit just as long as it was not too inconvenient. When it got to be a bother, everyone just passed the buck to someone else and took off.

From this parable several observations can be made that have implications for the topic under discussion.

Firstly, it is evident that the individual and the group cannot be isolated from each other. In the performance of a profession one interacts with other professionals in one's group. Group expectations and behaviour will have an impact on one's professional performance. This in no way means that the group's view is the ethical one – ethics is not a case of democracy. The guiding question here should be what is the general view on a matter and what would universally be expected to be the guiding principle?

Secondly, although this case study is open-ended, the underlying assumption is that the group influences the individual but the preferences of an individual also challenge group behaviour.

Applied to the topic of this study, two directives for a professional ethical model can be identified:

- Whose ethic is the preferred one? In a diverse religious and cultural group there would be more than one view on issues such as truth telling (in the orthodox Jewish community this means not to harm your neighbour), the sanctity of life (in the Catholic community embryo stem cell research is not approved), etc.
- Responsibility is beyond debate and must be evident from all actions taken. Responsibility should be understood beyond the narrow understanding of responsibility as obedience/subscription to rules only. Jaschik (2007) leads one in this regard with his comments on "educating for responsibility". His comments are based on the book *"Responsibility at work: How leading professionals act (or don't act) responsibly"* (Jossey-Bass). He says that a call for responsibility can easily become rhetoric if no examples are set. Examples are best set through advocating the ethos of the university – either through activities in the lecture room and laboratories, or through service. Students should experience a kind of "tough love" that will provide them with direction. This of course is only possible if the lecturer/researcher him/herself lives by a set of values. A fine example that can be quoted here is the *"Ethics across the curriculum"* programme at St Louis University. The objective of the programme is to integrate professional lives "with the virtues of integrity and compassion" in the professions of academics (see Kavanaugh, 2000:vii).
- Where individual and group interests coincide, the choice is very often for the common good and the lesser evil. The common good does not

lead to the logic that the greatest happiness should be brought to as many people as possible. Rather, it signals that where there is a conflict of interest the question should be how close a decision could get to the preferred decision. Consider the following example: one cannot simply produce as many embryos as needed to entertain the needs of stem cell researchers. Reformed medical ethics associates the protection of life with embryos. (The athor is mindful of the debate – even in Reformed ethics – on the beginning of life (Lategan, 2006); see also Rheeder, 2002). Silverman (2006:415) articulates researchers' responsibility well in asking whether researchers are contributing to the common good of society if the people they are studying are not protected.

- *Corporate citizenship* – moral commitment to organisation – is a more overarching terminology than corporate governance. Companies must take charge of their overall responsibility towards the broader society. If not integrated into the organisational framework, ethical responsibility will remain an ideal (see Höver, 2005). Add Van Wyk's (2008) view that ethical codes are no guarantee that people will act ethically and it becomes obvious that a company's corporate values should embrace personal values and *vice versa*. Sullivan (2005) identifies negative behaviour such as anxiety and anger as characteristic of the modern workplace. It appears that occupational calling no longer exists and that it has been replaced by technocracy. This should be replaced by responsible engagement and self-regulation.

2.2 The Johnson and Johnson case

Tylenol is a well-known over-the-counter pain medication in the US. Two incidents were reported of pharmaceutical terrorism carried out by means of misusing this medicine. Several people died as a result of the sabotage of the medicine.

The reaction to these terror attacks was noteworthy. The first time tampering with these capsules was discovered, the technology was not only changed from a capsule to a tablet (less possible to be tampered with) but all packages that could possibly have been sabotaged were withdrawn from the markets irrespective of the financial implications to the company. Clearly evident was the fact that people were considered before profit. Technologies were changed to improve human safety and no cost was too great to protect the lives of people. This is in line with Johnson and Johnson's mission statement: *Loyalty to people.*

In spite of all of these safety measures, sabotage was again reported, and again there were casualties. Once again Johnson and Johnson lived up to its own company values: loyalty to people and people first. Despite the fact that "good" money was associated with this product, it never took precedence over the company's preferred ethical behaviour (Badaracco, 1998:373-394). This sound principle is also found in the Second King Report on Corporate Governance (2002). It stipulates that "… there must be greater emphasis on the sustainable or non-financial aspect of performance".

The implication for professional ethics is clear. Own proven and valued ethical behaviour cannot be compromised. Market share cannot overrule standing up for a preferred behaviour.

This leads to the discussion on ethical codes. Although such codes cannot safeguard a company or its professionals from corrupt behaviour (such as the Enron saga and the unwarranted speculation at the French Bank, Société Générale) the ethical code signals what the company aspires to be. When the mirror is turned to universities, the question is how do they deal with ethical codes for professional research behaviour. From self-assessment reports submitted to the HEQC it is evident that although ethical codes form part of research management policies and procedures, there is a tendency to limit ethical practice to administrative medical and animal-related research committees. Immediately, however, the question of business ethics (not only to be associated with accountability in terms of external grants) comes to mind, as well as environmental ethics (for agriculture, architecture, engineering, etc.), human ethics (for all types of questionnaires, interviews, data collection, etc.) and education ethics (think of all the ethical challenges associated with postgraduate supervision such as joint authorship, ownership of patenting, availability and preparedness of the supervisor, commitment of the student, ownership of the project by the student, administrative support by the university, and so on). In addition, one may also ask how ethical codes are rolled out to the levels of awareness and implementation.

2.3 Derrik Bok's commercialisation of research

Although Bok (2003) does not present a case study on the commercialisation of research, he starts his book off with the hypothetical case (presented as a "dream") of what if Harvard University were to be turned into a business, and what effect this would have on the integrity of research at the university. He asks:

> Was everything in the university for sale if the price was right? If more and more 'products' of the university were sold at a profit,

> might the lure of the marketplace alter the behavior of professors and university officials in subtle ways that would change the character of Harvard for the worse? … Observing these trends, I worry that commercialization may be changing the nature of academic institutions in ways we will come to regret (Bok, 2003:x).

Bok (2003:59) identifies important ethical challenges in the shift towards commercialisation of research. One such an example is the increase in the number of science papers based on industrial problems. Although co-operation with industry may be to the advantage of research, a conflict of interest arises when financial or personal decisions influence the conduct of research. Examples are reported of researchers who promote the medicine of companies in which they have shares, but without revealing negative results. Favourable results lead to the rise of prices. In addition, more and more new drugs and medical procedures are tested where human subjects are involved. There are, however, also examples of researchers who are engaged with companies but who make bad or hazardous results known. Commercial activities may be strewn with good intentions but can easily lead to conflict. Commercial incentives have succeeded in encouraging universities to do a much better job of serving the public interest. Nevertheless, universities have paid a price for industry support through excessive secrecy, periodic exposés of financial conflict and corporate efforts to manipulate or suppress research results (Bok, 2003: 59-73).

It is not always the outcome of the research that challenges the integrity of that research; it may also be the research in which the researchers are engaged, or the continuation of a project just to get the funding. Another problem is the practice of universities investing in companies started by their own faculties. Conflicts in terms of management can arise, and universities have then to pick and choose between their own scientists (Bok, 2003: 146-154). Bok remarks:

> Worst of all, universities with a financial stake in work of their professors may be influenced, or may be thought to be influenced, by commercial considerations rather than academic merit when they decide on promotions, salaries or other sensitive personnel questions (Bok, 2003:154).
>
> It is unhealthy for universities to have their integrity questioned repeatedly by reports of excessive secrecy, conflicts of interest, and corporate efforts to manipulate and suppress research (Bok, 2003:156).

The warning from Bok's analysis of the commercialisation of research is clear: research for the sake of financial gain only questions research

integrity and in turn professional behaviour. Research should be driven by curiosity and problem solving. Research is all that can contribute towards the creation of new knowledge (such as the human genome project) and the renewal of old or outdated knowledge. If this philosophy for research is replaced by a financial orientation only then the essence of research is lost. I do not wish to imply in any way that financial gain is evil. The point is simply that the over-emphasis on commercial work (classified as an ideology) challenges ethical behaviour.

Bok provides one with sufficient material to build a professional ethical model for research. Four directives can be indicated:

- Research for self interest and personal gain only is unethical. The benefit of research should be extended to one's profession (the group dynamic) and to society at large as the end-users.
- Professional behaviour should be driven by the aims and objective of the assignment (for example, a cleaner environment) and not by possibilities following on the possible results of the assignment (patenting of technologies).
- Professional behaviour should refrain from conflicting activities.
- Professional ethics should guard against the multiplication of ideologies.

3. How can theological ethics assist?

3.1 The contribution of theological education

In Smit's (2002) review of the practice of systematic theology (which includes theological ethics) he touches on theological training at universities. He says that theological education can focus on issues such as personal development (including matters such as integrity), skills development (to direct a congregation) and academic knowledge – not isolated from other fields of study. He also mentions that although small in numbers when it comes to students and staff, theology departments can remind scholarly communities of questions on truth and values which should never be ignored at any respected university. Venter (2007:206) joins this debate when he asks what is unique to theological training. He observes that in theological training the emphasis is very often on moral pronouncements, and he suggests that God should become more evident in the debate – as if God Himself speaks.

Louw (2004) deals with a related issue: theology as science. The problem is how can theology work with the principles of science (for example rationality and evidence) but still retain a confessional character? He seeks

the answer in a hermeneutic model. For theology to be a science it should focus on understanding God (or better still the Biblical revelation about God – L.O.K.L.) and the relationship between God and man. "Theology, thus, is not solely about God as an object, but about faith in God and the relationship between God and humans" (Louw, 2004:863).

Some examples can provide more evidence to support the value of theological education (in general) and theological ethics (in particular).

Truth telling is fundamental in any research environment. Truth reflects on how evidence is reported, the integrity of data, informed consent, and so forth. Debates on truth telling can promote professional behaviour and support integrity in the research process. Consider the following: for the Greeks truth meant not to obscure any of the facts. In the Old and New Testaments it is less about the correct words spoken and more about the fellow-person. This in no way implies that one speaks/tells things blindly in support of other people. It means rather that one loves the truth and will live according to the truth. *Truth telling is therefore a lifestyle* (Van Wyk, 1996:92). This orientation is supported by textual references such as Isaiah 59:14 (truth has stumbled in everyday life), Ezekiel 18:9 (to do the truth), 2 Corinthians 11:10 (the truth of Christ is in you).

Another example can be found in Heyns' trilogy on theological ethics. Heyns (1986:301) remarks that a comprehensive social-ethical policy for the university is essential, firstly 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. Theological ethics can make a substantial contribution towards an ethical code for a university which includes, amongst other things, matters such as respect for and protection of human life, the integrity of data, the protection of intellectual property and the impact of research on a community. *Fundamental to this is the understanding that ethics should be part of all higher education activities.*

The notorious "offensive video" associated with incidents of alleged racism at Free State University evoked all kinds of discussions and allegations. One issue which never featured was the matter of how students are educated for their professional careers. Extended to the research community, the question can be asked as to whether only capable researchers are trained, and whether researchers in training (both novice researchers and postgraduate students) are never exposed to the requirements of professional ethical behaviour. The well-known example of using cloning techniques to create a Frankenstein monster is most applicable here. How can this be prevented? Based on this line of thought,

many issues may be raised, such as how do we prepare researchers for leadership roles in research, and how are students sensitised to have integrity in their research? Covey (1989) states that there is a direct link between trustworthiness and integrity. A popular introduction to postgraduate supervision is the so-called Memorandum of Understanding. This memorandum regulates the relationship between supervisor and student; yet a professional ethic is often neglected in this document.

It should be clear that theological ethics can make a significant contribution towards the development of a professional ethic in research. Yet, as stated earlier, theological literature is poor at looking at professional ethics and research ethics (not only in tandem!). Nevertheless a number of interesting scientific and ethical studies, seen from a theological perspective, have been published over the last few years that could assist one in drafting a framework for professional ethics that could be applied to research. In general two things are evident from these studies. *Firstly,* that science and religion are not opposing activities. New scientific methods and ways of knowledge production provide new understandings of reality. This emphasises that scientists must move away from fundamentalist approaches to science and religion. Religion can never validate scientific facts in a rational manner (if rationality is the point of departure!). If religion is about hearing and understanding then religion is an avenue to science. *Secondly* scientists should also become more aware of ethical challenges, ethics as a way to include (as opposed to exclude) other scholars in moral behaviour and that ethics is a dynamic reflection on reality and not a rigid framework to evaluate people and their acts. Confessing God influences one's understanding of life and reality and also influences consequent behaviour, but cannot provide empirical evidence for scientific facts. Religion is a matter of belief and trust and the confession thereof. In this view, God is not written out of science: the emphasis is on the revelation of God (*kerugma*) and man's response to this, rather than on declaring God as an object of science.

To elaborate on the two observations above, two references on each of the observations follow.

3.2 Science and religion

Du Plessis (2003) evinces a similar sentiment, that science and religion shouldn't be placed in direct opposition to each other. He works with the distinction between the creation as act of God and the creation as the result of this act. The latter is the focus of science (Du Plessis, 2003:40). Science and religion shouldn't be leading separate lives. Religion is the integration

of intellect and trust. Not all things in the Bible can be understood literally. If so, then a fundamentalist understanding is at stake. Instead the question is on interpretation and search for application. Openness of mind is therefore important (Du Plessis, 2003:42). In this regard Du Plessis calls for a "third dimension" which leaves room for mystery. This avoids a fundamentalistic approach and the perception that truth lies in that which can be proven historically (Du Plessis, 2003:130).

Another useful link is Van Niekerk (2005), who recently addressed the issue of science against the framework of religion. He emphasises the death of dogma when it comes to understanding God in science. In his well-presented research he refers to the post-modern technology-driven society in which science and religion should be understood. In his book he says that it is an old question to address the link between faith and science. He refers to the church father Tertullianus (145-220 a.C.) who posed the question: "What is the link between Jerusalem and Athens?" Jerusalem embodies faith and Athens the Academy. Broadly speaking there are currently two traditions: scientists in favour of closing the gap between science and religion and scientists who suspend any possible link between science and religion. Van Niekerk sees the solution to these problems in understanding the difference between religious knowledge and scientific knowledge. He says that both are legitimate sources of knowledge. A major difference between the two could be in relation to evidence. Religious knowledge deals with trust and scientific knowledge with factual evidence. The one has objective truths (it influences one's personhood) whilst the other has subjective truth (it may impact on one's life but not on who one is). The difference therefore lies in the fact that these two sources of knowledge are asking fundamentally different questions. The conclusions of one set of knowledge are not meant to contradict the conclusions of the other. These knowledge systems also deal differently with reality. Religious knowledge observes God's role in the universe and confesses accordingly. Scientific knowledge deals with theories which are verifiable and subjected to evidence, proof and experimental design. Religion can confess God; science cannot prove Him. Religion can confess that God is the Creator of the universe, science can explore the universe. It is therefore wrong to assume that religion and science deal with the same objective reality. Where roles are changed one ends with an ideology[2].

2. The author is aware of the public discussion between Spangenberg and Van Niekerk (see Van Niekerk, 2007) but will not allude to this debate since the focus of the debate falls outside the direct focus of this article.

3.3 A broader ethical understanding

Koopman and Vosloo (2002) look into the meaning of ethics. Although the context of their book is the local congregation and its reaction to social ethics, important remarks are made for the debate in this article. Four things should be observed. Firstly, they value the role of the person who has to act morally. They emphasise the fact that ethics is not about laws, norms or a set of rules for behaviour. In the deontology the emphasis is away from "good" acts to "good" people. Ethical behaviour can never be *limited* to what people are doing although it should always *highlight* what people are doing. Here (on the basis of Bonhoeffer) ethics shouldn't only ask what the right thing is to do but rather, how does one live the right thing? (Koopman & Vosloo, 2002:60-63). They refer to the sermon on the mountain in which Christ teaches us that it isn't about telling the truth but rather about loving the truth and living it (Koopman & Vosloo, 2002:69). Secondly they emphasise that a virtue ethic crosses the strict divide between the rigid subject-object scheme. Man and his behaviour and effects thereof on other people, animals and nature cannot be separated. They say (my translation): "ethics isn't about abstract moral characteristics but about people who have to embody these values" (Koopman & Vosloo, 2002:73). Ethics has to move away from a *Babel* ethic (one doesn't understand) to an ethic of *Easter* (one understands) (Koopman & Vosloo, 2002:153-154). Thirdly, responsibility is a critical ethical value. Koopmans and Vosloo suggest an ethic of responsibility. One of the virtues of responsibility is that it enquires into the consequences of decisions and acts. They also argue that responsibility means to act. Here they follow Barth (*A Christian life*) and Bonhoffer (*Ethics*) in their understanding of responsibility. Noteworthy is the emphasis on *act* and *answer* as characteristics of responsibility (Koopman & Vosloo, 2002:76-84). Fourthly, ethics should embody *hope*. Ethics is vested in Christ as Redeemer. Christian faith is based on the salvation brought about by Christ. This means that no person should be lost for the Kingdom. An ethical life therefore portrays hope as a result of the relationship with Christ (Koopman & Vosloo, 2002:154).

Another related contribution is provided by Vosloo, who works with innovative concepts for ethics. One such concept is *ethics as optic*. The meaning of ethics as optic is that people should be sensitive when it comes to identifying and reacting to ethical issues. Optic means one is focused in seeing/identifying good and bad images. Seeing a figure as ethical doesn't imply the physiological sensitivity of the human eye but the metaphorical sensitivity to see not only the bad images but also the desired good images.

Ethics is therefore a matter of the "right eye" (Matthew 6:22). The eye should be extended to the ear as well. Ethics is not only a matter of *seeing* but also of *hearing*. In this context he links up to the concept of obedience. He says that people should "see" with their ears as well. Vosloo also reminds us that one should not limit one's "seeing" to acts only but that one should also be able to note the person behind the acts (Vosloo, 2004).

Another useful concept is to be found in his book *Engele as gaste*? (*Angels as guests*) (2006). He works with the concept of *hospitality* towards strangers. Hospitality here is not limited to providing shelter, food and drinks only but embodies the way in which we meet and interact with strange ("other") people. This concept has meaning for one's personal ethic, calling and attitude towards other people in all social environments. An important directive from this study is ongoing discussions with people. The need for such dialogue is, amongst other things, because people have different views and lifestyles and continuous dialogue can assist in dealing with these issues. Dialogue should eventually change people's attitude ("heart"). The implication for a professional ethic is evident. Professional behaviour can never be limited to people of the same culture, religious background, language, world and life view, etc. People will differ on the meaning thereof. In a formal interview situation, the researcher should treat squatters with the same dignity as they would the CEO of a listed company. Informed consent from poor people is as essential as that from the wealthy.

4. Observations

Although theological ethics is good at dealing with issues such as medical ethics, animal ethics, environmental ethics and education ethics, it is rather poor when it comes to extending its knowledge to burning issues such as professional and research matters (which is the focus of this study). In general it is safe to state that research-related issues are addressed but never explicitly debated in a research environment. I blame theological ethics for this short-sightedness since I am of the opinion that theological ethics – as a discipline in own right – is ideally situated to deal with professional ethics in research for at least the following reasons:

- The philosophy of science makes it clear that no science is value-free. Theological ethics can build on this debate.
- Interdisciplinary research is characteristic of Gibbons' Mode Two Knowledge. In dealing with the complexity of "whose ethics?" theological ethics has to interact with faith systems (missiology and apologetics), hermeneutics (OT, NT, linguistics and systematic theology), etc. For theological ethics to understand journalism it has to

interact with communication science, biotechnology with biology and engineering, and so on.

- Science is dominated by paradigm and ideological shifts. Twenty years ago abortion on demand was a no-go for Reformed ethics and challenges associated with biotechnology were non-existent. Today there are new views on the beginning of life, embryo research, cloning, animals in research, the protection of human life and sustainability in architecture and engineering, etc. Theological ethics has not yet (sufficiently) responded to these (for example what is the Dutch Reformed Church's official view on biotechnology?).

5. Conclusion

In this article the point was debated that theological ethics can make a meaningful contribution towards the debate on a professional ethic for research. The value of theological ethics' contribution towards a professional ethic is that it reminds one that no professional can subscribe to a value-free orientation towards his/her profession (in this case research). Understanding one's professional behaviour must be relayed to the value system a professional lives by. Theological ethics informs from a Biblical perspective daily research realities such as the protection of life and the environment, truth telling and care for vulnerable people, research not at all cost and the limits to what researchers are able to do, etc.

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