attempting to reconstruct patterns and devices in our quest for a better understanding of ancient texts.

Confusion may sometimes arise as to the author's use of "micro-" and "macro-chiasm". Furthermore, the question why the analysis did not yield other prominent terms such as "peace" alongside "love" could be asked and one might ask for more substance being given to the introductory topics, such as authorship and audience.

On the whole, however, the book is recommended for providing an example of a detailed literary-rhetorical, audience-oriented approach, for contributing to an appreciation for and insight into the Letter to the Ephesians and for highlighting the importance of the theme of "love" within it, shown to be underlined and supported by the careful structuring of this text.

Peters, T 2007 – *The stem cell debate*

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Reviewer: Prof Cornel du Toit (University of South Africa)

This is a lucid introduction to the stem cell debate, offering ethical guidelines for assessing it. The author, Ted Peters, is a well-known systematic theologian at the Pacific Lutheran Theological Seminary in Berkeley, California. He is also prominent in the die science-religion debate. From 1990 to 1994 he was involved in monitoring the human genome project. Since 1996 he has been involved in the stem cell controversy and was appointed consultant to MD West, chief executive of Geron Corporation at that time. In 2004 the state of California approved a grant of $3 billion in bonds for stem cell research. The California Institute for Regenerative Medicine (CIRM) was established and Peters is a member of the workgroup that advises CIRM on ethical standards (p xiii). Thus, Peters is theoretically not involved in the issue, but directly influences the way in which the research is conducted.

The controversy centres aroundthe status of zygotes, since stem cells mostly develop from these cells, and for this reasonthe debate encompasses abortion with all its ramifications.

To grasp the ethical problem the book is dealing with, one needs to understand the biological background. Stem cells can potentially trigger a medical revolution in that they create new tissue. Peters explains (p 2): "What scientists are imagining is placing regenerative stem cells into not only the heart but also the brain, pancreas, liver, and spinal nervous system. With tissue renewal, regenerative therapy could reverse deterioration that leads to such diseases as heart disease, Alzheimer's, Parkinson's, diabetes, lower body paralysis, and numerous others. As a by-product, regenerative medicine offers strides forward in the battle against cancer."

Within days after the formation of a zygote mitosis occurs. Every cell (now called a blastomere) is totipotent. At the blastocyst stage the trophechtoderm (an external shell/tissue of sorts formed between days four and six, surrounding the inner cell and eventually the connective tissue with the uterine wall) is removed and the inner cell mass is disaggregated. The individual cells are placed on a feeder tray and if all goes well, the cells, now called pluripotent cells, will divide. After fifty cell divisions they will be defined as 'characterized'. "Once characterized, experiments to tease pluripotent cells into integrating with targeted tissue can begin" (p 10). That, in broad outline, is the background.

Peters sees the ethical response to this in terms of interpretive frameworks, within each of which one could argue in favour of or against stem cell research. The three frameworks – the embryo protection framework; nature protection framework and medical benefits framework – are discussed in chapters 3 to 6 respectively. Within the embryo protection framework the question is whether the blastocyst (zygote after a few days) has human dignity "and if so, are we forbidden to dismantle it when pursuing medical research?" (p 30). I find the debate somewhat artificial, since zygotes are derived from fertility program's redundant frozen cells. . Should the question of whether freezing zygote cells endlessly violates human dignity not have been raised long ago? Zygote cells can be directly obtained from the uterus, but because it is risky for the mother, it is commonly felt that it should not be permitted. The nature protection framework (p 49ff) centres around the question of whether we should so radically intervene in nature and whether it is not 'trying to act God'. I cannot say that I found this discussion particularly profound – could it be expected in a scenario where the interlocutors are representatives of popular opinion? The medical benefit framework (p 61ff) is focused on the question of whether the ends (inconceivable relief of suffering) justify the means. Again, I find the discussion rather superficial. The issue of economic benefit from the research (p 70) is vitally important, but is dealt with far too cursorily. Chapter 6 (p 75 ff) deals with the research standards framework. It concerns guidelines that secular research sets for itself. "In its most mature form, ethics becomes policy-rules made by society to guide our best attempts to live a good life" (p 76). Peters cites examples of self-imposed limitations set in practice. One is the fourteen-days rule "… that research should not be permitted that involves *in vitro* culture of any intact human embryo, regardless of derivation method, for longer than 14 days or until formation of the primitive streak begins, whichever begins first" (p 77). Another aspect dealt with is the issue of whether women should be paid to donate their ova (81ff).

In chapter 7 (p 89 ff), under the heading "Theological reflections on human nature", Peters tries to sway public opinion in favour of stem cell research by falling back on the issue of dignity. In this regard it is pointed out that dignity only emerges in relationships. A zygote is not yet in any relationship and therefore the dignity argument does not apply. After lengthy argument Peters concludes that dignity is relational rather than biological (p 104). This finding smacks of a response by a paid official. After all, we know better and can see through such artificial distinctions: the one (social interaction) necessarily entails the other (biology).

Technology appears to have landed us in a pseudo-argument, evidenced by Peters comment (p 107): "An early embryo *ex vivo*, outside a mother's body, cannot become a person in the biological sense, let alone an autonomous individual." Hence, the entire debate on frozen zygotes is a virtual one. Virtual ethics is not pointless, provided it results in actual rules for conduct. This is what Peters grapples with in the final chapter. A good conclusion is a stance of humility "since there are only degrees of certainty available regarding the ontological status of the early embryo" (p 112).