The contribution of Arthur Peacocke to the science-theology debate

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ABSTRACT

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The work of Arthur Peacocke may be considered to be a good example of the effort to link the findings and theories of new cosmology to the world of theology and religious thinking in a consistent and credible way. Highlights of Peacocke's theology pertaining to this venture are discussed. Some of the issues that are dealt with include his anti-reductionist approach, his critical realist stand, and his use of metaphor. Attention is also given to God's interaction with the world, the interaction of law and chance, God's self-limited omnipotence and omniscience, God and time, the suffering of creation and kenosis. The article concludes with some critical questions posed to Peacocke.

1 INTRODUCTION

The interaction between science and religion on the South African theological scene has in the past been largely limited to the traditional modes of thinking about God and creation found in the Protestant and Catholic traditions. It appears as if we have been isolated from developments in the rest of the theological world as far as new cosmology, new biology, and developments in creation science are concerned. One of the reasons may be the very strong influence of Protestant Calvinism which has permeated our society and has been reflected in school curricula, preached from the pulpits and promoted by the so-called "Christian-national" system of education. Protestant Calvinism stresses that the Bible cannot function as a guide to science but that it guides us in having the correct relationship with God. Nevertheless, the same belief system does not permit any scientific modes of thinking that would seem to be in contradiction with Scripture or that would interfere with basic doctrinal beliefs. Evolution, for instance, is still not taught as a school subject and is almost unanimously rejected in theological thinking. A systematic theologian like König[1], for instance, still rejects evolution in his latest book on anthropology. One also finds the peculiar situation that many natural

scientists who are at home with new cosmology and accept the evolution theory still read the Bible in a very fundamentalistic manner, which renders void to their critique against creationists and the like.

It seems as if new models concerning the relationship between God and creation are more readily accepted within a secular environment than in a traditionally Christian country like South Africa, where many believers still read the Bible in a fundamentalistic way. Peacocke himself has been writing for a predominantly secular society and this may influence the understanding and reception of his work in the South African environment.

One is reluctant to challenge, on a religious level, a society already shaken by political and social change. It is, however, necessary to reformulate, for post-modern and post-Darwinian society, the main Christian doctrines coming from the sixteenth century. We are in need of new creative theological models that reflect our present context. The work of Arthur Peacocke may make a very interesting and important contribution in this regard. His work provides an excellent introduction to new cosmology and simultaneously addresses major issues such as creation, the fall of man, original sin, human freedom, the status of Scripture, the person of God, the providence of God, the person of Christ, human suffering, the place of evil, the role of chance and freedom in God's work, God's interaction with the world, and so on. He introduces a new look at these issues by dealing with them in the context of new cosmology.

Arthur Peacocke has devoted much of his life to physical biochemistry and molecular biology. As a theologian he has indicated how the world of science affects our theological interpretation of this world. Science is not reinterpreted in the light of Scripture, as many believers would have it. We find with Peacocke the exact reverse, namely the reinterpretation of the Bible and theology in the light of science. His work represents a new theological *genre* where the Bible and Christian tradition are reformulated in a rational way to fit the basic assumptions of the latest scientific findings, especially as they relate to new cosmology. He loves to quote Einstein, saying "The eternal mystery of the world is its comprehensibility"[2]. This comprehensibility refers exclusively to scientific comprehensibility. One cannot ignore the fact that from many religious and cultural viewpoints the world has in the past also been interpreted as perfectly comprehensible.

Peacocke does not simply bend scientific data to fit his theological ideas. He maintains the basic ideas which science has provided over the years and uses these in a rational and consistent manner lucidly to present

his arguments in the science-theology debate. He combines ideas from both the scientific and the theological worlds on a metaphoric level, so as to stimulate new thinking. Peacocke opts for a holistic and integrated way of thinking. The same line of thought runs through all of his work. He is not prepared to maintain theological ideas which are not congruent with his scientific beliefs. A golden rule, for him, seems to be that theological data ought not to be accepted when they are inconsistent with scientific findings. The *rationale* behind this is that one could make valid theological inferences from creation about God's attributes, the act of creation and so on. Creation remains a source of general revelation and this may not be contradicted by any other source or revelation, such as the Scriptures. Therefore, we have to reformulate historically bound doctrines about God in the light of the new broadly accepted scientific narrative. He believes that the traditional affirmations of Christian theology must be related, even recast, if Christian theology is not to operate in an intellectual vacuum[3].

The use of recent scientific models and metaphors for explaining theological issues makes Peacocke's theology contingent, historic and contextual. There are still many uncertainties surrounding the first three minutes of the so-called big bang; there is still much speculation in quantum mechanics. The overall model is, however, secure and theological inferences are drawn from this total image. One may expect that, because of the influence exerted by this core of certain and substantial scientific evidence, the critique brought against modernism will be revitalised. This critique is directed against belief in science, which eventually develops into science being the belief. It is interesting to note the sensitivity of some thinkers to any remarks that smell like post-modern critique.

However, the kind of theology that is constructed through the application of scientific data speaks in a credible manner to a generation living with these models. Peacocke[4] writes for a post-Christian community where the acceptance of biblical authority does not go unchallenged. He does not accept that the Scriptures alone give a clear understanding of the word of God. "How can we know that these scriptures, this tradition, are transmitting to us the genuine word of God?", he asks. He says that, because we cannot know, Protestant and Roman Catholic theology are more open to the broader streams of intellectual enquiry in our culture, including the sciences, as well as to each other and to other religions[5]. One could ask whether science has now become the new key to unlock and understand the Bible, as biblical ideas are being explained and reinterpreted through the contemporary scientific narrative. This approach is enhanced by the fact that the Scriptures are a fixed body of texts about

God, limited by historical and contextual boundaries, while science is experienced as an open and developing testimony about God. Science thus becomes the new canon for understanding the process of creation and for understanding the nature of God in and through this process. Natural being and becoming for instance, become the model for understanding divine Being and Becoming[6].

Of course, one could also reformulate theological ideas from a psychological, literary or philosophical point of view. These different viewpoints however, do not affect our world-view as radically as that of the new cosmology.

2 PEACOCKE'S THEOLOGICAL METHOD

Peacocke addresses well-known theological issues from the world of science and challenges the church to reformulate its stand on traditional Christian doctrines. He looks for new images and metaphors in the light of the best scientific picture of the world. His theology is a rebirth of images concerning the nature of God as Creator, the act of creation and the continuing nature of God's creative interaction in the world[7].

One cannot accuse Peacocke of an unwarranted belief in science. He acknowledges the limits of science and theology, and he does not hesitate to address uneasy questions. He knows that there is in modern physics a great mystery concerning our understanding of matter, energy, space and time. The world is very mysterious in its ultimate depths[8].

His anti-reductionist stand has earned him much appreciation from many quarters. He rejects both dualism and reductionism and accepts a hierarchical epistemology that leads to a philosophy of emergence. Knowledge claimed by one reality cannot be explained by, and reduced to, a lower-ranking reality. He considers reality to consist of hierarchical levels of complexity, each to be interpreted and explained by methods and concepts appropriate to it. These hierarchical levels refer to complexity and not to authority. Higher levels of complexity incorporate information from the lower levels and expand on it. What is real at the atomic level is not more real than a social or personal reality. The social level, however, incorporates relevant input from lower levels. Similarly, theologians, when considering human in creation, will have to take cognisance of the latest findings of science[9].

Methodologically, Peacocke correlates critical realism in the natural sciences with a critical-realist theology. Both rely on metaphor and engage in realities that may be referred to and pointed at, while being beyond the

range of complete and literal examination. As a critical realist he offers a scientifically objective display of theological interpretation, emphasising the rational aspect of theological thinking.

Peacocke presents his case in a creative and very sensitive manner so that one never gets the impression of a forced or artificial way of thinking. Issues which have been experienced as being problematic for many years are dealt with in his theology in a dynamic and gripping way. He does not accept the *sola scriptura* principle and feels free to reformulate basic views on God, humankind and creation. Yet Scripture is not discarded; it is set in a new *genre*. In the same manner he quotes passages that are consistent with his views from the early church fathers and reformers.

Although Peacocke's point of departure is the natural world, one cannot simply typify his thinking as a resurgence of natural theology. The natural theology proposed by thinkers like Teilhard, Brunner and others in the past did not work with the same model and simply did not have as much to offer; it was not as challenging. Nature is now used to reinterpret God in a radical way and not simply to enhance our preconceived images of him. Jesus was the ultimate revelation of God's being to humankind in a mode that it could understand and appropriate. This, according to Peacocke[10], confirms that nature in its actuality, materiality and evolution - of which Jesus was indubitably a part - is, potentially at least, both an expression of God's being and the instrument of his action.

Although much of Peacocke's thinking seems to agree with process theology, he is not a process theologian. He appreciates the way in which process theologians have taken God's action in the world, which they describe in terms of law-like evolutionary processes, seriously. He criticises process theology's interlocking with pan-psychism, a view of the world which sees mental and physical aspects in all world events[11]. Process theology, for him, over-emphasises God's total receptivity towards all events in the world. Peacocke[12] does not want to imply a direct involvement of God in all events, nor does he consider all events as, in the same sense, having an equal effect on God.

Peacocke's theology is positive. From the multiplicity of structures and processes he infers a personal creator who intended this rich multi-formity, and who "delights" in what he has created[13]. Peacocke also rejects the idea of a "fall" from past perfection. There was no golden age, no perfect past, no perfect individual "Adam" from whom human beings have now descended. Humans have emerged within nature along natural processes which, by and large, science now renders intelligible. Sin, which

is real, is about falling short of what God intended us to be and is concomitant with our possession of self-consciousness, freedom, and intellectual curiosity[14].

3 THE INTERACTION BETWEEN SCIENCE AND THEOLOGY

Peacocke has dedicated much of his work to the science-theology relationship. He has not only contributed to the resurgence of this debate, but also sets a credible standard for the interaction of science and theology, acknowledging the different language systems and attitudes of science and theology, and appreciating the contribution that both disciplines could make to the debate[15]. Peacocke reminds the sciences that they will have to be more willing than in the past to see their models of reality as partial and applicable in restricted areas only. Theology should neither be immune to the changing outlook of the sciences of man and nature, nor should it be captive to them[16].

A new world-view must be accompanied and explained by appropriate metaphors. Without these metaphors such a new paradigm will simply not become part of people's thinking. One of the best ways to explain the implications of such a new paradigm is to link it to firm traditional beliefs that may be affected by it.

The use of examples from natural science to disprove the literal understanding of the fall, Jesus' miracles, the immaculate conception, the omniscience of God, and so forth, may seem superfluous to theologians who in any case reject it on hermeneutical grounds. Peacocke uses examples from natural science to underscore what many theologians have been saying for some time. He considers, from the view of what can be called a scientific apologetics, what theological hermeneutics has been doing all along. We know, for example, that the story of the fall is part of a cycle of protology literature found in Genesis 1-11 and is not to be read literally. It is not (if one accepts the evolution theory) because of the realisation that the fossils leading up to *homo sapiens* do not display a perfect prefall condition and a radical break that the literal understanding of the fall is questioned.

4 HERMENEUTICS AND THE USE OF METAPHOR

Peacocke was accused of not paying adequate attention to hermeneutics or to the role that rhetoric and language play in theology. Although this may be formally true, Peacocke's hermeneutics can be deduced from his work.

It is clear that he reads Scripture in a non-fundamentalistic way and that he takes note of the context within which texts are presented. But how does he go about linking science to theology? Van Huyssteen has shown, with reference to McMillan, that it would be an epistemological fallacy to infer directly from contemporary science to theological doctrine. It would be a serious categorical mistake to infer directly from, for example, the Big Bang to creation, from field theory to the Spirit of God, from chance to divine providence, from entropy to evil, or from the anthropic principle to design[17]. He suggests that one should develop a conceptual framework that would yield a fine-tuned epistemological consonance by carefully focusing on the nature of rationality in theology and science[18]. Peacocke does not make unwarranted inferences. His use of models and metaphors aids him in applying relevant scientific data to theology. He does not work within a fine-tuned epistemological framework. This does not prevent him from being consistent and congruent in his thinking. He considers the models used by science and theology as analogical and metaphorical, which means that they are not explicitly descriptive. It is exactly this resilience that makes these models so useful. He considers a critical or sceptical and qualified realism as appropriate in the domains of both science and theology[19]. In both science and theology the models are, as he says, "candidates" for reality. They are not literal pictures, but they are more than useful fictions. They reflect reality, and are to be taken seriously, but not literally. Metaphors can be referential without being naively descriptive[20]. Models in science and theology are concerned less with picturing objects than with depicting processes, relations and structures. He seems to limit the use of metaphor simply to a figure of style. Metaphor could be seen much more broadly, however. Narratives, doctrinal statements, and so forth could also be metaphorical.

Peacocke maintains the diaphoric part of metaphor - that is, the "is-not" dimension in all metaphors. God is always more than we can think or say. We can never in an unrevisable and final way refer to God. "Thus", says Peacocke[21], "the Christian mystic is your true critical realist - compelled to be aware both of the reality of God and of the utter inadequacy of human speech about him". With reference to Sally McFague he underscores the models of God as Mother, Friend, Lover, et cetera. Such models utilise metaphors, with the concomitant and simultaneous "is" and "is not" character of their affirmations. In this way different models could be employed together in a metaphorical manner without contradicting each other while, at the same time they enrich our perception[22]. The models of "making" and "emanation" are especially fit to describe God's

creation as they emphasise God's immanence in and his transcendence over creation. The metaphors of an author and a composer stress the same[23]. The recourse to models and metaphors is an opportune strategy in the debate. When scientists speak metaphorically they cannot be accused of naively applying their findings to theology.

5 NEW REFLECTIONS ON CREATION

Peacocke deals with the doctrine of creation in his Bampton lectures. The rethinking of the doctrine of creation somewhat restores the significance of the doctrine of God and creation which was less focused upon in the twentieth century[24]. Whereas science in modernism to some extent curtailed the wonder of nature and God's place in it by ably explaining everything in terms of laws and relations, the same science now restores the wonder and awe which have been lost.

The doctrine of creation is so closely linked to the doctrine of God that the two cannot be separated. The creation is not merely a means to an end as in Barthian theology, where the creation is simply the outward ground and presupposition for God's covenant with man. With Peacocke the creation process is an end in itself.

That God is creator does not mean that God is any ordinary cause in the evolution of the universe. To declare that God is such a cause would be to return to the "God of the gaps" theology and deny God's uniqueness and distinctness from the world[25]. Peacocke, in affirming God's immanence, wants to see the hand of God not in isolated intrusions, not in any gaps, but in the process of continuous creation itself[26]. There is integrity, consistency and wholeness in the entire process of creation.

Matter, after a succession of levels of self-transcendence, became in man self-conscious and personal, self-transcendent, and corporally self-reflective. This is a fundamental feature of the cosmos and is a clue to its meaning and intelligibility. This process eventually reveals the immanence of the transcendent creator[27]. Humankind, nature and God are still in a process of becoming. Human beings are actually human becomings. This occurs through the ongoing process of evolution.

Evolution occurs inorganically, geologically, biologically, socially and culturally. There is a continuous, almost kaleidoscopic, recombination of component units into an increasing diversity of new forms, which last only for a certain time, after which they are reformed from the same simpler entities into new and more complex patterns[28].

5.1 Emergence and open-endedness

Creation can be explained by the metaphors of emergence and emanation. The history of creation is a seamless web, a continuity that is increasingly intelligible. Peacocke sees the process as one of emergence of new forms of matter, and several organisational hierarchies of these forms of matter appear in the course of time. They form new properties, behaviours and a network of relations all interacting with each other. So we would anticipate continuity, with new meanings emerging out of the old, subsuming them, perhaps, but not denying them[29].

In the dynamic picture that is presented to us, the world of entities and structures displays genuinely emergent properties that are non reducible in terms of what preceded them and thus constitute new levels of reality. New realities emerge and old ones pass away, so that God's action as Creator is both past and present. Though God as Creator acts in all events, not all events are equally perceived as acts of God. Some events will reveal more to us than others[30].

5.2 The interplay of law and chance

For Peacocke, the role of science is to elicit all the possibilities in the inherent stuff of the universe so that a "ringing" of possibilities may be evoked[31]. Chance and law work together as part of God's instrumentalities, as the means through which God acts as transcendent lawgiver and as immanent manifestation of potentialities in the world[32].

6 DIVINE BEING AND BECOMING - THE DOCTRINE OF GOD

6.1 Panentheism

Peacocke uses the concept of panentheism to describe the relation of God to the world. Panentheism seems to function as his theological method. Panentheism is the belief that the Being of God includes and penetrates the whole universe, so that every part of the universe exists in him, but his Being is more than this universe and is not exhausted by it. God is, for Peacocke, the fundamental creative power immanent in all physical processes. The emphasis on God's immanence counters the notion of deism, according to which God has created matter in such a way that it tends to assemble itself in increasingly complex ways which eventually

lead to the emergence of intellectual and spiritual beings[33].

One may easily infer that God is the process itself and that this process came to self-consciousness through man who now creates a projection of God. Although God is immanent in nature, he also transcends it. God creates a world that is, in principle and in origin, other than himself, but he creates it within himself[34]. God is thus not the process itself which became self-conscious in man. God encompasses the process and transcends it. Peacocke uses the very appropriate model of the composer to describe this relationship. In listening to a passage of Beethoven's music one actually encounters the composer as creator. There are many aspects of the person of the composer not found in a particular piece of music. So it is with God in creation. We could infer what kind of a God is involved in such a process, but he may be much greater and more than the process. What we can know, however, is what our inferences allow us to know.

The concept of God as Creator has in the past been dominated too much by the externality of God's creative acts. Using the metaphor of mammalian females, where the growing embryo resides within the female body, Peacocke[35] wants to emphasise the more "feminine" aspect of God as creating the world within "herself". God is transcendent over and immanent in nature. He creates a world that is in principle and origin other than himself, but he creates the world within himself. He continues the process of creating. The emergence of novelty, of higher orders of complexity, brought about through the temporal process of non equilibrium thermodynamics and biological evolution, underscores this continuous creation. If God is fully immersed in time as an immanent, continuing Creator, then he cannot know the future. One can then indeed question whether God can guarantee the eventual fulfilment of history[36].

6.1.1 God's interaction with the world

In a lawful world God does not intervene in an unlawful or miraculous manner. God interacts with the world and communicates with humanity in a way that is consistent with the way he has made the world and this is consistent with the descriptions of that world given at other levels by the natural and human sciences[37]. If he was to intervene in a *Deus ex machina* manner, this would be inconsistent with the whole process, which is meticulously fine tuned, and which is so impressive that the so-called "anthropic" or "biotic" principle was formulated[38]. Peacocke[39] refers to the notions of top-down causation and information transfer to explain God's interaction with the world. In many complex systems the macro-

scopic state and character of the system as a whole is a constraint upon - and effectively a cause of - what happens to the units of which it is constituted, so that these units behave in ways other than they would have done, were they not part of that system. The model of top-down causation may be considered as allowing a model for the providential activity of God. The nature of the causal joints is, however, not always certain. How far, for instance, will it allow for real freedom at the lower levels?

6.2 Self-limited omnipotence and omniscience[40]

God has imposed constraints on himself in creation and has a "self-limited" omnipotence and omniscience. He has so made the world that there are certain areas over which he has chosen not to have power - for example, human free will. God's self-limitation refers to certain systems whose future states cannot be known - even to him - since they are in principle unknowable[41]. God's self-limited omniscience refers to the subatomic constituents and nonlinear systems of the world which have an unpredictable character. God has allowed himself not to have overriding power over all that happens in the world nor to have a complete knowledge of the direction events will take. He has actually put his ultimate purpose at risk by incorporating open-endedness, and eventually human freedom, into the created world[42].

6.3 God and time

Peacocke's view of God and time must be read in the light of God's self-imposed omnipotence and omniscience. Peacocke's view totally changes the major theological issues such as free will, predestination, the claim of God's changelessness and impassability and the relation of God to eternity. Special relativity, in particular, changed Peacocke's view on these matters. We cannot accept the Newtonian theory of one, universal, flow of time. There are many times, specific to different observers, each with their own positions and velocities. The question is - to which of these times does God relate?[43]

There is no place in Peacocke's theology for an eschatology. God does not work with any predetermined blueprint. Peacocke finds the concept of God as the deterministic law-giver, prescribing all in advance, as inadequate and even false, and searches for metaphors associated with probing experimentation, exploration, and improvisation, as presenting more appropriately what God is up to in his continuous creative activity[44].

God is the Creator of physical time. He is also above time. He transcends time, but not in the sense of viewing the whole course of "our" time from the mountain top - as if in another dimension - "above" or "outside" time, so that our "before", "now" and "after" are all spread out for him to see. God cannot see ahead in time in the sense that all is actually predetermined. Analogous to the indeterminacy of events at the subatomic level, one can say concerning future events that, at best, only the range of possible outcomes of certain events can be predictable and thus known to God[45]. God is thus not timeless. He is temporal in the sense that divine life is successive in its relation to us. God creates and is present every instant of the physical and psychological time of the created world.

The only guarantee we can have of future events is that whatever will happen, God will be there. We could, to a certain extent, predict broadly what may happen, but we could be wrong and we are subject to the randomness of events.

God has thus not created the universe with the specific aim of attaining a specific goal or reaching a specific point. The creation process itself can be God's only aim and he can only hope that it will develop so that his future relations with humanity will be according to his will. He suffers all along with his creation in so far as it does not develop according to his will.

6.4 The suffering creation and the suffering God

From a scientific viewpoint suffering can be viewed as normal and a natural part of the evolutionary process. Theologically speaking, it evokes many questions which relate directly to God's place in suffering. Peacocke argues that suffering occurs within the divine being. God himself suffers with creation. He suffers in, with and under the creative processes of the world with their costly, open-ended unfolding in time[46]. Pain and death must be seen as preconditions of life. New forms of matter only arise through the dissolution of the old; new life comes through the death of the old[47]. Consciousness and awareness cannot evolve without the nervous system, which implies pain. What theologians used to call "natural evil" now seems to be a necessary part of the process for the production of new life and consciousness[48]. Suffering occurs within the divine being. God is involved in the evolutionary processes and suffers with nature[49]. Through the cross God suffered with Jesus and thus with all creation. The manifestation of God in the Word-made-flesh himself went through the door of suffering and death to fullness of life and the consummation of

humanity within the presence of God - so the final agony and apogee of the evolutionary process is the paradox of a human being on a cross exalted by God into divine life[50].

God's act of creation still proceeds, and God is immanently present in and at the whole process. These processes include the operation of chance in a law-like framework as in the origin of life, the emergence of new forms of life only through the costly processes of natural selection with death of the old forms, and the emergence of sensitive, free, intelligent persons through a development that inevitably involves increasing sensitivity to pain and the concomitant experience of suffering with a growing consciousness and self-consciousness[51].

6.5 Kenosis

Peacocke employs the idea of *kenosis*, found in Philippians 2, to describe God's relationship with creation. We can speak of the vulnerability of God - indeed, of the self-emptying (*kenosis*) and self-giving of God in creation. Different meanings of God are communicated at the different levels of creation, according to the capacity of those levels to receive the information, the message and the meaning of God. If God is creating through the kind of processes we see in the sciences, then God must be regarded as the self-offering and suffering love active in creation[52]. This *kenosis* and self-inflicted vulnerability of God were designed to try to achieve an overriding purpose, the emergence of free persons[53]. God could not enforce this, but had to wait for it to happen.

7 THE PERSON AND WORK OF JESUS

Peacocke[54] demythologises Jesus' immaculate conception and his miracles and sees him as an ordinary human being. The difference is that Jesus was fully open to God. He is the manifestation of God's transcendence immanent in human life. Jesus is the perfect vehicle for conveying to us what the transcendence and immanence of God may be. God, who had all along been immanent to the whole temporal creative process, has expressed himself directly, personally and concretely in and through a particular person who, humanly speaking, was totally open to him[55].

Jesus is a self-communication from God and the self-expression of God in a human person. In Jesus' cross we see God's self-offering love. Our positive reaction to this is the beginning of our salvation. Peacocke quotes Irenaeus who said "Our Lord Jesus Christ, the Word of God, of his

boundless love became what we are that he might make us what he himself is". Peacocke sees this as the positive understanding of redemption - not the restoring of the past perfection of a mythical Adam, but an initiative that raises humanity into the life of God. This then seems to be the qualified eschatology of Peacocke - namely that we may be raised to share in the life of God as happened in the case of Jesus. Peacocke acknowledges the importance of hope for us. But our hope must be centred on this world in the sense that the centre and arena of our hoping must be the world we know[56].

Peacocke's soteriology seems to be analogous to that of Abelard, who stressed the subjective atonement. We react subjectively to the experience of Jesus' cross. The question is, then: why only Jesus' example and not also that of so many other saints through whom God also must have acted and who were similarly open to God?

8 AN EVALUATION OF PEACOCKE'S CONTRIBUTION AND ITS MEANING IN A SOUTH AFRICAN CONTEXT

Peacocke reflects in a fascinating manner on the images and models of Christian theology in the light of his understanding of the natural world gained from the sciences. His implementation of the new cosmological model for theology is unique. We find a new assessment of nature and its minuscule processes. Even the smallest piece of matter attains sacramental worth. We were born in the stars and the stars have come a long and miraculous way[57].

Peacocke's work can be regarded as an apologetic theology redescribing traditional theology to be rationally credible from a scientific and secularist perspective. One could, however, differ on its existential appeal, especially since the gaps left by the loss of Christian eschatology and Christian hope are not really filled. Science answers the "how" questions, but not all the "why" questions of existential concern.

Can science really answer ultimate questions in the same manner that faith does? Science also demands faith, but on a different level. Issues like the anthropic principle and the notion of finetunedness require some degree of faith, too. Can faith in the explained process and its presuppositions replace traditional ways of believing?

There remain several questions:

* Are we not back in a modernist frame of mind where we remain stuck within a closed system of thought, where all ideas must be consistent

with the overall programme? Should a system acknowledging the possibility of randomness, indeterminacy and chance, not perhaps be more open to the possibility of miracles and unexplained events? Is present day man not more open to miraculous events than was the case in modernism?

* Is Peacocke's theology existentially and pastorally satisfying? Does it provide comfort for people who are suffering and does it give hope to people dying - or should these questions not be asked?

* What is the place of Scripture in this obvious post canonical age? Is it simply to be used in so far as it fits the new models of God, world and man? Can we accept that God does not necessarily speak most clearly through the Bible, and that he speaks as clearly through other religions within their contexts? God may have revealed himself magnificently in Christ, but there are also many other clear manifestations. As the objective atonement of Christ is rejected, we must not depend exclusively on models like altruism to describe God's interaction with the world. Other important models could be inferred from other world religions and philosophies.

* This brings the question of the place and worth of other religions to the fore. We can infer from Peacocke's work that God was also immanent in all processes leading to the formation of other religions. How are these religions to be confronted with the new science model, if at all?

* What are the ethical imperatives to be derived from the new cosmological level? Must *kenosis* and altruism, for instance, become an overarching ethical norm from which all other norms must be derived? How must Peacocke's view on evil, suffering and death as necessary components of the whole process be dealt with? Will it be easier now to decide on issues like abortion, euthanasia, genocide and so on?

* Peacocke's work introduces new factors in dealing with theodicy. God cannot be blamed any longer for innocent suffering, since natural disasters cannot simply be shifted onto him any more. God must abide by the process and what it allows. Although the broad development of the creation process may be according to his will, many developments may fall outside his will. His will cannot be enforced upon free human beings. We are to take responsibility for our circumstances and actions.

Our destiny is in God's hands, but our lives here and now are ours to direct, in his way, if we so choose[58].

* What is the status of the faith of believers? Faith cannot be a prerequisite for salvation any more.

Knowledge of the process that brought everything into existence seems to be a prerequisite for believing in the God who interacts with us and is present every moment in this process. What must we believe and what can we hope for? We can believe that we will be taken up into the life of God, as Jesus was. We can hope that the future will be as fine tuned as our past was. What about mind-body integrity? If God waited fifteen billion years for us to be created, does it make sense to believe in another kind of existence outside the mind-body unity as we know it?

It is unfair to expect Peacocke to answer all the questions raised. Does it make sense to ask these questions at all? Can questions relevant within one *genre* of theologising simply be asked within another *genre*? Presumably not. These questions must however be dealt with. Peacocke falls back on models and metaphors to try and answer some of these issues. The hardware-software model from computer science is one such a model to be used for explaining our future existence with God. Whether believers will find it satisfactory is uncertain.

Concerning the South African context, the hope may be expressed that people from all religions will engage in the science-theology debate so as to come to grips not only with the new science narratives, but also to apply them to their religion. It has always been a mark of religions that their people have integrated their world view into their total belief system. The new cosmology discussed here may contribute in uniting all people, not only in their common destiny but also in an ethics of reverence for God and respect for one another.

It would be apt to end however, with the acknowledgement of our limitations and the mystery of all things. To say that God created the universe does not explain either God or the universe, but it keeps our consciousness alive to mysteries of awesome majesty which we might otherwise ignore[59].

NOTES:

1 A König, *Menslike mense: gelowig nagedink*, Halfway House 1993, 158-175; see also J A Heyns, *Dogmatiek*, Pretoria 1978, 105-108.

2 A R Peacocke. *Theology for a scientific age: being and becoming - natural , divine and human,* Minneapolis 1993b, 81.

3 A R Peacocke, *The sciences and theology in the twentieth century*, London 1981, xiii.

4 A R Peacocke, "The religion of a scientist", *Zygon* 29/4 (1994), 656.

5 A R Peacocke, *Intimations of reality*, Notre Dame 1984, 39.

6 Peacocke, *op cit*, 1993b, 300.

7 A R Peacocke, "Science and God the Creator", *Zygon* 28/4 (1993a), 483.

8 A R Peacocke, "The challenge of science to theology and the church" in: J M Mangum (ed), *The new faith-science debate: probing cosmology, technology and theology*, Minneapolis 1989, 12.

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10 A R Peacocke, *God and the new biology*, London 1986, 101.

11 Peacocke, *op cit*, 1986, 85.

12 Peacocke, *op cit*, 1993b, 209.

13 A R Peacocke, "God as the Creator of the world of science" in: V Brümmer (ed), *Interpreting the universe as creation: a dialogue of science and religion*, Kampen 1991b, 109.

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15 Peacocke, *op cit*, 1981, xivff.

16 Peacocke. *op cit*, 1984, 51-54.

17 J W van Huyssteen, The shaping of rationality in science and religion. Paper delivered at the Religion and Science Conference, University of Warwick, Coventry 1995, 15.

18 Van Huyssteen, *op cit*, 16.

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20 Peacocke, *op cit*, 1984, 42, 46.

21 Peacocke, *op cit*, 1984, 49-50.

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25 B R Hill, "Creation education: an overview of contemporary theological education", *Religious Education* 85/3 (1990), 392.

26 Peacocke. *op cit*, 1993b,154.

27 Peacocke, *op cit*, 1986, 129.

28 Peacocke, *op cit*, 1991b. 103.

29 Peacocke, *op cit*, 1991b, 103.

30 Peacocke. *op cit*, 1986, 100.

31 Nelson, *op cit*, 521.

32 Peacocke. *op cit*, 1986, 99.

33 Peacocke, *op cit*, 1986, 181.

34 Peacocke, *op cit*, 1993b, 300ff.

35 Peacocke, *op cit*, 1984, 64.

36 Russell, *op cit*, 508.

37 Peacocke, *op cit*, 1993b, 211.

38 Peacocke. *op cit*, 1994, 650.

39 Peacocke, *op cit*, 1994, 653.

40 Peacocke. *op cit*, 1993b, 121-123.

41 Peacocke, *op cit*, 1993b, 121-122.

42 Peacocke. *op cit*, 1993b, 123.

43 Peacocke, *op cit*, 1993b,129-130.

44 Peacocke, *op cit*, 1984, 65.

45 Peacocke, *op cit*, 1993b, 128-129.

46 Peacocke, *op cit*, 1984, 68-69; Peacocke, *op cit*, 1986, 132; Peacocke, *op cit*, 1993b, 126.

47 Peacocke, *op cit*, 1991b, 103.

48 Peacocke, *op cit*, 1989, 14.

49 Peacocke, *op cit*, 1993b, 126-127, 308-311.

50 Peacocke, *op cit*, 1986, 132.

51 Peacocke, *op cit*, 1993b, 125.

52 Peacocke, *op cit*, 1989, 15-18; Peacocke, *op cit*, 1993b, 308-311.

53 Peacocke, *op cit*, 1993b, 124.

54 Peacocke, *op cit*, 1993b, 268-274.

55 Peacocke, *op cit*, 1986, 101.

56 A R Peacocke, *Science and the Christian experiment* , London 1971, 197.

57 Peacocke, *op cit*, 1986, 116ff; Peacocke, *op cit*, 1989, 21.

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59 W B Drees, "Potential tensions between cosmology and theology" in: V Brummer, *Interpreting the universe as creation: a dialogue of science and religion*, Kampen 1991, 79.