

**Immanent transcendence and radical transcendence
the pivotal issue between a Christian theology and
a naturalistic metaphysic**

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Introduction

I am grateful for the opportunity to present my thoughts on transcendence at this conference. In contrast to many other contributors to this volume, I do not think we can reduce the concept of transcendence to immanent transcendence. ‘Immanent transcendence’ is not only self-evident, but also generally accepted as such. No particular faith is needed to understand it. The pivotal issue between the metaphysics of naturalism and the Christian faith is *radical* transcendence.

This divergence has enormous consequences for Western civilisation, social reconstruction and ecological responsibility. My essay begins with the wider context of modernity and its economic and ecological consequences, spell out the differences between immanent and radical transcendence as I see them, present a few examples and close with a concluding assessment.

The overall context

Ever since the Enlightenment, faith and science have been drifting apart. There are at least two reasons for that. One, modernity is driven by an emancipatory thrust that, in time, jettisoned its transcendent foundations. It aims at human mastery and ownership of reality. In this particular respect post-modernity is a radicalisation of the modern quest for freedom – even from the constraints imposed by modernity itself.²

The fundamental manifestations of modernity are **science**, which feeds into **technology**, which serves **commerce**, which actively promotes an all-embracing **consumer culture** because it is geared to profit maximisation at the enterprise level and economic growth at the economic policy level. The liberal-capitalist system as such must grow or it will stagnate or collapse (Nürnberger 1998:28ff; 156ff). The consequences are ever greater economic

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² For Nancy, for instance, any kind of metaphysics ‘encloses’ and must be ‘dis-enclosed’ or exploded by the “piety of reason”, a service that it “owes itself in the name of its absolute destiny” (Nancy 2008:3).

discrepancies, ever more frequent economic crises and – if futurological projections can be trusted – some ecological mega-disasters in the not too distant future.³

Two, the Christian faith, originally one of the most dynamic faiths ever to have emerged, got stuck in traditionalist mindsets and authoritarian structures that were unable to keep pace with the unfolding dynamics of modernity.

In sum, science lost its transcendent foundation and orientation, while the Christian faith lost its credibility. As a result we are drifting mindlessly, helplessly and relentlessly towards an unprecedented human, economic and ecological catastrophe. This may threaten the very survival and prosperity of humanity as such or, at the very least, huge chunks of the world population. If the faith-science debate has any point at all, *this must be the point*.

For better or for worse, science and faith have been instrumental in the generation of modernity in the West. They have, each in its own way, contributed to the genesis of the current impasse and they are jointly responsible for resolving it. The combination of ‘best science’ with ‘best faith’ could go a long way towards raising public consciousness and global responsibility. As a Christian theologian, I try to “become a scientist to the scientists” (1 Cor 9:19-23) to enter into a meaningful dialogue with modern science and, by implication, with naturalism.

Nature and naturalism

The mandate and method of the natural sciences are confined to immanent reality, or ‘nature’. Nature is a name for the cosmic process as such and as a whole. According to modern science it began with the ‘big bang’; it is constituted by various forms of energy; it is powered by the interplay between entropy and gravity; it is guided by regularities of various kinds (natural laws); it evolved in various levels of emergence, and it is likely to end up in a big crunch or an infinite dispersion of energy billions of years into the future. The methodological assumption of the sciences is that there is only this one reality, the reality that we experience and that the sciences explore.

Naturalism translates the methodological restriction of the sciences to immanent reality into a metaphysical axiom. For naturalism, nature is all

³ Neo-Marxian social analysis and the upsurge of ecological research since the first oil crisis in the 1970s have produced a wealth of perceptive and detailed studies. They have been wiped off the table by the upsurge of neo-liberal economic thought during the Reagan-Thatcher era, especially after the collapse of the Soviet Union. My own extended research on these issues culminated in Nürnberg 1999. Decades have since been lost due to this calculated denial. The unprecedented economic development of huge populations in China, India and other large emerging nations, and the effects of climate change and water scarcity that can no longer be overlooked, have rekindled ecological concerns, but they have not reached a critical mass on a global scale as yet.

there is. There is nothing beyond. Transcendence beyond immanent reality is a concept without referent. Because of this seamless affinity between the methodological restriction of the natural sciences and a naturalist metaphysical axiom, natural scientists are strongly inclined towards naturalism. Human beings tend to attribute greater reality content to aspects of reality that demand their immediate attention and that at the expense of deeper questions.

However, at this juncture of the argument we have to distinguish between immanent and radical transcendence. Transcendence in general means that we allow our recollection, anticipation, imagination and reason to go beyond certain boundaries, in this case the boundaries of our immediate experience. There are, of course, such boundaries within the reality we experience, whose existence neither scientists, nor naturalists, nor believers would deny. What distinguishes naturalism from faith is the question whether it makes sense to go beyond the boundaries of nature as such and as a whole. Before we come to that let me demonstrate the pervasiveness of immanent transcendence with a few examples.

Immanent transcendence

Immanent transcendence means that humans are able to think, plan and act beyond the small sphere of reality that is accessible to their immediate experience, but staying within immanent reality as such. We go beyond what is *experienced* towards what is *known*, but not experienced; beyond what is known to the *knowable unknown*, that is, what could be known but is not (yet) known, and beyond the knowable to the *unknowable*, that is, to that part of immanent reality that cannot be known because humans lack the capacity to come to know it.

The area of the knowable unknown is vast in its own right. The famous physicist and Nobel laureate Werner Heisenberg remarked that “The existing scientific concepts cover always only a very limited part of reality, and the other part that has not yet been understood is infinite.” (Heisenberg 1999:201). But that is not all. There is also the unknowable. As other contributions to this volume (for instance Detlev Tönsing) demonstrated, the unknowable is substantial even at the most fundamental (subatomic) levels of reality.

There are also more simple and self-evident forms of immanent transcendence. In terms of space, any place that I do not presently occupy is transcendent. In terms of power, any energy that is not available to me is transcendent. In terms of time, the past is transcendent because it is no more and the future is transcendent because it is not yet. In the present the potentials that have not been realised are transcendent.

The Other is transcendent in as far as it is not immediately experienced, whether we think of other persons, other languages, other systems of meaning, other mindsets, other academic disciplines, other cultures, or the emotional experiences (*qualia*) of others.

In a deeper sense the self as an Other is transcendent. Here one can think of the instinctual and the subconscious levels of the mind. It always eludes us; it is never in our possession. One can also think of the intention to reach an improved, more emancipated, more self-controlled, more powerful, more wealthy, more efficient, more fulfilled, more enlightened, or more comprehensive self. In each of these cases, the experienced self is contrasted with a potential and desired self. Motivational speakers and the vast 'how to' literature thrive on this kind of transcendence.

Moving into the field of ethics, one can think of what Platonic thought calls 'essence', what existentialists call 'authenticity' and what faith calls 'the will of God'. This is of particular interest for our topic because the scientific exploration of what reality has in fact become (or is in the process of becoming) does not lead to a vision of what reality ought to become. Finally there is the epistemologically transcendent – the Kantian 'thing in itself' and its many variations in philosophy. Philosophical epistemology and the theory of science have had a field day discussing this elusive area, often coming to sceptical conclusions.

To conclude this section, for science immanent transcendence is pervasive and self-evident. It harbours no mysteries and has no religious connotations. While the unknown is vast and, to an overwhelming extent, impenetrable for human observation and interpretation, this does not make it supernatural or uncanny. All forms of immanent transcendence are readily admitted by faith, science and the derived metaphysics of naturalism. *This is not where the problem is located.*

What is 'real'?

A more fundamental question is what is to be taken as 'real'. Though not immediately experienced, the known, the unknown and the unknowable are taken by science to be real in as far as they form part of the one immanent reality that the sciences explore. Geared to immanent reality, science works with theories based on empirical evidence, mathematical stringency or reasonable conjecture. It comes up against human limitations exactly at that level (Ben-Ari 2005:44). In other words, science follows an approach that I call 'experiential realism'. It assumes that there is an objective reality out there that does not depend on our observation or interpretation. It also assumes that our perception of that reality is a reflection of that reality,

however limited, provisional, perspectival and problematic it may be (Ben Ari 2005:115-121).⁴

While epistemology focuses on the observing subject and, where consistent, often ends up in scepticism, science focuses on the observed object and gets on with the job. It is astoundingly successful in doing so. It can direct a space craft to a precise location on Mars; it can place the contents of a whole library on a computer chip, while the slightest inaccuracy can cause an air-liner to crash. The idea that there is no objective reality out there is not only counter-intuitive, but counter-factual and nonsensical.

If there is only one reality, nothing experienced as real is excluded. The natural sciences are beginning to overcome the crude empiricism or positivism of former times, when personal experiences were disparaged as 'subjective', thus unreal and irrelevant. '*Qualia*', such as the sweet taste of honey, falling in love, or an aggressive attitude towards strangers are being explained in terms of neurological and chemical processes; they are inter-subjectively verifiable; they have consequences in the real world (Vincent 1990). The same is true for religious convictions, ideological enslavements, or ethical inhibitions. Again *this is not where the problem is located*.

What is not real

There are things, however, that the sciences will not recognise as real. One of them is the reified biblical metaphor from which dubious inferences are drawn and that are then proclaimed revealed truth.⁵ Another is the Platonic pre- and post-existent 'idea' or 'essence'. This is nothing but a reified and idealised abstraction from reality itself. 'The essential flower' or 'the essential dog' does not exist. As we know since the times of medieval Nominalism, concepts are generalisations that are indispensable, but not real. Unless they cover an interaction pattern at a higher level of complexity, they refer to packages of common characteristics between actual flowers or dogs.

Another kind is the Aristotelian *entelecheia* or 'teleology'. Here the assumption is that there is an intrinsic form within a material thing that

⁴ The fact that observation impacts the observed constitutes nothing uncanny or extraordinary. In anthropological research, for instance, this has been recognised for a long time. The impact of collective interests on economics as a science has also been exposed in great depths. In contrast to popular assumptions, this is also true for quantum mechanics. The 'subjectiveness' of research findings only presents a challenge to reach closer approximations, for instance by using various vantage points ('triangulation'), statistical methods or interdisciplinary approaches.

⁵ 'Father', 'Son' and 'Spirit' are anthropomorphic metaphors that have distinctive historical origins and that are meant to refer to particular faith assumptions about God's relationship to human beings. When these metaphors are attributed ontological reality and then used as building blocks for a metaphysical system (found for instance, in the postulate of an inner-trinitarian fellowship), they lose their original earth-bound meaning and lead to insoluble paradoxes.

strives for its own perfection, progressively leaving matter behind. Science does not accept this assumption. At best one can use the term for the fact that all living organisms strive towards survival and the realisation of inherent potentials. Similarly there is no 'soul' that could emancipate itself from its biological, chemical and physical infrastructure. 'Spirit' is the structure and orientation of individual and collective consciousness. As such it is not opposed to matter (in this case the biological brain), but based on it.

Another kind is the metaphysical construct that consists of logical deductions made from problematic axioms.⁶ Certain types of logic can also generate their own dynamics without reference to empirical reality. The Hegelian dialectic, for instance, represents an artificial imposition on empirical reality, rather than an empirical or existential analysis of reality.⁷

Another kind is a particular kind of postmodern relativity that deems scientific theory just another way of looking at reality alongside those of religious narratives, poetic creations, social ideologies or gross superstitions – which are all deemed equally valid and equally spurious language games. This assumption is not only flawed but dangerous. To ascribe AIDS to sorcery, which can be exorcised through rituals prescribed by diviners on the basis of their oracles, can cost your life.

Science simply cannot deal with such a stance. "If the real world does not exist, then the claim of science to be describing the real world is nonsense, and science becomes nothing more than another set of precepts similar to a religion ... Nothing, but nothing, drives scientists crazy like these postmodernist claims" (Ben Ari 2005:118).

⁶ Classical theology, for instance, deduces the concepts of divine omnipotence, omniscience and predestination from the axiom of divine *perfection*, which is gleaned from Platonic idealism. The biblical counterparts to these postulates are located in the area of pastoral reassurance rather than metaphysics. This kind of speculation has caused insurmountable logical impasses.

⁷ A rather crude example can demonstrate the incongruence between experiential realism and dialectical idealism. If life is taken as the thesis and death the antithesis, what synthesis could realistically form a new thesis? In fact, there is no life as such, there are only functioning organisms, which sooner or later cease to function. Similarly, market equilibrium cannot be the synthesis between a boom (thesis) and a recession (antithesis), because it cannot constitute a new thesis. What happens, in fact, is a constant oscillation.

Radical transcendence

After these initial clarifications, we can contemplate the relation between naturalism and the Christian faith. The pivotal difference lies in the denial or affirmation of radical transcendence. As mentioned above, true science imposes a methodological restriction on its work, leaving questions concerning the transcendent open. Naturalism elevates this methodological ‘abstinence’ to a metaphysical axiom. My approach to the Christian faith will not respond with a counter-axiom, but follow the approach of experiential realism as far as it can take us.⁸

While readily conceding immanent transcendence (and why not?), naturalism denies that there is something beyond the natural world as such and as a whole. Nature is all there is – closed in upon itself, self-generated, self-catalytic, self-organising, self-sustaining, self-destructive. Faith, in contrast, assumes that immanent reality, the very reality that we experience and that the sciences explore, owes its existence and operation to a transcendent Source and Destiny.

It should be clear that, in contrast to immanent transcendence, the radically transcendent *as such* is, by definition, not accessible to human observation, interpretation and manipulation, otherwise it would not be the transcendent.⁹ God can also not be confined to a metaphysical construct – which would indeed be an idol, as suggested by some speakers at the conference.

What faith relates to, and what theology deals with, is a **notion** of the transcendent. Such a notion is part of immanent reality. It emerged and evolved in human history in response to changing human needs. It can be described, critiqued, transformed, replaced or abandoned. If that were not the case theology would make no sense at all.

However, faith assumes that, in an extremely partial, provisional and problematic way, this notion is a reflection of the disclosure, within human evolutionary history, of a basic *intentionality* (not ontology) that underlies reality as a whole, thus the intentionality of the transcendent Source and Destiny of reality (1 Cor 13:9-13). It is like an Eastern Orthodox icon that refers the observer to something beyond, or a tiny, smirched window through which the rays of the sun fall into a prison cell.

The *reassurance* that the ultimate Source and Destiny of reality is for us and with us and not against us is the foundation of the biblical faith. Scrap

⁸ At the conference a theologian argued that I tried to “save transcendence”, which “cannot be saved”. In logical, theological and existential terms this would indeed be a non-sensical and futile pursuit.

⁹ Atheists love to refer to the ‘invisible gardener’ or the ‘orbiting teapot’ in this connection. What cannot be accessed by human observation is irrelevant and does not need to be taken into account.

this assumption and you have scrapped the biblical faith as such! Then the believer is alone with him/herself, thrown upon his/her own spiritual resourcefulness and moral achievement – precisely the existential situation that the New Testament message seeks to overcome.¹⁰

The double thrust of the notion of the transcendent

In the Christian case the notion of the transcendent has a double thrust: God is deemed the transcendent **Source** of the power and regularity of reality (the very reality that humans experience and that the sciences explore) and the transcendent **Destiny** of reality, its ultimate rationale and direction, that is, God's benevolent, life enhancing, redemptive and sacrificial intentionality.¹¹

This double assumption must be distinguished from the Deist notion of God, according to which God only initiates an otherwise mechanical world process. In biblical terms, God is the Source and Destiny of reality in *all of* space, all of time, all manifestations of energy. The transcendent permeates and empowers immanent reality and immanent reality would not subsist without it. The theological tradition speaks of 'continuous creation' in this regard.

In consequence, the transcendent and the immanent cannot be deemed to operate at the same level. It is never correct to say that God and world (or God and humans) **cooperate**, or that God and world **compete** with each other. God acts **through** the world in all its manifestations and dimensions. In the same way God's initiative does not obviate human initiative but ignites it. God's action does not obviate human action but arouses and empowers it. God's sovereignty does not impede human freedom, but sets humans free. As Philippians 2:12f shows, this is also applicable to the phenomenon of faith as such.

It is equally wrong to restrict God's action to gaps in our knowledge of causal sequences, such as the emergence of life or human consciousness. This is the much maligned 'God of the gaps'. But in my opinion it is also wrong to search for an underdetermined space in the causal network in which

¹⁰ In my view, the attempts to formulate a non-theistic theology (Richard Rubenstein, Gabriel Vahanian, Paul van Buren, William Hamilton, Thomas J.J. Altizer, Gordon Kaufman and many others latching on Nietzsche's postulate of the 'death of God') must be considered to have failed, not because they observed that God cannot be proved to exist – which theology has known for a very long time – but because a 'Christian faith' without the assumption that a transcendent benevolent intentionality has disclosed itself in Jesus of Nazareth, presumed the messianic representative of God, is a contradiction in terms. Why should the rudimentary and problematic historical detail known of the 'earthly Jesus' be so extraordinary that after two millennia millions of people would still derive their grounding and orientation from this historical figure?

¹¹ As Old Testament scholars like Gerhard von Rad have pointed out, the second aspect – God's graceful intentionality – is primary, but it depends on the first aspect to underpin its validity.

God could intervene directly and without suspending natural law.¹² This too is a ‘God of the gaps’. The notion of God refers to the transcendent Source and Destiny of all of reality – causality, contingency, chance, random, propensity, probability, you name it.

All of reality is a miracle. Special events considered miraculous happen all the time. They are unexpected, awe-inspiring, extraordinary occurrences that seem to give us a glimpse of God’s benevolent intentionality and lead us into humility and gratitude. But they do not, by definition, imply that God suspends the natural laws that God has entrenched in the reality God created. They must also be counter-balanced with concrete experiences of meaninglessness, blind fate, horrendous catastrophes and blatant injustices, all of which deeply question God’s benevolence and lead to the intractable problem of theodicy. As theology has always recognised, experienced reality is deeply ambiguous.¹³

Why assume a transcendent?

If human and earthly phenomena operate at a ‘lower’ level and seem to follow their own internal logic at that level, why assume a ‘higher’ transcendent Source and Destiny in the first place? Is this not a case of the much maligned ‘invisible gardener’ who ostensibly makes the flowers grow and who can be ignored without making a difference? There are various reasons.

One, the assumed self-disclosure of the transcendent imposes itself on the consciousness of the believer. All humans experience themselves as derived, dependent, accountable, vulnerable and mortal beings – some in more profound ways than others. It is when this awareness reaches beyond the sphere of immanent reality that people are overcome by the depths of their own origination and purpose in life. What is the meaning of their existence? How will they reach their authenticity? How do their lives, their communities and their life worlds fit into the greater scheme of things? Could they have wasted the unique and totally improbable opportunity to get a chance to live?

¹² This is the basis of the research project on “scientific perspectives on noninterventionist special divine action” conducted by the Vatican Observatory and the Center for Theology and the Natural Sciences at Berkeley (Russel, Murphy and Stoeger 2008). A great variety of proposals have one thing in common – the reduction of divine action to gaps in otherwise closed causal networks.

¹³ The most explicit example is Martin Luther’s concept of the hidden God. It reflects the highly ambiguous experience of God’s power in all of reality, but not God’s redemptive intention – which can only be gleaned from the counter-factual proclamation of God’s grace manifest in the ‘mask’ of the cross of Christ. For detail see my essay ‘Martin Luther’s experiential theology as a model for faith-science relationships’. *Zygon* Vol 45, No 1, March 2010, 127-148.

Two, because without transcendence, immanent reality becomes ultimate reality. Where there is no beyond, the human being is boxed in, as it were, thus the powerless product and victim of a mechanically functioning cosmos. This potential situation is something so fundamentally incongruous with being human that it evokes a rebellion against the apparent inevitabilities posited by the mechanistic interpretation of reality. Faith is a protest against the unacceptable nature of experienced reality that translates into defiant action. In this sense, the notion of the transcendent opens up reality, revealing its unrealised potentials. It explodes the spectre of physical or biological determinism.

Three, an absolutised immanent reality leads, in turn, to the absolutisation of the human being as the highest product of the evolutionary process. Where there is no transcendent reference point, humans deem themselves entitled to operate as owners, masters and beneficiaries of reality. They are not responsible to any authority other than themselves. The human being assumes the status of ultimacy previously attributed to the divine. Cahoone has described this typical characteristic of modernity as “philosophical narcissism” and analysed its immense and devastating impact on Western civilisation (Cahoone 1988).¹⁴

In contrast, seeing reality ‘from above’ as it were, ‘with the eyes of God’ induces an awareness of reality as a whole and our place within it. This is of critical importance for gaining an integrated society, an equitable socio-economic dispensation, a sustainable utilisation of scarce resources and a restoration of the dignity of non-human creatures – all of which are absent in the dominant modern civilisation and its popular postmodern offshoot.

Four, looking at reality from above with the eyes of God again leads to inner freedom **from** reality, and responsibility **for** reality – including freedom from ourselves and responsibility for ourselves. According to the Christian faith this is not an enslaving law, but a gift of grace. Humans are invited to join God’s creative and redemptive project, which aims at God’s vision of comprehensive optimal well-being for reality as a whole, thus making every deficiency in every aspect of reality the target of their immediate concern. Nothing in the natural sciences precludes the possibility that such reassurances reflect the intentionality of a transcendent Source and Destiny of reality as a whole.

What kind of transcendent?

¹⁴ Cahoone proposes that after the collapse of religion, culture has to assume the integrative functions of the latter. He does not recognise the fact that culture itself is in need of transcendent foundations or lose its power of commitment, and that in a pluralistic society culture is as fractured as the society itself.

That there is a transcendent Source and Destiny of reality is a formal assumption that, on its own, has no relevance. What matters is the **content** of the concept of the transcendent. Such a concept provides the foundation of a system of meaning, however tentative and fluid it may be, without which human life becomes erratic and unstable.¹⁵ A system of meaning defines one's individual and collective identity within the whole. It sets up differentiated criteria of acceptability. It allocates differentiated authority in the form of statuses and roles. Christianity would add spiritual liberation, benevolent motivation and spiritual empowerment to these general prerequisites of human existence.

Without such determinations, it would seem, we end up in the kind of spiritual entropy that we witness in postmodernity today.¹⁶ To be responsible, naturalism cannot do without some structured and oriented consciousness either. But for naturalism, it is the sovereign human agent who has to construct his/her own meaning, define criteria of acceptability and assume authority over reality as the master and owner of reality. In how far this would not be a sporadic, self-interested, unreliable and arbitrary exercise is a moot point.

Western naturalists may be able to feed on a subconsciously internalised humanistic tradition with classical and Christian roots. But there is nothing at sub-personal levels of nature that could provide substance and validity to such a tradition. At this conference we have also heard about our self-destructive palaeontological conditioning and the impact of our reptile brains and limbic systems on our behaviour. Moreover, we are brain-washed by the modern marketing and entertainment industries to concentrate on the ruthless satisfaction of individual desires and collective self-interests at the expense of society, nature and future generations.

How then can we be confident that the endowments of our evolutionary history will make us see our place in greater contexts, motivate us to move away from our self-allocated position at the centre of reality and empower us to avert the approaching catastrophe? It is allowed, I presume, to

¹⁵ In a 'post-foundational' worldview the concept of 'foundation' raises eye-brows. But a foundation, a basis, a rootedness does not have to be static and inflexible. Due to the force of gravity we are all nailed to an earth that flies around the sun at an incredible speed, yet we can stand or move around on this earth as if it were completely static. We can also make ourselves comfortable in the seat of an airliner that flies through thin air at a speed of 800 km an hour. Without some kind of stability biological life and spiritual meaning would be impossible.

¹⁶ Teachers, I am told both in Europe and South Africa, are desperate because learners no longer bother to listen to them but play computer games on their cell phones while in class. Parents do not have the guts to teach their kids their limits, for instance by limiting air time or internet access. Teachers may not bother to teach, or even report for duty. Recently, nurses could go on strike for higher wages, leaving their patience stranded in their helplessness.

ask this question. None of these concerns can be met by a reductionist naturalism per se.

That ethics has evolved because of certain advantages in terms of collective survival and well-being in particular environmental and historical niches cannot be disputed.¹⁷ But where does the current spiritual entropy lead us, when the erstwhile rocks of society are being dissolved into beach sand, swept in any direction by powerful waves and winds? Recent experiences with ideological derailments, such as found in Hitler's Germany or Stalin's Russia, are not very reassuring, nor is the spiritual, moral and social chaos found among traditionalists uprooted by rampant modernity in our own part of the world.

Yet the naturalist challenge remains. Conceding that human existence cannot do without transcendent grounding and orientation, is the assumption of transcendence nevertheless irrational, if viewed in purely scientific, non-existential, impersonal terms? I do not think so. To me it sounds more plausible even in strictly scientific terms to assume an open universe than a universe closed in upon itself.

This openness is suggested by questions that perceptive scientists acknowledge as valid but which the natural sciences cannot answer, such as what happened 'before' the big bang or 'after' the big crunch; where energy comes from; why it follows natural laws; how the 'unreasonable applicability of mathematics to the physical world' comes about; why there is something rather than nothing, whether there are alternative, parallel or successive worlds out there and so on. In view of the observed behaviour of energy, time and space, a closed universe seems counter-intuitive, if not counter-factual.

Is God a person?

Because the world process as such is not personal, naturalists find the biblical notion of a personal Creator God particularly difficult to digest. Much more destructive of popular faith in a personal God, however, is the intractable question of theodicy: how can a powerful and loving God cause, or allow, so much depravation, injustice, meaninglessness, suffering and death to happen in a world ostensibly under 'his' control?

For me, emergence theory provides a plausible answer.¹⁸ Human personhood is a fact. It is part of immanent reality. Any notion of the Source and Destiny of reality as such and as a whole must cover the personal level of emergence, or be deficient in this respect. However, such a Source and

¹⁷ In its own way theology endorses this assumption when it recognises the fact that the "Word of God" functions in history as God's redemptive response to human need. See Nürnberger, Klaus 2002. *Theology of the biblical witness: an evolutionary approach*. Münster (Germany): LIT-Verlag.

¹⁸ For an introduction see Clayton 2004.

Destiny of reality as such and as a whole must also be much more than a person – just as humans are much more than persons. Personhood presupposes the entire impersonal infrastructure of human reality from the quantum level upwards.

There is a secular corollary that is not always realised. An impersonal conception of reality can only work if one either isolates the personal self from its embeddedness in this ostensibly impersonal reality (which has a long history from Plato to Descartes to modernity), or alternatively, to deny or play down the personhood of the human being as such in favour of the view that it is nothing but a ‘beefed-up baboon’, or a functioning mechanism (which is the common assumption of all kinds of reductionism).¹⁹

According to the biblical witness God, the transcendent Source and Destiny of reality as a whole, encounters humans as a person *because humans are persons*. That does not imply that God is nothing but a person. God is not, as generally believed, pure intentionality, pure power, pure agency, void of all constraints.²⁰ Together with most of antiquity, the biblical faith knows that reality has regularities that are constitutive for the existence and functioning of cosmic, social and individual reality. Moreover, it has always ascribed these regularities and their validity to the divine Source and Destiny of reality.

Because humans are persons, the biblical faith cannot do without the assumption that God relates to humans in a personal way, nor can Judaism or Islam. There are several reasons for that. One, God imposes ‘himself’ on the consciousness of the believer as a person. The manifold forms of divine communication through human agents (Moses, the prophets, Jesus, the apostles) make the “Word of God” the formal constitutive element in divine-human relationships. In terms of the content of the message there is always an expectation and there is always an invitation to participate in God’s creative and redemptive project.

Two, if God were not perceived as a person, God would be restricted to the impersonal dimensions of experienced reality. God would thus be less than the transcendent Source and Destiny of reality as a whole. God would

¹⁹ Perceptive naturalists such as Stuart Kauffman, or the theologian Gordon Kaufman, seem to be aware of this impasse when they replace the concept of the divine with the concept of “creativity” (Kauffman 2008:282ff; Kaufman 2004:53ff). But creativity is an abstract noun that, in its original verbal form, demands a personal subject. Only persons create in the true sense of the word; crystals, plants and computers don’t – though one has to concede some primitive forms of creativity in higher animals. The metaphor sits rather uncomfortably with the concept of a mechanical theory of evolution.

²⁰ Conceding that the anthropomorphic metaphors used for God in the biblical tradition are derived from the experience of being human, the notion of God as pure intentionality and agency without any constraints emanating from lower levels of emergence or past history looks suspiciously like the Platonic abstraction and idealisation of what humans aspire to be, namely spiritual souls released from their bodily incarcerations, thus a Feuerbachian projection into a non-existent heaven..

also be less than a potential partner to the human being. God would even be less than the human being. This assumption automatically raises the human person ontologically above God – which is simply an impossible idea for the biblical faith.²¹

Three, there can be no personal relationship with the non-personal aspects of the natural world precisely because the latter are impersonal. Personifications, though popular in poetry, are less than plausible. Only if the Source and Destiny of reality is a person, can you relate to reality as a whole in a personal way. This is of critical importance for a restoration of nature to its dignity, as well as for ecological sustainability and intergenerational justice.

Four, humans could then also not transcend themselves as persons, thus becoming absolute in their own estimation, while the world would become mere matter to be dominated, owned, dismantled and exploited. That is precisely what happens in modernity. Naturalists may want to dismiss with contempt the insinuation that they are, by virtue of their approach, bound to develop a destructive attitude towards nature and society. Indeed, most committed naturalists are more caring than Christians are. My question is, rather, how their benevolent attitudes towards nature (and humanity) are grounded in their basic assumptions.

It is evident that these four reasons form part of a package. Humanism and naturalism can take the package apart, borrow some of its elements and internalise them. But how long they will be able to sustain the inner credibility and spiritual compulsion derived from their pre-scientific antecedents is anybody's guess. The theory of evolution does not support it. Why should altruism be a 'blessed, precious mistake', as Dawkins argues (Dawkins 2005:220f.)? Why should it not rather be the manifestation of a decadent and repulsive slave spirit that needs to be overcome in favour of the 'will to power' of an ostensibly emerging 'super-human', as Friedrich Nietzsche proposed?

Naturalism – three examples

My deliberations so far have been theoretical. Being confronted with the work of actual naturalists, one may be forced to qualify one's conclusions. In what follows this fact is clearly demonstrated. But naturalists are also not

²¹ For naturalism it is quite self-evident that 'God' or 'the sacred' is the creation of the human being (Kauffman 2008). An enlightened faith will not dispute the human historical origins of the concept of God. However, as stated above this in no way precludes the self-disclosure of the divine in the historical evolution of the biblical tradition.

necessarily of the same league, as the examples of Dawkins, Kauffman and Swimme show.²²

Richard Dawkins

Richard Dawkins' aggressive atheism is well-known. "If this book works as I intend, religious readers who open it will be atheists when they put it down" (Dawkins 2006:5). At the end of his book he provides a list of addresses for those "needing support in escaping from religion", similar to the lists of addresses offered to drug addicts. This is clear enough!

The logic works like this. Immanent reality is all there is. If there were a God, he would have to be part of the reality accessible to human observation and scientific investigation – for which there is "not a shred of evidence". Since God cannot be shown to exist, the probability that he doesn't is so overwhelming that it must be discounted.

But Dawkins also cannot leave the issue open. For him agnosticism – arguably the only truly scientific approach to something we cannot know – is nothing but a lack of courage and integrity. An agnostic scientist is either an atheist or a hypocrite. A believing scientist fools herself and others.

In my view Dawkins' treatment of religion is ill-informed and naïve. His reductionism makes his own theory of evolution deficient. The book also reveals a powerful bias in which his 'villain' (the concept of God) is nothing but detrimental and nonsensical fantasy, while his hero (Darwinian evolution) is nothing but incontrovertible and beneficial insight.

I have responded to Dawkins' aggressive atheism in another publication and do not need to repeat that here (Nürnberger 2010). The point to be made in the present context is merely that science does not have to lead to the denial of transcendence. On the contrary, such a denial does not help us solve the deepest riddles of reality. The cosmologist Stephen Hawking, for instance, raises questions that cannot be avoided and that cannot be answered by science:

Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe? ... Why does the universe go into all the bother of existing? Is the unified theory so compelling that it brings about its own existence? Or does it need a creator ...? (Hawking 1988:174.)

²² The choice may seem arbitrary. One could think of many others, such as Stephen Hawking or Willem Drees. But these examples are sufficient to make my point and an essay of this nature has its limitations.

This often quoted passage does not expose Hawking as a believer. It just displays a depth of awareness that Dawkins seems to lack. The denial of transcendence also does not lead to existential reassurances in the face of the fatefulness of reality. A tsunami kills or displaces thousands of innocent people. A gifted scientist is crippled by a chemical accident. Such experiences cry for meaning. It is instructive to look at Dawkins' twofold response to the agonies of life that suggest meaninglessness and futility. The first one seems pretty straight forward:

... if the universe were just electrons and selfish genes, meaningless tragedies ... are exactly what we should expect, along with equally meaningless *good* fortune ... In a universe of blind physical forces and genetic replication, some people are going to get hurt, other people are going to get lucky, and you won't find any rhyme or reason in it, nor any justice. The universe we observe has precisely the properties we should expect if there is, at the bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference ... DNA neither knows nor cares. DNA just is. And we dance to its music.²³

Dawkins' idea that subatomic particles and genes have no inherent intentionality cannot easily be faulted. Of course, they also do not display pitiless indifference. They just function. But they function in contexts that give them meaning because without them these contexts could not exist or function. The passage seems to suggest that the universe consists of *nothing but* electrons and selfish genes. Reductionism denies meaning and purpose not only for the impersonal infrastructure of human consciousness, but for reality as such and as a whole, including the personal level of reality.

The question is how Dawkins himself can live with this idea. In fact he doesn't. On the contrary, he displays a defiant and dismissive self-certainty in his attitude to nature, life and other people. He is strongly purpose driven. The question is on which kind of spiritual resource he draws to keep alive, active and purposeful – certainly not those of his naturalist convictions! The answer dawned on me when I read a passage that displays a “passionate defence of human dignity and freedom in the face of genetic determinism”:

We have the power to defy the selfish genes of our birth and, if necessary, the selfish memes of our indoctrination. We can even discuss ways of deliberately cultivating and nurturing pure, disinterested altruism – something that has no place in

²³ Dawkins 1995:132f.

nature, something that has never existed before in the whole history of the world. We are built as gene machines and cultured as meme machines, but we have the power to turn against our creators. We, alone on earth, can rebel against the tyranny of the selfish replicators (Dawkins 1989:200f).

So this is where his existential sustenance is rooted – in the mastery of the human subject over its own impersonal infrastructure. Nature may be our ‘creator’, but it is quite definitely not the ultimate authority. Its creature, the human being, is! That is where purpose comes into the picture – not at the quantum level, Newtonian physics, or Darwinian evolution, but at the level of human mastery, and only there. That is bench mark modernity. I have spelt out some of the consequences above.

The immediate question is how far our own spiritual resources can carry us when things turn really bad – in solitary confinement, in contracting an incurable disease, in the futility of standing for months in endless queues to find a job, in situations of insurmountable oppression, exploitation and persecution, in the sudden and unnecessary loss of a beloved person, in physical pain and emotional suffering, in the hopelessness of our last hours.

Without doubt there are people with incredible strength of character and extraordinary gifts of perseverance. Yet in most such cases these people are rooted in a grounding that is able to transcend life-destroying aspects of reality, to relativise them, assess them, deny them the right to exist, to open up horizons of potential alternatives, to “hope beyond hope”, or indeed to submit to a higher authority.

It is not always realised that the biblical concept of God surfaced precisely as a series of reassurances *in the face* of fateful experiences. Biblical faith is a defiant protest against the ultimacy of human depravity and natural destructiveness. Reality is not absolute. It does not have the last word. It depends on a transcendent Source and Destiny that is not hostile but benevolent. Our human limitations are not the limitations of God. That is a courageous stand to take when one is under fire.²⁴

Stuart Kauffman

Kauffman is much more perceptive than Dawkins. He appreciates not only the role the ‘sacred’ has played in the past, but also considers it to be important for the future. “If we must reunderstand our humanity, wisdom suggests that we use all the resources we can find”. In spite of its potential misunderstanding, Kauffman is not afraid to call “the natural creativity in the

²⁴ The theology of Martin Luther as a prominent example of this stance. See footnote 12 above.

universe” ‘God’, because “no other human symbol carries the power of the symbol God. No other symbol carries millennia of awe and reverence” (Kauffman 2008:284). He hopes that we can “find a natural sense of God that we can share to a substantial extent whatever our religions convictions.”

But for Kauffman, as for Dawkins, the human being is the unquestionable master of reality. This is not always apparent because in Kauffman’s scheme of things, nature acquires some of the characteristics and functions of the traditional concept of the divine. Using the imagery of the biblical creation stories, he says: “How very kind of God to give humans dominion over all of the world – and how arrogant we are to believe that that dominion is ours after all. For it is not. We are of the world, it is not of us” (2008:276). Kauffman is deeply aware of our derivation and dependency, which I have stressed above. But we are derived from, and dependent, on nature – which an enlightened believer should also know. What about accountability? Can we be accountable to an impersonal nature?

Kauffman’s proposed ‘God’ is not a God who will confront us with a claim, a challenge and an invitation to get involved in God’s creative and redemptive project. “We can experience this God ... for this God is real. This God is how our universe unfolds. This God is our own humanity” (Kauffmann 2008:285). It is humans who are in charge. It is humans who grant nature the dignity it deserves. It is humans who have invented the sacred in the past and who now have to reinvent it for the future. “Is the Old Testament less sacred if it is our own invention ...?” (Kauffman 2008:287).

Kauffman’s experiential realism is as anti-reductionist, comprehensive and staggered in terms of the theory of emergence as one could wish for. “The view of emergence and ceaseless creativity partially beyond natural law is truly a new scientific worldview in which science itself has limits. And science has found those very limits” (Kauffman 2008:281). Kauffman explicitly and repeatedly assures his readers that there is “nothing mysterious” about the incredible complexity that creates itself and works itself out in the world we know – whether in micro-biology or social-economic processes.

It is the cosmos, thus nature, that has brought itself into being, that sustains its own operation and that fills him with awe. It does not just function mechanically or meaninglessly. There is an arrow, a rationale, a beauty. Certainly, Kauffman has no time for the meaninglessness and purposelessness of what believers call ‘the creation’ as posited by reductionist proponents of evolutionary theory. “I find it impossible to realize this and not be stunned with reverence.”

Awe also lies at the heart of Kauffman’s ethical concern. It disturbs him to see that “Awe and respect have become powerfully unfashionable in our confused postmodern society” (Kaufman 1995:302). I heartily agree! Kauffman “hopes for more”, namely “the construction of a global ethic”. He hopes that his approach will help us “to create a vision and reality of an

emerging global civilization forever diverse, creative, and tolerant – a new Eden, a new Enlightenment.” With caution, he believes, “we need to find a global spiritual space that we can share across our diverse civilizations, in which the sacred becomes legitimate for us all” (Kauffman 2008:283).

So there is a vision that translates into a mission. And what a vision it is! It is comparable to the inter-religious ‘global ethic’ envisaged and propagated by, among others, the theologian Hans Küng. Compare that with Dawkins’ unbroken optimism concerning the Darwinian evolution of a pre-historically based and powerfully evolving global ethic!²⁵ Kauffman is sensitive to the need for a conscious development of a global ethical orientation. He also realises that this must be based on something ‘sacred’ if it is to guide us:

we can only understand the biosphere, economic evolution, and culture retroactively, from a historical perspective. Yet we must live our lives forward, into that which is only practically knowable. Then since reason is an insufficient guide, we truly must reunite our humanity. And if so, we truly need to reinvent the sacred for ourselves to guide our lives, based on the ultimate values we come to choose. At last, we must be fully responsible for ourselves, our actions, our values, our civilizations, the global civilization (Kauffman 2008:281-282).

All this is entirely in line with my own argument. An enlightened faith will agree that “we are responsible, not God” in the sense that the God of faith does not obviate human responsibility and agency but empowers and motivates us to do what needs to be done. But Kauffman’s ‘God’ is not specific about the authority to whom we are responsible and from whom the motivational power to do something about an untenable situation should be derived.

In fact, this authority is humanity itself. It is we, humans, that choose our ultimate values and – by implication – have to generate the spiritual power to bring them to bear. Yet, gripped with awe and respect for nature, Kauffman seems to be groping for a ‘higher entity’ at least symbolically. If not, why recruit the concepts ‘God’ and ‘sacred’ in the first place? He believes that it would be appropriate to “rename God, not as the Generator of the universe, but as the creativity in the natural universe itself” (Kauffman 2008:283). “Is not this new view, based on an expanded science, God enough? Is not nature itself creativity enough? What more do we really need

²⁵ Dawkins 2006:271 (read the context from 262ff.). Kieffer, in contrast, draws attention to the fact that evolution has not endowed the human being with a vision that goes beyond its immediate concerns and short-term interests (1979:345ff).

of a God, if we also accept that we, at last, are responsible to the best of our forever-limited wisdom?” (Kauffman 2008:283).

All that is indeed close to the ‘Abrahamic’ faiths, as Kauffman (2008:283) maintains. According to these faiths, God acts through the ‘wonders of creation’. Here the creativity at work in the universe that Kauffman describes so masterfully in scientific terms and so passionately in ethical terms is deemed the creativity of the transcendent God. And of course we are responsible at our human level – who else? ‘Best naturalism’ and ‘best faith’ thus observe the same reality and are overcome with awe and respect when contemplating its vastness, complexity and beauty. Kauffman’s views on what naturalists call Nature and what believers call ‘the creation’ are so close to my own that I wish his books were obligatory reading for every student of theology. They could become an outstanding example of how science can help faith to regain an appropriate worldview and regain its relevance in the modern world.

And yet the gulf remains. Which gulf? Pantheism does not recognise the difference between Creator and creation. But Kauffman’s stance is not even pantheism, because the human being of pantheism recognises divinity, while Kauffman’s autonomous human being ‘invents the sacred’. A seemingly insignificant linguistic fault line reveals the difference between faith and naturalism in this regard. “Creativity”, used as a pseudonym for divinity, is an abstract noun, derived from the verb “to create”, which demands a subject. But nature cannot be a subject. So the metaphor has no appropriate referent.²⁶

In the end it is not creativity that Kauffman attributes sacredness, but an automatically functioning process – which Kauffman explicitly describes as such. The ingredient of faith that is missing (or rather explicitly and repeatedly rejected) in Kauffman’s work is an intuitive awareness, not of immanent transcendence, which Kauffman describes with unsurpassed excellence, but of the radically transcendent.

It is the radically transcendent that prevents one from attributing ultimacy to the world we know and thus, by implication, to the human being. It allows for a personal relationship with whatever transcends and underlies reality as such and as a whole, thus indirectly to reality itself. The radically transcendent is something or someone radically other, yet fundamental for the existence and the evolutionary process of reality itself, including the intentionality and agency of the human being. For Kauffman, there can be no such thing. But why not?

Brian Swimme

²⁶ The same applies to the concept of ‘serendipitous creativity’ that the theologian Gordon Kaufman’s uses for God (Kaufman 2004:53ff).

Swimme's naturalism is similar to that of Kauffman. He too appreciates the valid concerns of the religions. But he also believes that, concentrating on divine-human relationships, they have not been designed to do justice to current scientific insight. A new spiritual infrastructure must be found that articulates the true mysteries that nature presents, rather than the merely postulated and believed mysteries of religion. When contemplating big bang cosmology Swimme turns lyrical – and rightly so:

The universe began as an eruption of space, time, matter, and energy out of all-nourishing abyss, the hidden source of all creativity ... a titanic bestowal, a stupendous quantum of free energy given forth from the bottomless vaults of generosity (Swimme 1996:110).

This is as close to radical transcendence as a naturalist can get – and it is indeed exceptionally close to the biblical concept of a Creator. Compare this stance with that of Richard Dawkins! Swimme's poetic concepts of an "all-nourishing abyss" or the "bottomless vaults of generosity" underlying all of reality may not satisfy Dawkins and other hard core empiricists.²⁷ Yet the choice of Swimme's metaphors is informed by best science. He does not say more about the openness of reality to an incomprehensible Beyond than that this reality 'gushes forth into existence' from it, and is taken back into its nothingness. This leaves the mystery of the openness of reality intact.

The point to note is that there **is** such openness. Nature does not seem to be closed in upon itself. For Swimme there is no doubt that the source of all existence is not only *invisible*, but *nonvisible* and *nonvisualizable* (Swimme 1996:97). Is it therefore transcendent in the strong sense of the word? Not necessarily. It just means that the most profound layer of nature remains a mystery to the human mind. This seems to match with Kauffman's realisation that the future cannot be predicted precisely because of its inscrutably complex and indeterminate emergent processes.

Swimme begins with modern cosmology based on science rather than the proclamation of divine benevolence. But he is, nevertheless, driven by an agenda that translates into a global ethic. Less diplomatic than Kauffman, Swimme castigates the unscrupulous and stultifying brain-washing techniques of the modern advertising industry and the stupidity of the consumer culture (Swimme 1996:8-20). He penetrates current subatomic theory to reach the depths of an underlying ineffable. He does so not to satisfy

²⁷ Clayton draws attention to the fact that Swimme presents the Deity in a "new age" form that "is not sufficiently scientific to win a serious hearing from scientists today" (2008:109). This may indeed be the case. But poetic enthusiasm may just be able to offer the kind of bridge that Clayton is looking for by breaking open seemingly impenetrable conceptual barriers.

insatiable curiosity and gullibility, but to discover valid criteria for human orientation. Can science as such provide such criteria?

Swimme obviously believes it can. It is cosmology rather than 'revelation' that has to provide new ethical criteria. "Cosmology is the story of the birth, development, and destiny of the universe, told with the aim of assisting humans in their task of identifying their roles within the great drama" (Swimme 1996:98). Precisely that was the rationale of the pre-scientific cosmologies found in the Bible! But for Swimme the ineffable is not a person. Reality is one giant evolving entity, "a cosmic egg fifteen billion years ago" that "now blossoms forth as oneself, as one's family, as one's community of living beings, as our blue planet, as our ocean of galaxy clusters. The same fecund source – then and now; the same numinous energy – then and now" (Swimme 1996:110).

Concluding assessment

For science immanent transcendence is pervasive and self-evident. It has no mysteries about it and no religious connotations. While the unknown is vast and, to an overwhelming extent, impenetrable, there is nothing supernatural or uncanny about the unknown. However, at the impersonal levels of emergence, on which the natural sciences concentrate, nature is not able to provide humans with meaning, criteria of acceptability, vision and authority – thus the grounding and orientation they need to lead an authentically human life. That is why naturalism develops its own metaphysic – one in which the central concern of modernity, the ultimacy and autonomy of the human being, occupies centre stage.

The Christian faith assumes that God disclosed God's intentionality (not God's ontology) in a historical process covering more than a millennium of ancient history. Any divine self-disclosure, assuming that it happened at all, can only manifest itself in the structure and orientation of human individual and collective consciousness. Human consciousness is anything but universal, timeless or perfect. There is no question that the biblical worldview as such is thoroughly outdated. But its message is not.

This dialectic should not be a problem for the relation between faith and science, because essentially faith is not engaged in exploration, explanation nor prediction, but in grounding, commitment and orientation. Faith is not a substitute or alternative for science. However, to regain its credibility, the Christian worldview must allow itself to be updated quite radically:

How is it that hardly any major religion has looked at science and concluded, 'This is better than we thought! The universe is much bigger than our prophets said, grander, more subtle, more elegant'? ... A religion, old or new, that stressed the

magnificence of the Universe as revealed by modern science might be able to draw forth reserves of reverence and awe hardly tapped by the conventional faiths (Carl Sagan, quoted by Dawkins 2006:12).

Indeed, how is it? Both the Christian faith and naturalism deal with the same experienced reality. As interpretations of this reality they are both engulfed in the quest for the closest possible approximation to ultimate truth. In this never ending quest, naturalists are explicitly and emphatically on their own, while believers are overcome by an awareness of human dependency on, and accountability to, a transcendent Source and Destiny of reality. For the naturalist there is no transcendent intentionality or agency, benevolent or otherwise, thus no ultimate authority. There is only the impersonal evolutionary process. This process in itself is without meaning and purpose. Why should humanity, a product of this process, then have meaning and purpose?

More perceptive naturalists agree that evolution has produced a creature that cannot live without meaning, identity, acceptability and authority. Being thrown back onto their own spiritual resources, however, naturalists have to create their own meaning. But why should a meaning humans have created for themselves be persuasive, let alone objectively valid? Why should humans be committed to anything beyond the immediate satisfaction of their own needs and desires? For popular postmodernity, at least, the ecstatic enjoyment of life seems so much more exciting. The message of the cross – God's sacrificial benevolence that invites us into its dynamics – will not be heard in such an atmosphere.

This is the impasse into which modernity has led us. I cannot see how a reductionist form of naturalism, the child of modernity, can offer a way out. The current narcissistic, spiritualistic and individualistic version of the Christian faith – a close parallel to modernity – cannot provide grounding and direction in the current cultural climate either. It is clear to me, however, that a dialogue with naturalists who base their stance on a non-reductionist, emergentist science, such as Kauffman and Swimme, can hugely help a Christian theology to update its obsolete worldview and regain its credibility and relevance in the modern world.

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