For centuries science and faith have been drifting apart. Science lost its transcendent foundations, faith lost its credibility. Science conquered the future; faith got stuck in the past. Science unleashed unprecedented powers; faith became a private pastime. The economic and ecological consequences are catastrophic. Science and faith must reconnect and lead the way out of the crisis. The book looks at faith from the immanent perspective of science and at science from the transcendent perspective of faith and shows how best science and best faith complement each other.
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Foreword by George Ellis

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The gist of the argument

This book is about the relationship between science and faith. But it places this relationship into the context of the perilous direction in which modernity has taken humankind over the last few centuries. Perceptive analysts warn us that current trends lead us blindfolded towards an economic–ecological catastrophe of unprecedented proportions. Collaborative faith–science relationships have become indispensable and urgent.

Regaining sanity

We have reached a threshold in history where the sanity of the earth requires the sanity of human minds. Humankind must develop a new sensitivity for the intricate relationships between the super-competitive and the less competitive; between humanity and nature; between knowledge and commitment; between research and vision; between science and faith.

The word regaining suggests that this sensitivity has been lost. Gratitude has changed into entitlement; needs into wants; contentment into avarice; responsibility into indifference. Humankind is suffering from an obsession that is suicidal for humanity and destructive for all life on earth.

The responsibility of faith and science

Faith and science were co-responsible for the generation of this situation over the last four centuries. They must also be held co-responsible for its resolution. Ever since the Enlightenment faith and science have been drifting apart. In this process, science lost its transcendent foundations; faith lost its credibility. The consequences are catastrophic. Insight needs commitment to be responsible, commitment needs insight to be credible.

Science and faith are foundational and complementary human pursuits. Their rationale is to serve humanity and its natural infrastructure. They must join forces in leading humanity into wholesome directions.

The book develops the argument first from the side of science to a point where it can link up with faith. Then it develops the argument from the side of faith to the point where it can link up with science. The aim is the integration of ‘best science’ with ‘best faith’ for the sake of humanity and the earth.
Conclusion

The complementarity of science and faith

If science and faith are to face their common responsibility in regaining a future for suffering humanity and a threatened earth, they have to discover their complementary tasks. Science looks at reality from an immanent perspective, while faith looks at the same reality from a transcendent perspective. Science needs best faith to be responsible; faith needs best science to be credible. Adopting an experiential approach to both pursuits, we have first explored the status of a concept of the transcendent from a scientific perspective and then integrated the findings of science into the perspective of faith. These theoretical reflections gain existential relevance when believers and scientists are confronted with the demand and the gift of an authentic existence, that is, a life that participates in the creative and redemptive project of God.

Summary of the argument

We have come to the end of a long journey, so let us retrace our steps. Beginning in Part I with the incredible achievements and hazardous ambiguities of the modernist revolution, I argued that, in view of the immense dangers that we are faced with, faith and science can no longer afford to be drifting apart. Science needs ‘best faith’ for an overarching system of meaning that can offer criteria of acceptability, vision, liberation, motivation and orientation. Faith needs ‘best science’ to pull it out of individualistic spirituality, mystery and fantasy and become engaged with the real world in which humankind is embedded and where its task is located.

I then proceeded to discuss the relation between science and faith in two directions. I looked at the reality that we all experience and that the sciences explore first from an immanent, then from a transcendent perspective.

In Part II, I tried to figure out where faith fits into immanent reality, as examined by the sciences. I called the method that seems to be appropriate for such a perspective ‘experiential realism’. It entails a strict confinement to the reality we actually experience, or that we could experience if we had the capacity and the tools to do so. This method avoids the following:
- Sophisticated obscurantism
- Epistemological scepticism
- Reification of biblical metaphors
- Reification of idealised abstractions
- Reification of fantasy and fiction
- Deductions made from untested assumptions
- Postmodern relativity

Experiential realism does not engage in subatomic, physical, or biological reductionism, but treat all levels of emergence as real, including the structures of human consciousness and the structures of society. This approach is wider than crude empiricism because it includes whatever can be described, comprehended, critiqued and transformed, and what has concrete consequences in this world. The theory of emergence allows us to cover all academic disciplines engaged in the quest for an understanding of the reality we experience within the same conceptual scheme.

On this basis, I offered a brief overview of current scientific theories concerning big bang cosmology, entropy and the hierarchy of emergences. The latter included, in principle, all levels of emergence from subatomic physics, through classical physics, inorganic chemistry, organic chemistry, biological evolution, the brain, the subconscious, consciousness, spirit as structured consciousness, historical sequences and social structures and processes. Each of these levels is characterised by its own regularities. Because humans are endowed with intentionality and agency, they are confronted with choices that have consequences and call for accountability.

In Part III, I ventured the suggestion that freedom from the world and responsibility for the world presuppose the capacity to objectify experienced reality, including the reality of the personal self, and subject it to critique and reconstruction. This calls for an (imaginary) vantage point ‘above’ reality, thus a notion of the transcendent Source and Destiny of reality. Such a notion is capable of providing meaning, criteria of acceptability and authority to existential, communal and social processes.

Is such a notion irrational? I argued that neither humanity nor the world in which it is embedded seems to be self-generated, self-contained, self-sustaining, self-sufficient and self-accountable. A notion of the transcendent Source and Destiny of reality opens up our awareness towards all-inclusive contexts. To be appropriate, it must cover both the transcendence of the human person as well as the transcendence of all impersonal levels of emergence. This is as far as one can get when trying to describe and comprehend the phenomenon of faith from an immanentalist perspective.

In Part IV, I looked at the reality that we experience and that the sciences explore from a transcendent point of view. To be relevant, the transcendent
must be understood as the transcendent of the immanent reality that we experience and that the sciences investigate. I argued that, if God were to be understood by faith as the ultimate Source and Destiny of experienced reality, faith would have to integrate ‘best science’ in its view of reality. If it could not do that, one would have to suspect that it has hovered off into the sphere of fantasy or speculation. I called this approach ‘integrative transcendence’.

Is an experiential approach to Christian theology possible? Is God not infinitely beyond anything humans can experience, describe, comprehend, explore and manipulate? Indeed God is, but there is a difference between the transcendent as such, which is inaccessible, and our notion of the transcendent, which is part of immanent reality and can be described, critiqued and transformed. If that were not the case, theology would be pointless.

However, the Christian faith is persuaded that its concept of the transcendent reflects the self-disclosure of the transcendent as creative and redemptive intentionality, albeit in a very provisional, fragile and problematic sort of way. This conviction is based on the insights gained during the emergence and evolution of the Israelite tradition that responded redemptively to situations of human need over more than a millennium of ancient Israelite history. It culminated in the Christ-event and continues to transform human lives in the context of a community of believers.

With the recognition that the assumption of a self-disclosure of God’s intentionality is constitutive for the Christian faith, I entered into the sphere of theology proper without abandoning my commitment to an experiential approach. To explore what can be done, even within a traditional theological framework, I examined the approach of Martin Luther. This approach is embedded in a pre-scientific worldview, but among classical theologians, Luther follows an experiential approach to faith and theology most consistently. That is what makes his theology more amenable to a discourse centred on faith–science relationships than others of its kind.

The outcome of this investigation was surprisingly positive. Luther distinguished between the creative power and the redemptive intentionality of God. The creative power of God is experienced in ordinary life as deeply ambiguous and does not reveal God’s redemptive intentions. The proclaimed redemptive intentionality of God as disclosed in the Christ-event and paradoxically is manifest most succinctly and paradoxically in the catastrophe of the cross of Christ.

The experience of God’s power in ordinary life does not need any special revelation. It can be explored and explained through observation and reason, thus giving the sciences all the leeway they need to do their job. The proclamation of God’s redemptive intentionality, in contrast, is a
promise that can unfold its transformative power only when it is accepted in faith. As a vision of what ought to be, it stands in contrast to the experience of what ought not to be. It is not based on empirical evidence but on a defiant commitment to what ought to be. It does not take no for an answer but forges ahead in the direction of God’s vision of comprehensive well-being.

Seen in this perspective, faith is self-entrustment to, and participation in, the creative and redeeming love of God. This love has manifested itself paradoxically in the catastrophe of the cross of Christ. It becomes effectual when people respond positively to the challenge and the offer of an authentic life – a life that participates in God’s creative, redemptive and sacrificial project in the world and that overcomes what ought not to be in the direction of what ought to be.

In the last chapter, I suggested that, to become both plausible and relevant in a world informed by science, faith and theology must reconceptualise their pre-scientific traditions. The biblical faith has been exceptionally versatile in its canonical history. It has responded to ever new situations of need and dominant frames of reference. Contemporary theologians and believers must do for their times what the biblical authors did for theirs. Their worldview must integrate the best insights now available. Without trying to be dogmatic or prescriptive, I offered a few pointers in this direction:

**Biblical hermeneutics** can no longer afford an abstract and static concept of revelation but must follow the actual historical emergence and evolution of the biblical witness. We cannot continue with a concept of God as an inner-worldly factor among others, rather than the transcendent Source and Destiny of reality as a whole. We cannot continue with an understanding of creation that confines the activity of God to gaps in the causal network. God is the transcendent Source of the entire evolving network. We cannot continue with an apocalyptic understanding of eschatology. God’s vision of comprehensive well-being is a ‘moving horizon’ that opens up ever new vistas, challenges and opportunities.

We should not reify mythological and metaphorical statements about Christ but take both the humanity of Christ and the self-disclosure of God’s intentionality in the ministry of Jesus of Nazareth seriously. We must not indulge in obscurantist Trinitarian speculations but simply state that, according to Christian convictions, the creative and redemptive intentionality of God, the ultimate Source and Destiny of reality, disclosed itself in the Christ-event and continues to be present and effective in the divine Spirit of Christ that permeates, liberates and motivates the community of believers.
We can no longer substitute the gospel message of God’s suffering transformative acceptance of the unacceptable, as manifest in the Christ-event, with the conditional acceptance based on the fulfilment of a law, divine or otherwise. We can no longer assume that the Eucharist is all about mysterious substances but understand it as the identification of an intangible event, the redemptive act of God for us on the cross of Christ, with a tangible medium, bread and wine, so that it can be specifically allocated. We should at all times be alert against the abuse of the Christian faith to legitimate the pursuit of individual desire and collective interests at the expense of others, the community, the society and nature.

In short, when dealing with modern people in general and scientists in particular, faith and theology should rigorously apply Occam’s razor, confine themselves to the essentials of the Christian faith, eliminate the immense speculative outgrowths that have accumulated over three millennia of interpretation and communication, and aim at as lucid and self-explanatory conceptualisations of the Christian faith as possible.

The existential relevance of the study

So far the overview. In this book, I concentrated on the problem of the disjuncture between a Christianity that has lost its relevance and a modernity that has lost its bearings. Aiming at human mastery of reality, science is the epitome of modernity. In practice, scientists may be more concerned with their daily research and its desired outcomes than with the greater contexts in which it is embedded, the system of meaning it presupposes and its ethical implications in the modern world. Likewise, believers may be more concerned with their personal spirituality than with the fate of the world of which they are a part.

If the interaction between these two pursuits does not begin to determine our personal lives, they will remain pure theory. If they do not break out of their narcissistic preoccupation with our petty interests and desires, they will not orient our thinking and acting in the direction of the comprehensive well-being of the whole of the reality in which we are embedded. The actual interface between science and faith will have to play itself out in the existential struggle to make sense of the whole of the reality we experience and, at the same time, the struggle to become personally accountable to its assumed transcendent foundations.

Before signing off, therefore, allow me to bring the relation between science and faith, between comprehension and commitment, between explanation and vision back home into the personal sphere. What are the stakes for scientists as persons, and what are the stakes for believers as persons?
Personal stakes for scientists

I have argued that, to become human, science, technology and commerce need to rediscover the transcendent foundations of life. But why bother? The concerns of faith seem to be way beyond the mandate and method of science. What would happen if it could be shown that there was no God? If science, technology and commerce were nothing but tools, nothing would happen at all.

But what if this pragmatic approach translates into the metaphysical assumption that there is no transcendent meaning, criterion, or authority to be concerned about? Then personal desires and collective interests become ultimate motivations. Then science becomes indifferent to faith. Then technology and commerce can simply ignore it and concentrate on their mundane aspirations. Then the consumer culture can jettison all ethical inhibitions.

It is this attitude that makes modernity such a profoundly dangerous mindset. Scientists, technicians, leaders in business and consumers can end up in perpetual denial. They can be just as confined, short-sighted and provincial in their laboratories as prisoners in their cells. They can become victims of demagogues and profit-hunters. Scientists, technicians and business folks cannot afford a mindset to take over, whether in terms of their personal lives, their professions, society, or nature.

Science, technology, commerce and consumer abundance have been a blessing and a curse at the same time. Scientists cannot afford to overlook this ambiguity. They are at the helm of the most potent forces in a globalising society today. Without science, technology and commerce, political and military decision makers would be powerless. The masses of the population have become totally dependent on their work. What these professions do, or do not do, will determine the future of humanity and the planet forever after. They have created or catalysed the development of all typically modern problems. And without them these problems can no longer be resolved.

They must regain the awareness that they are not gods but derived, dependent, accountable, vulnerable and mortal human beings. They cannot shed their responsibility for the well-being of future generations and the earth. They are accountable to an authority higher than themselves. They have to find their bearings within a more comprehensive reality or get lost in the trivialities of life. The immense powers that their professions have unleashed and continue to unleash has raised this responsibility to a higher order of magnitude. All this is not fantasy but fact.

The detonation of nuclear devices in World War II has opened the eyes at least of some scientists to their unimaginably heavy responsibility.
Today global warming, the massive extinction of species, the destruction of forests and maritime resources, the depletion of fossil fuels, the dangers of nuclear power, declining food and water security, new and resistant viruses, the dangers of genetic engineering and many other such developments have added urgency to a change in attitudes.

The fact that scientific, technological and commercial developments have “gone far beyond any control of human forces” makes the situation even more precarious. Only the formation of a critical mass of awareness, alertness, responsibility and determination among leaders at many levels and in many fields across the globe can prevent total catastrophe.

This is the reason for my argument that science needs ‘best faith’ to be responsible. Even the most pragmatic scientists cannot suspend the human quest for the universally most appropriate and most redemptive vision available. Seen in terms of the grounding and orientation of human existence, questions concerning the ultimate Source and Destiny of reality may be the singular most important question humanity faces today, the question of life and death for earthly existence in general and humanity in particular. As stated above, concepts of the transcendent can be hugely inappropriate, dysfunctional and counterproductive. But that makes the struggle for the truth not less but more important and urgent.

I do not claim that the Christian faith is ‘best faith’, but I do suggest that it has the potential of becoming ‘best faith’ if it gets its act together. For modern people, it is not very attractive, if it ever has been. I sympathise with those for whom the message of the plausibility and acceptability of naturalist assumptions has been a liberating experience: no more pressure to believe and confess what makes no sense; no twenty-four-hour surveillance by a stern and omnipresent parent or judge; no expectation to be ‘meek and mild’ when getting hot under the collar; no need for unnecessary frugality and prudish inhibitions; no anxious questions about the hidden designs of a God of love and power who allows atrocities and catastrophes to happen.

But all this presupposes that faith in Christ is an irrational and oppressive state of mind. This assumption flies into the face of what the Christian faith was always meant to be. It is most unfortunate that the disillusionment with an inappropriate faith has led to the abandonment of faith altogether. The concept of God stands for the power underlying reality and the vision of what reality ought to become – the very reality that science explores, that technology manipulates, that commerce exploits, and that consumer hedonism abuses. And the biblical God has offered humanity justice, redeeming love and personal fulfilment.

Christians believe in Christ because in Christ they have been confronted with the demand and the gift of an authentic existence and the prospects of
a meaningful life world. In Christ, believers encounter the potential authenticity of their own lives, the lives of others and their entire contexts, defined and empowered by the Source and Destiny of reality as a whole. There is nothing irrational, outlandish, or reprehensible about such an encounter. In fact, believers experience it as the most foundational, the most enlightening, the most liberating, and the most motivating aspect of their existence.

**The stakes for believers**

Why should believers bother to take the insights of modern science seriously? Faith seems to have survived quite well for three millennia without leaving its own ‘symbolic universe’. But this is a deceptive impression. At least in societies affected by modernity, faith has been pushed into the status of an irrational and irrelevant private pastime. The vast majority of the population has voted with their feet. It has become redundant for all practical intents and purposes. It plays no role in dimensions of public life that really matter – whether sexual morality, family life, social construction, economic achievement, or political organisation. Where it tries to do so, it is experienced not as a help, but as an irritant.

If God was indeed the ultimate Source and Destiny of reality, the One that constituted our identity and defined our authenticity, the One that had a vision for reality as a whole and invited us into his creative and redemptive project, how could faith possibly have become a private pastime? If the Christian message really confronted modern humanity with the choice between authentic and inauthentic existence, between a meaningless and a meaningful world, it would be either embraced and treasured or rejected and persecuted. Simply being ignored is the most devastating form of irrelevance and contempt imaginable.

Clearly the Christian faith is under siege. But we must understand what it is that besieges us. It is not simply the godlessness of the world. It is our own godlessness. We do not entrust ourselves to God as we move into the future, but cling to idolised remnants of the past. It is the lack of plausibility of our faith assumptions, the lack of credibility of our commitment, the lack of integrity in our lives that has brought us into this unenviable situation. Our faith has become obsolete, irrelevant and redundant. We have been left behind at the airport while the jumbo jet of modernity has roared off into distant skies.

For believers, the stakes are enormous. They cannot afford to let their faith degenerate into irrationality, superstition and triviality. Theologians cannot continue as if they were living in biblical or medieval times. If their
faith cannot integrate the best insight that is currently available, believers cannot hope to be taken seriously. They cannot even take themselves seriously, because in the depths of their hearts, they know better.

They may enjoy the ecstasy of a crowd singing ‘hallelujah’ on Sunday mornings. But on weekdays, they may sheepishly and awkwardly move about in the modern world with the gnawing suspicion that there is something amiss in their faith assumptions. If that is the case, they will not be pillars of confidence, vision, responsibility and determination in a modern society gone astray. On the contrary, they will betray symptoms of cognitive dissonance and psychological repression.

The certainty of a special covenantal relationship with God has sustained the Jewish faith through most unbearable circumstances. The iconoclastic response of the prophets to an institutionalised religious routine has held the ancient Israelite community of believers on edge. The reconceptualisation of the Jewish faith by an itinerant teacher in a remote province struck the very foundations of the mighty Roman Empire and its Jewish satellite regime in Jerusalem. The reconceptualisation of the Christian gospel offered by the Reformation struck at the very foundations of medieval European society including the institutional church.

It can happen again if we dare to translate the essence of the gospel into modern frames of reference. The conceptual adjustments needed today are no more earth-shattering than the emergence of post-exilic Judaism, the proclamation of Jesus, or the translation of the gospel into Greek metaphysical assumptions that led to the classical dogmatic tradition. We must just allow ourselves to be led out of our emotional comfort zones and inherited doctrinal formulations by the Spirit of Christ. The Spirit of Christ is ever geared to the future; it always responds creatively and redemptively to the challenges that the world poses in every new phase of history.

Only if that happens will the scandal of the cross again present itself to modern humanity. This scandal does not consist of an obsolete worldview. It consists of the invitation to abandon the human quest for autonomy, mastery and ownership of reality in favour of participation in the freedom, the responsibility, the creative authority and the redeeming love of God, the Source and Destiny of reality as a whole. It involves becoming part of God’s vision of comprehensive optimal well-being and God’s sacrificial intentionality to overcome any deficiency in well-being in any dimension of life on earth.
Von Weizsäcker, a prominent scientist and philosopher, has spelt out these ambiguities in no uncertain terms (see the summary in 1990:405 ff). One can augment his observations with many instances taken from the social and the human sciences.

According to Heisenberg, they can either take part in the political decision making process or withdraw into their academic world. But at the very least they have to keep political decision makers aware of the immense repercussions of such decisions when it comes to scientific applications (1999:192).


“Don’t we hear the noise of the undertakers that are about to bury God? Don’t we smell the stench of divine decomposition? ... What are these churches but sepulchres and tombs of God?” (Nietzsche 1966, II:128, my translation). When I visited Halle in Eastern Germany, I was told there are more churches per square kilometre than anywhere else in Germany. But hardly anybody bothers to belong to the church, let alone attend church services. In the Netherlands, once the bulwark of Calvinism, 20 per cent of the population is said to be Catholic and 8 per cent Protestant. Church buildings are sold to secular entertainers, cafes, clubs, ice rinks and so on. One cafe owner put up a crucifix with the body hanging upside down as a decoration. In England, the Anglican Church struggles to maintain its medieval cathedrals, and priests in their robes beg tourists for donations.