

Theses underlying the argument in the book

Regaining sanity for the earth

*Why science needs best faith to be responsible,
why faith needs best science to be credible.*

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Theological Society of SA 25 January 2012

Point of departure

1. Science is not an enemy of Christian faith and theology, but a potential tool of God to update, enrich and empower Christian faith and theology. Faith is not a pre-scientific superstition, but a potential tool of God to provide humanity, including scientists, with meaning, acceptability and authority.
2. To exhibit the complementarity of science and faith, the book first locates the phenomenon of faith within immanent reality (as seen from a scientific perspective) and then integrates modern scientific insight into the transcendent perspective of faith.

On the urgency of the topic

3. In view of impending economic-ecological crisis, the complementarity of science and faith is not an academic pastime, but an urgent necessity.
4. Ever since the Enlightenment science and faith (= the Christian faith) have been drifting apart. Science lost its transcendent foundations, faith lost its credibility.
5. Science is the epicentre of the modern quest for mastery, ownership and entitlement. It serves technology, which serves commerce, which serves the consumer culture, which serves utility and pleasure.
6. Modernity has led to vast powers without a concomitant growth in horizons and responsibility for the whole. In fact, it has zoomed in on the immediate satisfaction of short term individual needs and desires.
7. The spiritual, social, economic and ecological consequences are catastrophic. Fishing and drinking its beer on a rudderless raft, humanity is drifting helplessly towards a cataract.
8. Science and faith are fundamental human pursuits. They have led, each in its own way, to the current impasse. 'Best science' and 'best faith' must again find each other and lead humanity out of the crisis.
9. 'Best science' is the provisional, partial and constantly updated description, explanation and prediction of reality, but it is the best description, explanation and prediction of reality available at any point in time.
10. 'Best faith' is trust in the benevolent intentionality of God, the transcendent Source and Destiny of reality. Best faith participates in God's vision of comprehensive optimal well-being that translates into God's concern for any deficiency in well-being in any dimension of life.

On the complementarity of science and faith

11. Science and faith are indispensable and complementary human pursuits. Science describes, explains, and predicts immanent reality; faith provides meaning, acceptability and authority. This includes identity, orientation, vision, authority and motivation. Such determinations lie outside the mandate and method of science.
12. Science assumes only one reality, the reality we experience. Science explores this reality from within that reality, thus from an *immanent* perspective. Faith looks at the same reality from a *transcendent* perspective, 'with the eyes of God' as it were.
13. The transcendent perspective objectifies reality and, in this way, makes *freedom from* reality and *responsibility for* reality possible. Without transcendence the self is not only embedded, but imprisoned in experienced reality: biological processes, needs and desires, social lures and pressures. It is reduced to reactive and defensive behaviour, rather than engaged in pro-active and creative behaviour.

On methodology

14. To be true to its mission in the world and make sense to scientifically informed people, faith and theology must "become a scientist to the scientists" (1 Cor 9:20-23). This entails taking 'best science' on board, rather than continuing to operate in the largely fictional and arcane 'symbolic universe' of a pre-scientific theological tradition.
15. Taking its clues from science, faith and theology should not claim to know more than can be known. Any 'revelation', whether in faith or science, has to happen (and has happened) through the medium of human imagination, observation and comprehension, which are subject to the constraints of immanent reality.
16. For faith there are two such avenues, the **experience** of the actual operation of God's power as manifest in reality as explored by the sciences, on the one hand, and the **proclamation** of God's intentionality as intuited by faith and clarified by theology on the other. Both kinds of insight emerge and evolve in the form of historical traditions.
17. Experiential realism will avoid the following approaches common in the traditional theological discourse:
 - (a) Sophisticated obscurantism. 'Occam's Razor' says that the simplest explanation doing justice to the phenomenon must be given priority over all others.
 - (b) Epistemological scepticism. Science assumes that there is a reality out there and its image in our brains (though partial, provisional, perspectival and interest related) can be trusted.
 - (c) Building metaphysical edifices on inferences drawn from idealised abstractions (example: omnipotence; eternity as timelessness or time-fullness).
 - (d) Making speculative deductions from reified biblical metaphors (example: 'Son of God'. This multi-layer metaphor is analysed in par 66 below).
 - (e) Wishful thinking (example: a kind of submission to God's will that relieves us of our God-given responsibility).
 - (f) Ideological legitimization of collective self-interest (example: divine authority underpinning the abuse of human authority. Apply a hermeneutic of suspicion at all times!).

- (g) Confusing fantasy, poetic expression and fiction with ontological reality. (example: Jesus ‘bridegroom’ of the ‘soul’ as his bride).
- (h) A kind of post-modernism that treats science as another form of faith, and legitimates a pre-scientific theological worldview by appealing to quantum mechanics.

Some scientific theories relevant to faith

18. **Big bang** cosmology (reality as a whole has emerged and evolved from an energy singularity about 14 thousand million years ago).
19. The theory of **entropy** (the energy that drives the cosmic process is derived from the transformation of ordered and potent energy into disordered and spent energy).
20. The theory of **emergence** (cosmic evolution proceeds in levels of complexity, volatility and transience: fields, waves, particles, atoms, molecules, amino acids, cells, organisms, nervous systems, brain states, consciousness, structured consciousness, social structures and processes.) The theory has the following theologically relevant repercussions:
 - 20.1 Each higher level presupposes all lower levels, yet constitutes a new kind of reality with its own non-reducible characteristics.
 - 20.2 The theory debunks
 - (a) an ontological (Platonic) dualism between matter and spirit (or body and soul),
 - (b) a historical (Persian) dualism between the corrupt present age and the ideal age to come
 - (c) physical (or biological) reductionism: there is both upward *and* downward causation.
 - 20.3 ‘Spirit’ is structured and oriented consciousness that presupposes the infrastructure of all lower levels of emergence from quanta to the biological organ of the brain. Such structures of consciousness are formed and ‘hard wired’ in the brain through infantile conditioning, ongoing experiences and information flows.
21. **Chaos** theory: the trajectories and outcomes of processes depend on the sensitivity of initial conditions. The more balanced the powers that impact a situation, the greater the freedom of humans to effect ‘switches’ in the direction of cosmic processes.
22. **Complexity** theory: many processes follow impenetrably complex mathematical trajectories that cannot be predicted. This leads to impressions of contingency and chance.

On the foundational documents of the Christian faith

23. All human insight – whether scientific or religious – emerges and evolves in time and space.
24. The Christian faith emerged in the specific context of the history of the relation between ancient Israel and Yahweh, the God of Israel, culminating in the Christ-event, and continuing its journey towards a vision of comprehensive optimal well-being.
25. Israelite religion is embedded in the evolutionary history and the manifold bifurcations of religious intuitions, doctrines and institutions of humanity as a whole from its earliest beginnings to the present.
26. The driving force of the biblical faith is the conviction that God, the transcendent Source and Destiny of reality, is characterised by a committed benevolent intentionality. The experience of what ought *not* to be leads to notions of what *ought* to be in the sight of God.

27. The biblical notion of the 'Word of God' reflects the creative and redemptive response of God to changing human needs. As such it operates within human history and has its own evolutionary history. It is inherently translatable, dynamic and versatile.
28. The biblical Canon is a collection of early documents considered foundational for the identity and thrust of the Jewish-Christian faith. The Canon is like the barrel of a gun – short and open in front. Its function is to guide the bullet (the Word of God) to distant destinations.
29. To underscore their validity, some biblical scriptures indeed claim immutability and inerrancy. Such claims do not reflect the actual character and operation of the biblical scriptures, nor are they compatible with God's redemptive presence within fallible human consciousness.
30. Biblical authors are not constrained by the empiricist and historicist criteria of the Enlightenment. They use all linguistic tools at their disposal to communicate their message: myth, legend, poetry, fiction, parable, metaphor, miracle narratives, etc.

On perfection and perfectibility

31. A world in evolutionary flux and subject to the entropic process cannot reach perfection. The classical (Platonic) concept of perfection is an idealised abstraction from reality. Where the concept is used in the Bible at all, its function is to reassure, motivate and transform.
32. Scientific theories render a *literal* interpretation of biblical projections of a perfect reality untenable, whether (a) at the beginning of time, (b) at the end of time, (c) an alternative space (heaven above) or (d) an assumed essence obscured by concrete existence.
33. These projections are metaphorical conceptualisations of what reality *ought* to be, rather than what *was*, what *will* be, what exists *elsewhere*, or what reality is in *essence*. They are meant to assert the validity of what ought to be and reject the right of existence of what ought *not* to be.

On the concept of God

34. Naturalism believes that reality is a self-generated, self-contained, self-sufficient, self-destructive system. Reality is closed in upon itself. 'Immanent transcendence' refers to aspects inaccessible to human observation, explanation, manipulation and prediction.
35. Faith assumes 'radical transcendence': reality as a whole is an open system that presupposes a transcendent Source and Destiny. This includes all of reality –known, unknown and unknowable aspects.
36. It is beyond the mandate and method of science to adjudicate the validity of these alternatives. The assumption of an open universe may be more persuasive even on scientific grounds than its alternative, but its rationale is the provision of *meaning* as prerequisite of human existence.
37. The transcendent Source and Destiny of reality *as such* is inaccessible, thus incomprehensible, by definition. Faith and theology are dealing with the intuition, notion or *concept* of the transcendent – which is part of experienced reality.

38. Faith and theology cannot know more about God than can be known. What can be known is the actual operation of experienced reality understood as *God's creative activity* and the impact of the proclamation of *divine benevolence* on our consciousness.
39. Primeval God-consciousness and more developed concepts of God are located in our brains. They emerged and evolved in history, have concrete consequences, can be described, critiqued, transformed, or abandoned. They must be considered 'real' in this sense of the word.
40. Christians are persuaded that God, the transcendent Source and Destiny of reality, creates and utilises their *notion* of God to manifest God's creative and redemptive intentionality and agency within the provisionality and fallibility of human consciousness (revelation).
41. Faith agonises about the provisional and inadequate character of its God-consciousness. Genuine theology will struggle to find the most appropriate conceptualisation of the transcendent possible within any given frame of reference.

On God's creative power

42. God is not a factor within immanent reality that could cooperate or compete with other such factors, but the transcendent Source and Destiny of reality that underpins all such factors. This has the following consequences:
 - (a) God's intentionality and agency do not obviate human intentionality and agency but arouse and empower them. God's intentionality and agency do not compete with immanent processes and regularities but enable them to exist and function.
 - (b) The concept of God cannot be used to fill gaps in causal networks or gaps in our understanding of such causal networks.
 - (c) God does not need 'spaces' in the overall causal system to effect 'non-interventionist direct divine action' (cf the Berkeley-Vatican research project), because all events, causal or contingent, are derived from God.
 - (d) A miracle is an unexpected, awe-inspiring and beneficial event that seems to manifest God's benevolence, but it does not imply that God's suspends or overrides natural law. God acts *through* inner-worldly regularities and contingencies.
 - (e) It is incoherent and dishonest to attribute events beneficial to particular individuals or groups (often at the expense of other creatures) to a loving God and detrimental events to a wrathful God, a devil, blind fate or human sin.
 - (f) 'Creation' is not restricted to the beginning of the cosmic process. Fulfilment is not restricted to the ultimate end of the cosmic process. God is the Source and the Destiny of the entire process (cf the concepts of *creatio continua* and present eschatology).

On God's benevolent intentionality

43. Because our experience of reality is ambiguous, if not demonic at times, the benign intentionality of God cannot be gathered from this experience as such. God's benevolence is *proclaimed* in the authority of God and accepted in faith or rejected in disbelief.
44. However, believers tend to *recognise* God's creative and redemptive intentions in experienced reality: Without the validity of the laws of nature reality could not function. Without entropy there would be no energy. Without death there would be no biological life.

45. The theory of emergence can throw light on the intractable problem of theodicy. The Bible says that God became a person for humans because humans are persons. But personhood is one level within the hierarchy of emergences that presupposes lower impersonal levels.
46. As the Source of all levels of emergence, God is of necessity much more than a person, just as humans are much more than persons. A tsunami is not due to the wrath of an irate God, but due to tectonic shifts in the earth's crust following natural laws – which are also of God.

On the human being

47. Albeit most highly developed in terms of emergence theory, the human being is a biological creature among billions of others confined to a minute and possibly singular planet, a limited life time and subject to definite energy constraints.
48. The 'image of God' in the Old Testament (Gen 1:26ff) suggests ANE assumptions of the king as representative of God on earth – a channel of God's blessings and a bulwark of God's order – a position of enhanced responsibility and accountability, rather than licence and autonomy.
49. In the NT the concept refers to the *authentic* human being (Christ or the 'Spirit') into whose image we are to be transformed, as opposed to the inauthentic or 'fleshly' human being (2 Cor 3-4; Col 1:15). The authentic human being manifests God's benevolent intentionality.
50. The tension between what humans are and what they ought to be, is located *biologically* in the tension between the 'reptile brain', the limbic system and the frontal cortex. What theology calls 'original sin' is rooted, therefore, in the pre-historic evolution of the human species.
51. Perceptions of what ought to be are dependent on the system of meaning, the definition of acceptability and the allocation of authority internalised through early childhood socialisation and ongoing experience.
52. Liberation from sin occurs when a structure of human consciousness geared to God's vision of comprehensive optimal well-being of the whole of reality, becomes accessible and powerful enough to take the place of truncated and self-interested mental structures.

On the beginning, end and assessment of human life

53. Ancient Israel did not believe in life after death. What mattered was the relationship of Yahweh to the clan, tribe or nation. Individual got their chance to make their contributions and then passed the batons to their progeny, which continued the relationship.
54. In the Bible the last judgment always refers to the significance of what happened in *this* life, not to what a reconstructed life after death could achieve. Peace with God was constituted by an undisturbed fellowship with God and encrypted in God's memory after one's death.
55. Concern for the justice of God, rather than human longevity led to the notion of resurrection from the dead. Evil persons would not get away without condemnation and punishment, righteous persons would not forfeit recognition and reward simply by passing away.
56. No biological creature can claim or attain (timeless or time-full) eternity on the strength of its own resources. The Bible is as clear about this, as the natural sciences are (Gen 3:19;

Wisdom 7:6; 1 Tim 6:16; James 4:13ff). (In Wisdom 1:12-16 it is *righteousness* that is immortal!).

57. Eternal life can only mean participation in the ‘life of God’, the transcendent Source and Destiny of reality. For us the ‘life of God’ is only manifest in our *experience* of God’s creative power and the *proclamation* of God’s benevolent intentionality. Whatever God’s life may be in itself is beyond our observation and comprehension.
58. *Divine creation*: every person comes into being through a network of causes going right back to the big bang (and beyond). Every human being is part of network of changing relationships while alive. Every human being triggers a network of consequences that will continue until life on earth ceases to exist. In this sense every human being is part of the creative activity of God and its significance can never be erased from cosmic history.
59. *Divine intention*: authentic human life is participation in God’s creative and redemptive intentionality and agency. Inauthentic life is to obstruct God’s intentionality and agency. Through faith in Christ you participate in ‘eternal life’ already now, even though you will die as a biological creature (John 11:25). Rejection of Christ signifies judgment, condemnation and death already now, even if you continue to live (Wisdom 1:12ff; John 3:18; 5:24; 15:6).
60. The existential concept of ‘eternal life’ found in the New Testament (*authentic* life) must, therefore, replace its idealistic counterpart (*unconstrained* life) and the speculations based on the latter. Eternity is a Platonic abstraction from time meant to circumvent the end of everything that exists and happens by assuming an alternative reality, whether timeless, ‘time-full’ or ‘eternally now’.
61. Because it is authenticity rather than longevity that matters, those who have linked up with God’s benevolent intentionality and agency will be able to die in peace, entrusting their conscious lives to the God from whom they had received it in the first place, and trust that whatever God may do with it will be in line with God’s redeeming love. Whatever may lie beyond our conscious lives also lies beyond our observation and comprehension.

On Jesus, the messianic representative of God

62. According to the New Testament witness, Jesus of Nazareth was *ontologically* a human being similar to all others – subject to the constraints of time, space and energy, socialised into a particular culture and religion, having bodily and spiritual needs, praying to God, operating as a Jewish rabbi, being misunderstood, condemned, tortured and executed – “in all respects like his brothers and sisters” (Heb 2:17).
63. Due to his singular authority and his proclamation and enactment of the God of Israel as a God of redeeming love, rather than a God of retributive justice, his followers discerned in him the messianic ‘prince of peace’ expected by Judaism at the time (Is 9 and 11).
64. This conviction was expressed in terms of royal prerogative. In the Ancient Near East the king was deemed the adopted Son of God, that is, the representative and plenipotentiary of God on earth through whom God upheld the cosmic order and channelled his blessings to his people (Ps 2).
65. All titles applied to Jesus are royal titles: *Son of David* (harking back to prophetic promises concerning the Davidic dynasty), *Son of God* (harking back to Ps 2), *Son of Man* (harking

back to Daniel 7), *the Messiah* (the Anointed), *Melchisedek*, the priestly king of Jerusalem (Heb 7 harking back to Gen 14:18 / Ps 110:4 in Heb). Romans 1:3 distributes the two titles 'Son of David' and 'Son of God' according to authenticity ('flesh' versus 'spirit') and time (before and after the resurrection).

66. [The title 'Son of God' throws light on the use of metaphor in the biblical tradition. Its *experiential* basis is the **biological** son of a father. It is applied to successive metaphorical levels:
- (a) A first level metaphor applies the biological image to an *adopted* son.
 - (b) A second level applies the image of adoption to the *executives* and regional representatives of an Ancient Near Eastern emperor.
 - (c) A third level applies the image to the adoption of the *king* by God.
 - (d) A fourth level applies the image to *Jesus* as the messianic king.
 - (e) A fifth level applies the image to *spiritual powers* serving in God's universal government (Job 1, Ps 82).
 - (f) A sixth level applies the image to the 'risen Christ' who is elevated to the status of perpetual and universal authority above all spiritual powers (Eph 1:20ff; Col 1:15ff.)
67. As the messianic representative of God on earth, Jesus was seen as the authentic human being, as opposed to Adam, the inauthentic human being (Rom 5:12ff). He was the *true* image of God (as opposed to Adam) into whose image we are to be transformed (Col 1:15ff; 2 Cor 3:18; 4:4).
68. The 'incarnation' is the manifestation of God's creative and redemptive intentionality (*logos* in John 1 = decree in Gen 1; wisdom in Wis 7; fullness in Col 1:19ff) in the proclamation and enactment of God's intentionality by Jesus of Nazareth and its continued spiritual presence in the community of believers.
69. In less sophisticated traditions, this conviction translated into legendary narratives of the gift of the Spirit at his baptism by John the Baptist, and his birth from a virgin through the power of the Holy Spirit. John applies the latter metaphor to all believers: John 1:12, 3:3ff.

On the cross of Christ

70. The spiritual significance of the cross of Christ is that God exposed God's creative and redemptive intentionality, thus God-self, to the misapprehension and devaluation of humankind in the fate of Jesus, God's messianic representative. It is an enactment of God's suffering, transforming acceptance of the unacceptable into God's fellowship.
71. This event was interpreted in terms of Jewish sacrificial traditions, but the latter were turned upon their heads: it is no longer humans who sacrificed their first-born sons to God, but God who sacrificed God's only-born son to humankind.

On the resurrection and elevation of Christ

72. The first followers of Jesus experienced powerful manifestations of the ongoing spiritual presence of Jesus as the Christ (the messianic representative of God) and proclaimed his elevation to universal and perpetual ruler of the universe.
73. [These spiritual experiences translated into legendary narratives that suggested a quasi-biological ontology of the 'risen Christ' that first appeared bodily on earth and was then

translocated into a quasi-physical realm at the ‘right hand of God’ by a quasi-ontological ‘cloud’. This reasoning presupposes a double (or triple) story cosmology.]

74. With that they asserted God’s confirmation of the divine validity of Jesus’ proclamation and enactment of God’s redemptive intentionality in the face of its apparent failure on the cross.
75. To underscore the universal validity of this confirmation, Christ was proclaimed the expression of God’s creative power and redeeming love in terms of time (from all ages and into all ages - John 1:1ff; Col 1:15ff et al.), in terms of space (from the lowest to the highest location – Eph 4:7ff; Phil 2:5ff), and in terms of divine authority (above all principalities and powers in the universe – Eph 1:20ff).
76. They also proclaimed the universal accessibility of the new life of Christ in fellowship with God for all who let themselves in for it. Together with the Son of God, they were transformed into his image as sons and daughters of God (2 Cor 3:17-4:6; John 1:12f; 18), sharing in his new life and status (Eph 2:4ff).
77. The single authentic existence of Jesus of Nazareth had thus turned into an authentic humanity, accessible to all people at all times. In Paul’s terms, believers are ‘in Christ’ or ‘in the Spirit’ as members of the ‘Body of Christ’ (cf the change of the ‘Son of Man’ from an individual to the collective of ‘the holy people of the Most High’ in Dan 7).

On the Trinity

78. In contrast to countless Trinitarian speculations found in historical and contemporary theology, the Trinity can be conceptualised in very simple terms: God, the *transcendent Source and Destiny* of reality (Creator, Father) manifested God’s creative and redemptive intentionality in *Jesus of Nazareth*, God’s messianic representative on earth (Son, Logos, Christ, Redeemer), and this ‘Spirit of Christ’ continues to be *present and active* in the ‘Body of Christ’, the community of believers.
79. There is nothing paradoxical, uncanny or mysterious in these statements. None of these metaphors contradict science in any way, provided they are not reified and used to deduce metaphysical edifices, but confined to their intended meaning.

On the last things

80. Christian eschatology assumes that the current evil age will come to an end and be followed by an age without evil, imperfection, suffering and death. The motive behind this assumption is that evil has no right to exist in a world created by a benevolent God. Again: the experience of what reality ought *not* to have become leads to the vision of what reality *ought* to become.
81. Its classical form is the Persian view of history as a battle between good (*Ahuramazda* and his army of angels) and evil (*Angra Mainyu* and his army of demons). Humans are caught in the cross fire and will end up on either side. In a giant showdown (Armageddon) evil will be vanquished and destroyed in a pool of fire, issuing in an age where only the good prevails.
82. The model was developed in Apocalyptic, a late development in post-exilic Judaism. It responded to severe and perpetual suffering. It gave up on transformation of the existing world: God had to begin from scratch with a new creation. It amalgamated with traditions

concerning the universal kingdom of Israel, the messianic king, the coming kingdom of God, resurrection and the last judgment.

83. Apocalyptic eschatology was only one kind of future expectation in a long series. All of them constituted redemptive responses to situational needs. Most of them lost their relevance and thus their appeal over time: progeny for Abraham, freedom from Egyptian slavery, survival in the desert, entry into the promised land, the stability and security of a royal ruler, the end of the exile, return of the dispersed tribes, the restoration of the Davidic empire, the elevation of Israel to the status of a global elite. Some were abandoned, some were filled with new meaning. Though representing foundational events in the relation between Yahweh and Israel, they always referred to experienced or expected time sequences.
84. The assumption of an impending end of 'this age' and 'an age to come', or a 'new creation' without sin, evil and death was the most radical of them. It was never generally accepted in Judaism. It was taken for granted by early Christianity, but when the fiery expectation of the second coming of Christ in glory did not materialise as expected, it was gradually replaced by approaches that were more in line with the actual experiences of faith (Dt-Paulines, Acts, John). In later history the imminent advent of the age to come (*Naherwartung*) was relegated to an indefinite future and replaced by prospects of individual life after death.
85. The rationale of biblical future expectations can best be captured by the concept of God's vision of comprehensive optimal well-being. This vision operates like a **shifting horizon**, opening up ever new vistas, challenges and opportunities, and reassuring believers of the continued presence of God's creative and redemptive intentionality in the world.
86. This vision translates into God's concern for any deficiency in well-being in any dimension of life. It expresses God's commitment to the well-being of God's creatures within the constraints of potential futures. It involves believers in God's creative and redemptive project in the world. The concept of a 'shifting horizon' thus regains the immediacy of the biblical '*Naherwartung*'.
87. However, an intuitive vision is not a scientific prediction. It does not extend beyond the sphere of existential, social and ecological relevance. It does not lend itself to speculations about the future course of events. It presupposes the humility of accepting one's place as a creature within the cosmic whole, rather than aspiring to the status of a quasi-divine being.
88. Reconceptualised as above, biblical future expectations do not contradict the scientific theory of entropy, the cosmic 'freeze or fry' scenario of scientific cosmology, or the necessity of death for biological life.